

Intense3D Wildcat 4105 Graphics

Hardware User's Guide

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INTENSE3D

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If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, try to correct the interference as follows: reorient or relocate the affected device; increase the separation between this equipment and the affected device; connect this equipment to an outlet on a circuit different from the circuit to which the affected device is connected; consult a dealer or an experienced radio/television technician for help.

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Changes or modifications made to the system that are not approved by the party responsible for compliance could void the user's authority to operate the equipment.

To reduce the risk of electrical shock, do not attempt to open the equipment unless instructed. Do not use a tool for purposes other than instructed.

Notes

This device is designed and manufactured to comply with approved safety standards for information processing and business equipment.

Read all operating instructions before using this device. Keep these instructions for future reference. Follow all warnings on the device or in the operating instructions.

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Preface

The *Intense3D Wildcat 4105 Graphics Hardware User's Guide* provides information and technical specifications on the *Intense3D Wildcat 4105* graphics accelerators.

About This Document

The *Intense3D Wildcat 4105 Graphics Hardware User's Guide* is organized as follows:

- ◆ Chapter 1, “Getting Started,” introduces the Wildcat 4105 and its features, and describes how to get started using the Wildcat 4105 in your workstation.
- ◆ Chapter 2, “Replacing and Upgrading the Wildcat 4105,” provides instructions for replacing Wildcat 4105 hardware, installing cards, reinstalling driver software, and troubleshooting the installation.
- ◆ Chapter 3, “Technical Information,” provides technical information about the Wildcat 4105.
- ◆ Chapter 4, “Return and Warranty Information,” provides warranty information and instructions on how to return your card.

Document Conventions

Bold	Commands, words, or characters that you key in literally.
<i>Italic</i>	Variable values that you supply, or cross-references.
Monospace	Output that displays on the screen.
SMALL CAPS	Key names on the keyboard, such as D, ALT or F3; names of files and directories. You can type filenames and directory names in the dialog boxes or the command line in lowercase unless directed otherwise.
CTRL+D	Press a key while simultaneously pressing another key; for example, press CTRL and D simultaneously.

Operating System Information

For more detailed information on the Microsoft Windows NT[®] operating system, refer to the printed and online Microsoft documentation delivered with the system.

Customer Support

Intergraph Computer Systems offers an assortment of customer support options.

Hardware and Software Support Services

Intergraph Computer Systems provides a variety of hardware services for Intergraph and third-party equipment. Services include warranty upgrades, repair depot service, on-site hardware maintenance, system administration, and network consulting. Hardware purchased from Intergraph Computer Systems includes a factory warranty ranging from 30 days to three years. A detailed warranty description is available on the World Wide Web; see the Support pages at <http://www.intergraph.com/ics>.

Intergraph Computer Systems provides complimentary software support for 30 or 90 days following shipment of a hardware or software product. This includes World Wide Web access, Intergraph Bulletin Board Service access, and telephone (Help Desk) support. At the end of the complimentary support period, you can purchase other levels of software support.

World Wide Web

For the latest *Intense3D* news and product information, visit *Intense3D* on the World Wide Web at <http://www.intense3d.com>.

You can visit Intergraph Computer Systems on the World Wide Web at <http://www.intergraph.com/ics>. On these pages, you can get news and product information, technical support information, software updates and fixes, and more.

Intergraph Bulletin Board Service

On the Intergraph Bulletin Board Service (IBBS), you can get technical support information, software updates and fixes, and more.

To connect to the IBBS:

1. Set your system's communications protocol for eight (8) data bits, no parity, one (1) stop bit, and any baud rate up to 14,400.
2. Using a modem, call 1-256-730-8786. Outside the United States, call one of the mirror sites listed on World Wide Web; see the Software Support pages at <http://www.intergraph.com>.
3. At the login prompt, key in your user ID. If you have not connected before, key in **new** to create a user ID.
4. Follow the menus to find what you need. The IBBS provides clear choices and online help.

If you have trouble connecting to or using the IBBS, call the Customer Response Center at 1-800-633-7248 (product entry IBBS) or leave a message for the IBBS System Operator at 1-256-730-1413.

Telephone

To get customer support by telephone:

- ◆ In the United States, call the Customer Response Center at 1-800-633-7248 between the hours of 7:00 a.m. and 7:00 p.m. Central Time, Monday through Friday (except holidays).
- ◆ Outside the United States, contact your local Intergraph Computer Systems subsidiary or distributor.

Have the following information available when you call:

- ◆ Your service number, which identifies your site to Intergraph Computer Systems. You use your service number for warranty or maintenance calls.
- ◆ Your Customer Personal Identification Number (CPIN). You get a CPIN the first time you call the Customer Response Center; it is associated with your service number for future call logging.
- ◆ The product's name or model number.
- ◆ The product's serial number. Software product serial numbers are included in the product packaging. Hardware product serial numbers are on a sticker affixed to the hardware product.
- ◆ Your name and telephone number.
- ◆ A brief description of the question or problem.

More Support Options

For information on more customer support options:

- ◆ Visit the Support pages on the World Wide Web at <http://www.intergraph.com/ics>.
- ◆ For hardware support questions in the United States, call 1-800-763-0242.
- ◆ For software support questions in the United States, call 1-800-345-4856.
- ◆ Outside the United States, contact your local Intergraph Computer Systems subsidiary or distributor.

1 Getting Started

This chapter introduces the Wildcat 4105 graphics accelerator and describes what you need to use it in your workstation.

System Requirements

To use the Wildcat 4105, you will need:

- ◆ A workstation running on Intel's Pentium® II (or later) processor or equivalent
- ◆ Microsoft Windows NT® Workstation 4.0 operating system with Service Pack 4 (or later), or Service Pack 3 and the appropriate QFE product (QFE_INTENS4K) installed
- ◆ An AGP slot to insert the Wildcat 4105 and an open adjacent PCI slot for cooling purposes
- ◆ A minimum of 32MB DRAM (64 MB recommended)
- ◆ An industry-standard, multiple-frequency monitor
- ◆ 3 MB of free space on the computer's primary system disk for the Wildcat 4105 video display driver software

Features

The Wildcat 4105 offers the following high-end graphics features.

- ◆ Support for Windows NT graphics – Graphic Device Interface (GDI) and OpenGL
- ◆ Support for resolutions up to 1.3 megapixels (1280 x 1024)
- ◆ Support for graphics features such as Gouraud shading, 2D and 3D vectors and triangles, texture processing, rectangle fills, antialiased vectors, clipping, alpha blending, fog, and stenciling
- ◆ 16 MB of Synchronous Dynamic RAM (SDRAM) frame buffer memory and 64 MB of SDRAM texture memory
- ◆ Video plane sets of 128 bits per pixel (up to 1152 x 864) and 100 bits per pixel (at 1280 x 1024)
- ◆ Four video lookup tables
- ◆ 10-bit gamma correction
- ◆ 32-bit double-buffering and 32-bit Z-buffering at 128 bits per pixel (up to 1152 x 864) or 24-bit double-buffering and 24-bit Z-buffering at 100 bits per pixel (at 1280 x 1024)
- ◆ Integrated VGA video support

- ◆ Support for industry-standard monitors
- ◆ Hardware support for stereoscopic viewing, Display Data Channel (DDC), and Display Power Management Signaling (DPMS)

Visit <http://www.intense3d.com> for the latest performance data and other information.

Hardware

The Wildcat 4105 is a single-card solution that uses one Advanced Graphics Port (AGP) slot and supports a single-screen configuration. It also requires an open adjacent PCI slot for cooling purposes.

Driver Software

The Wildcat 4105 uses the *Intense3D* Wildcat video display driver. The video display driver installs as a standard Windows NT driver, and provides both GDI and OpenGL graphics compatibility. You can download the latest drivers from <http://www.intense3d.com> or from the delivery media included with the card.

Connecting Monitors

In a workstation purchased with the Wildcat 4105, the appropriate card is already installed in the workstation base unit.

To connect monitors to the Wildcat 4105:

1. Connect the workstation monitor's video cable to the color video output port on the Wildcat 4105 card. See the following figure.



Video
Output Port

Stereo Sync
Output Port

NOTE If a workstation monitor has no built-in video cable, use a shielded video cable with a 15-pin (D-sub) video connector at one end for the video output port on the card, and the appropriate connectors at the other end for the video input port on the workstation monitor.

Monitor input ports are usually D-sub or Bayonet Nut Connect (BNC) connectors. Shielded cables usually have a ferrite core (a box- or cylinder-shaped attachment) near each end to reduce interference with radio frequencies.

2. Turn on power to the workstation. The video display starts in VGA mode.
3. If you want to use a stereoscopic display device, see the previous figure and the section in this chapter on enabling the stereo display.

Configuring the Video Display

After connecting the monitor, you can turn on system power, start the Windows NT operating system, and configure the video display.

CAUTION Make sure the monitor is connected correctly to the Wildcat 4105 before applying power to the monitor and to the workstation.

To start the Microsoft Windows NT operating system:

1. Turn on power to the monitor and to the workstation.
2. At the boot screen, select the non-VGA version of Windows NT.
3. When prompted, press CTRL+ALT+DEL to log on to Windows NT.
4. Log on to Windows NT. Refer to Windows NT documentation and Help for instructions, if necessary.

To enable your workstation to use the Wildcat 4105, you must configure the display properties of the Wildcat 4105 driver software. The driver software is installed on the system's primary hard disk drive. The Display Properties dialog is available from the Windows NT Control Panel to determine the system configuration and installed options. Display Properties lets you change the video display settings to meet your needs.

To configure Wildcat 4105 video display driver software:

1. Close all open applications.
2. From the operating system Start menu, go to Settings/Control Panel/Display.

NOTE Two Intense3D tabs appear in the Display Properties Dialog: Intense3D Settings and Intense3D Monitor. See Chapter 2 for details on how to use these tabs.

3. Use the Display Properties dialog tabs to configure the operation of the workstation's video display. For example, click the Settings tab to change the screen resolution.
4. Click OK to close the Display Properties dialog, or click Cancel to close Display Properties without applying the changes.
5. Restart the system for changes to video attribute settings to take effect. (Certain changes, such as gamma correction, do not require that you restart the system.)

For more detailed configuration information, see Chapter 2 and the README.TXT file on the delivery media containing the Wildcat 4105 video display driver.

After you configure the video display, verify that the Wildcat 4105 driver is the default video display driver that runs automatically when you start the workstation.

To verify the default video display driver:

1. From the operating system Start menu, go to Settings/Control Panel/System.
2. On the Startup/Shutdown tab, verify that the non-VGA version of Windows NT is selected in the Startup list. If it is not, select it from the list and click Apply.
3. Click OK to close the System dialog.

NOTE Do not select the VGA version of the operating system. The video display runs in VGA mode when the Wildcat 4105 driver is not running.

Enabling the Stereo Display

The Wildcat 4105 supports any stereo product that conforms to the VESA Stereo Port Specification, such as Crystal Eyes stereo glasses and ENT emitter from Stereo Graphics, Inc. Follow these instructions to connect the stereo emitter and enable the stereo display:

1. Connect the stereo emitter cable to the stereo sync output port on the Wildcat 4105. (If your emitter has a 5-pin connector cable, use one of the 5-pin to 3-pin upgrade options described in the next section.)
2. From the operating system Start menu, go to Settings/Control Panel/Display.
3. Select *Intense3D* settings. Then select Advanced.
4. Select Enable Stereo Display and your choice of sequential or interlaced mode.
5. When prompted, restart your workstation. A red light on the stereo emitter indicates that your display is configured for stereo and Microsoft Windows NT is running.

NOTE You must de-activate stereo mode when you no longer wish to view in stereo.

Upgrading to the VESA 3-Pin Stereo Port

Stereo equipment designed for a 5-pin connector will not plug into a 3-pin connector. If you already own an E-Intergraph Crystal Eyes product with a 5-pin connector, use one of the following procedures to adapt your equipment for use with the Wildcat 4105. You can purchase the parts listed below from Stereo Graphics, Inc.

Option 1:

1. Remove the 5-pin mini DIN to DB9 cable (part #69960) from the EPRO emitter.
2. Connect the female DB9 plug on the power supply (part #82011 for 120VAC or #82016 for 220VAC) to the male DB9 connector on the EPRO emitter and plug the other end into an AC outlet. This provides 12V DC to the EPRO emitter.
3. Connect the 3-pin mini DIN to BNC cable (part #0920017) from the 3-pin mini DIN port on the graphics card to the male BNC connector on the EPRO emitter.

Option 2:

Replace the Stereo Graphics, Inc. EPRO emitter with the Stereo Graphics, Inc. ENT emitter.

NOTE The ENT emitter is designed to plug directly into the new 3-pin VESA port, but is designed to accept 12V in addition to the 5V that the new VESA port provides.

It is recommended that all new shipments of Crystal Eyes Wireless Stereo Glasses use the ENT emitter with the “Intergraph 5-Pin Plug to VESA 3-Pin Jack” adapter cable (part #0920015). This supports both the 5-pin and the 3-pin cases with one simple converter cable. The new Crystal Eyes Wired product should ship with the adapter cable as well.

2 Replacing and Upgrading the Wildcat 4105 Graphics Card

Follow the instructions in this chapter if you must replace or upgrade the Wildcat 4105 in your workstation. Refer to your workstation's documentation for instructions on opening and closing the system and identifying the AGP expansion slot.

NOTE Although the Wildcat 4105 is a one-card solution that installs in your workstation's AGP slot, your system requires an open adjacent PCI slot for cooling purposes.

Taking Antistatic Precautions

Static electricity can damage the components inside a computer or on a printed circuit card. To reduce the possibility of electrostatic discharge:

- ◆ Turn off power to the computer.
- ◆ Touch the metal chassis of the computer to drain off any static electricity before touching a card.
- ◆ Wear a properly connected grounding wrist strap when handling a card or working in a computer.
- ◆ Do not wear wool or polyester clothing.
- ◆ Work in an area with a relative humidity of at least 50 percent.
- ◆ Keep cards in anti-static bags until you are ready to install them.
- ◆ Handle cards as little as possible and by the edges only.

Collecting Materials and Tools

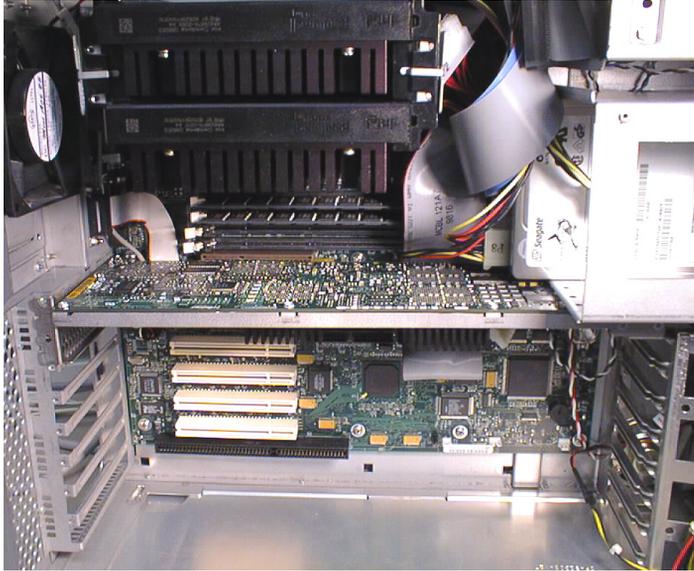
Make sure you have the following materials and tools, as appropriate:

- ◆ *Intense3D* Wildcat 4105 card
- ◆ Delivery media with the *Intense3D* Wildcat 4105 video display driver, unless you plan to download the driver from <http://www.intense3d.com>
- ◆ Flat-head or Phillips screwdriver, if required

Removing and Installing Cards

To remove an installed *Intense3D Wildcat 4105* card:

1. Turn off power to the workstation and to the monitor.
2. Open the workstation to gain access to the AGP slot.



3. Remove the existing card. Keep the screws; you will use them to secure the card to the workstation's chassis later.

To install the *Intense3D Wildcat 4105* card:

1. Align the card with the AGP expansion slot, making sure the gold-fingered connections on the card's edge are aligned properly with the slot connector.
2. Push the card into the AGP slot firmly and evenly until it is fully seated in the AGP slot connector.
3. Visually inspect the connection. If it does not appear to be correct, remove and reinstall the card.
4. Use the screws you removed previously to secure the card to the workstation's chassis.

Finishing the Installation

To finish the installation:

1. Close the workstation.
2. Connect the workstation's monitor as described in Chapter 1.

Installing Driver Software

You can download the *Intense3D* Wildcat video display driver software from <http://www.intense3d.com> or from the delivery media provided. Refer to the Microsoft Windows NT documentation and online Help for more information on installing drivers and software application programs, and configuring your workstation's video display.

Make sure your workstation has the following before attempting to install Wildcat driver software:

- ◆ Microsoft Windows NT Workstation 4.0 operating system with Service Pack 4 (or later) software installed. You may also use Service Pack 3 and the appropriate QFE product (QFE_INTENS4K)
- ◆ 3 MB of free space on the computer's primary system disk

CAUTION Make sure you have the correct driver to use with the Windows NT 4.0 operating system. If you are unsure, refer to the README.TXT file located on the delivery media for this information.

To install *Intense3D* Wildcat 4105 driver software:

1. Log on to Windows NT using an account that has administrative privileges.
2. Create a directory on the workstation's primary system disk..
3. Copy the files from the delivery media to the directory created in step 2, or deliver them to that directory from <http://www.intense3d.com>.
4. From the operating system Start menu, go to Settings/Control Panel/Display/Settings.
5. Click Display Type, and then click Change.
6. In the Change Display dialog, click Have Disk.
7. In the Install From Disk dialog, type the path to the directory that you created in step 2 and click OK.
8. Verify that the Wildcat 4105 driver is highlighted in the Change Display dialog and click OK.

- Click Yes when asked if you want to install a third-party driver. The files are copied from the directory on your workstation's primary hard disk drive.

NOTE If the driver files were delivered on two floppy diskettes, you will be prompted to key in the path for the driver files from the second diskette. The files are copied from the directory on your workstation's primary hard disk drive.

- After the driver files are successfully copied, a message that the driver successfully installed displays. Click OK.
- Click Close to exit the Display Type dialog.
- Click Close to exit the Display Properties dialog.
- When told that the workstation must be restarted for the new settings to take effect, remove the diskette from the workstation's floppy disk drive, if applicable. Click Yes to restart the workstation.
- After the system restarts and you log in, a message displays. The message states that a new display driver has been installed, and that you should use the Display option in the Control Panel to select the preferred display resolution. (See the section on monitor resolutions in Chapter 3.) Click OK.

NOTE Two Intense3D tabs appear in the Display Properties Dialog: Intense3D Settings and Intense3D Monitor. Use the Intense3D Settings tab to select graphics performance and stereo settings. Use the Intense3D Monitor Type to select your monitor type and review the supported DDC timings (if you have selected a DDC monitor).

- Test your selected resolution by checking the Test option in the Display Properties dialog.
- To change the display resolution or other display settings, see the section on configuring the video display in Chapter 1. For more detailed installation information, refer to the README.TXT file located on the delivery media.

CAUTION When you select Display in the Windows NT Control Panel, a message displays. Click OK to close the message. The message displays every time you select Display unless you clear the Show warning checkbox at startup.

Troubleshooting the Installation

The following table lists some common video configuration problems.

Problem	Action
Display is black, not synchronized, or distorted.	Restart Windows NT in VGA mode and select a supported resolution and refresh rate.
Monitor does not support a selected resolution or refresh rate.	Restart Windows NT in VGA mode and select a supported resolution and refresh rate.

The system operates in VGA mode when the video display driver is not running to accommodate all monitor types. VGA mode is used during initial installation of the video display driver and when experiencing video problems. If you select a resolution that causes the monitor to display incorrectly, do not press CTRL+ALT+DEL to log on to the Windows NT operating system. Instead, use the Last Known Good option to return to the last known good configuration recorded by Windows NT.

To use the Last Known Good option:

1. Restart the system.
2. Press the space bar at the following prompt:

Press space bar NOW to invoke the Last Known Good Menu

If using the Last Known Good option fails to correct the video display problems, restart the system in VGA mode and reconfigure your display to 640 x 480 x 60 Hz. Then, restart Windows NT again in non-VGA mode.

To restart the system in VGA mode:

1. Restart the system.
2. At the boot screen, select the VGA version of the operating system.

If the monitor display is distorted, ensure the software setup is correct for the monitor type. If the software setup is correct, use a similar type monitor (if available and functioning properly) to determine if the workstation is defective.

To determine a defective unit:

1. Save and exit from all files, if possible; then shut down Windows NT.
2. Turn off the power to the monitor and to the workstation.

CAUTION Always turn off the power to the workstation before connecting or disconnecting the cables.

3. Check and reseat all card and cable connections as needed.
4. Turn on the monitor power. If the Power On LED does not illuminate, return the monitor.
5. Turn on the power to the system base unit. If the Power On LED on the base unit does not illuminate, or if the BIOS beep codes indicate a failure, return the workstation.

3 Technical Information

The following technical information is subject to change without notice.

Hardware Specifications

<u>Item</u>	<u>Specification</u>
System	AGP 2.0*
Card Size	Full-length AGP card

*Although the Wildcat 4105 is a one-card solution that installs in your workstation's AGP slot, an open adjacent PCI slot is needed for cooling purposes.

Monitor Resolutions

In the following tables, *i* indicates an interlaced frequency.

The Wildcat 4105 supports standard multiple-frequency monitors at the following resolutions and maximum refresh rates (Hz).

<u>Resolution</u>	<u>Aspect Ratio</u>	<u>Bits Per Pixel</u>	<u>Vertical Refresh Rates (Hz)</u>
640 x 480	4 x 3	128	60, 72, 75, 85, 60i
800 x 600	4 x 3	128	60, 72, 75, 85, 60i
1024 x 768	4 x 3	128	60, 70, 75, 85, 60i
1152 x 864	4 x 3	128	60, 70, 75, 85, 60i
1280 x 960	4 x 3	100	60, 75, 85, 60i
1280 x 1024	5 x 4	100	60, 75, 85, 60i

The Wildcat 4105 supports the following frame sequential stereo resolutions and maximum refresh rates for multiple-frequency monitors.

<u>Resolution</u>	<u>Aspect Ratio</u>	<u>Bits Per Pixel</u>	<u>Vertical Refresh Rates (Hz)</u>
640 x 480	4 x 3	128	60
800 x 600	4 x 3	128	60

The Wildcat 4105 supports InterView 28hd96 monitors at the following resolutions and maximum refresh rates (Hz).

<u>Resolution</u>	<u>Aspect Ratio</u>	<u>Bits Per Pixel</u>	<u>Vertical Refresh Rates (Hz)</u>
640 x 480	4 x 3	128	75
800 x 600	4 x 3	128	75
1024 x 768	4 x 3	128	75
856 x 480	16 x 9	128	50, 60, 75
1280 x 720	16 x 9	128	50, 60, 75
1360 x 766	16 x 9	100	72, 75, 85, 90, 60i
1520 x 856	16 x 9	100	60, 70, 75, 85, 60i

The Wildcat 4105 supports Sony GDM-W900 monitors at the following resolutions and maximum refresh rates (Hz).

<u>Resolution</u>	<u>Aspect Ratio</u>	<u>Bits Per Pixel</u>	<u>Vertical Refresh Rates (Hz)</u>
640 x 480	4 x 3	128	60
1280 x 1024	5 x 4	100	75
1280 x 800	16 x 10	128	60, 75, 85, 90, 60i
1440 x 900	16 x 10	100	60, 75, 85, 60i

VGA Video Display Support

The Wildcat 4105 provides onboard VGA video display support. The maximum resolution supported is 640 x 480, 4 bits per pixel, at 60 Hz vertical refresh.

Geometry Processing

Geometry processing is provided by the onboard programmable geometry processing engine. This engine can execute up to three billion floating point operations per second (GFLOPS).

Geometry operations that are hardware-accelerated include:

- ◆ 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

Texture Processing

Texture processing is provided by the onboard graphics/texture processing engine. The engine supports full texture processing, including tri-linear interpolation of MIP-mapped images. The 64 MB texture memory provides texture acceleration up to 16 Mtexels at 32 bits per texel (RGBA) and supports a map size up to 1K x 1K (MIP-mapped or non-MIP-mapped).

DDC and DPMS Support

The Wildcat 4105 provides hardware support for the Display Data Channel (DDC) standard for communication between a workstation and its monitor. The Wildcat 4105 supports the DDC2B standard, which allows for bidirectional communication.

The Wildcat 4105 also provides hardware support for the Display Power Management Signaling (DPMS) standard. DPMS allows for a workstation to send its monitor a signal to enter a power-saving mode.

Interfaces

The Wildcat 4105 has two interfaces: a video output port and a stereo sync output port. These interfaces are described in the following sections.

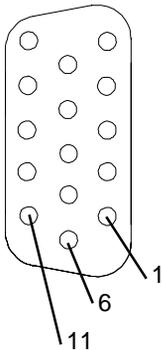
Video Output Port

The video output port is a blue, female, 15-pin, D-Sub connector. The port provides connection to a workstation monitor. The recommended cable length is less than three meters.

Pin	Signal Name	Pin	Signal Name
1	Red Analog Video	9	+5V Supply
2	Green Analog Video	10	Ground
3	Blue Analog Video	11	Monitor ID (bit 0)
4	Monitor ID (bit 2)	12	Monitor ID (bit 1) *
5	Ground	13	Horizontal /Composite Sync
6	Ground	14	Vertical Sync
7	Ground	15	Monitor ID (bit 3) **
8	Ground		

* Bidirectional Data (SDA) for DDC

** Data Clock (SCL) for DDC



Stereo Sync Output Port

The stereo sync output port is a female, 3-pin, mini-DIN connector. The port provides connection to the emitter module of a pair of LCD shutter glasses or to other stereo shutter devices.

<u>Pin</u>	<u>Signal Name</u>
1	+5V
2	Ground
3	Stereo Sync

