Intense3D Wildcat 4110

User's Guide

October 1999

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INTENSE3D

FCC/DOC Compliance

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a residential installation. This equipment generates, uses, and can radiate radio frequency energy. If the equipment is not installed and used in accordance with the instructions, it may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

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: re-orient 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.

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.

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations. Cet appareil numérique de la classe B respecte toutes les exigencies du Règlement sur le materiél brouilleur du Canada.

Warnings

Changes or modifications made to the card 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.

There are no user serviceable parts in the card. Refer all servicing of the card to qualified service personnel.

To comply with FCC Class B limits, you must use shielded cables with this device.

Contents

Preface

The *Intense3D Wildcat 4110 User's Guide* contains information on the setup and use of the Intense3D Wildcat 4110 video card, as well as troubleshooting information, connections, and specifications.

If you purchased this card as part of a system, the card was factory installed and configured in your system prior to shipment. This document provides instructions for setting your display parameters and installing the video drivers and hardware in case you bought the card as part of an upgrade or add-on purchase.

About This Document

The *Intense3D Wildcat 4110 User's Guide* is organized as follows:

♦ Chapter 1, "Introduction," provides an overview of the Intense3D Wildcat 4110 video card, a list of features, and a brief description of the external connectors.

♦ Chapter 2, "Setup," provides step-by-step instructions for installing the video card and related software, and connecting the monitor and stereo display device.

♦ Chapter 3, "Using the Video Card," provides instructions for configuring the video display and enabling the stereo display.

♦ Chapter 4, "Troubleshooting," describes common problems and solutions, and instructions for obtaining a usable video resolution, reinstalling the video driver, and how to get help.

♦ Appendix A, "Specifications," provides general, functional, and performance specifications for the Wildcat 4110 video card, as well as a list of resolutions, the card dimensions, and power requirements.

♦ Appendix B, "Connectors," describes the ports and connectors on the Wildcat 4110.

Document Conventions

Bold	Commands, words, or characters that you key in literally.
Italic	Variable values that you supply, or cross-references.
Monospace	Output displayed 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

You must have Microsoft Windows NT 4.0 with Service Pack 4 or later installed. The appropriate operating system was installed on your computer prior to shipment if you bought the Wildcat 4110 video card as part of a system.

For more detailed information on the operating system, refer to the printed and online documentation delivered with the system.

Hardware Information

For more information about your computer, refer to the documentation delivered with your system.

Customer Support

Please contact your system vendor regarding any support issues you may have.

World Wide Web

For the latest Intense3D news and product information, visit **http://www.intense3d.com**.

1   Introduction

The Intense3D Wildcat 4110 video card equips your personal computer or personal workstation with powerful and professional 3D graphics capability. This video card infuses Intel Pentium II or greater computers running the Microsoft Windows NT operating system with workstation-class 3D graphics features and performance.

NOTE   If you purchased the Intense3D Wildcat 4110 video card as part of a system, it was preconfigured to in your system operate before shipment. No other modifications are necessary. Also, your system's video drivers were installed before shipment and are operative when you receive the system. No further installation or configuration is necessary unless you bought the Wildcat 4110 as an ad-on or upgrade. Store the driver CD/diskette that came with your system in a safe place in case you ever need to reinstall the drivers.

Features

Card Interface

♦   AGP Pro50 card

♦   Designed for systems that have either a 50-watt AGP Pro50 expansion card slot or a 110-watt AGP Pro expansion card slot

NOTE   Intense3D Wildcat 4110 cannot plug into a standard AGP explansion card slot.

Video Memory

♦   Frame buffer—64 MB

♦   Texture buffer—64 MB

♦   DirectBurst—8 MB

222 MHz RAMDAC

Plug and Play Monitor Support

Resolutions and Refresh Rate

♦   Maximum resolution 1920 x 1200 (96 bits per pixel)

♦   Aspect Ratio 16:10

♦   60 Hz refresh rate

NOTE   Supported refresh rates, monitor resolutions, aspect ratios, and color depths depend on your type of monitor, and whether or not you have multisampling selected. See Appendix A, "Specifications," for a list of supported resolutions and refresh rates.

NOTE   To display at a specific resolution with the desired refresh rate, both the video card and monitor must support it. Refer to the documentation that came with your monitor for a list of supported video resolutions.

Accelerated 3D API

♦   OpenGL

Power Management Support

♦   Display Power Management Signaling (DPMS)

♦   Advanced Configuration and Power Interface (ACPI)\

Geometry Acceleration

♦   Model view matrix transformation of vertex and normal coordinates

♦   Perspective and viewport transformations

♦   Texture matrix transformation of texture coordinates

♦   Local display list storage and processing

♦   Full lighting calculations (up to 24 lights)

♦   View volume clipping

♦   Up to six user clip planes

♦   Image processing

Traditional 2D Operations

♦   16- and 32-bit color depths (565, 8888)

♦   Solid and patterned area fills

♦   Vectors (diamond rule compliant)

♦   Block moves (screen-to-screen)

♦   Block gets (screen-to-system)

♦   Block puts (system-to-screen)

OpenGL Operations

♦   Image support for multiple formats, zooming, bilinear scaling, color matrix, and color tables

♦   Fogging: linear, exponential, exponential^2, and user-defined

- 2D/3D points, vectors, and polygons
- Texture mapping: point, bilinear, trilinear, and multiple internal formats
- 24- and 32-bit depth buffering
- Dithering
- Fast window clears
- Window clipping
- Fast window-mode double buffering
- Masking
- Frame-sequential and interlaced stereo support
- Stencil operations
- Matrix transformations

OpenGL Extensions

- Imaging: pixel buffer, color table, color matrix, convolution
- Blend: color, minmax, function separate
- Fog: fog function, fog offset
- Texture: 3D textures (edge, border, and LOD clamps), mipmap generation
- Video: interlace, interlace read, 422 pixels
- Swap Control: swap control, swap group, swap statistics, texture color table
- Pixel texture and 4D texturing
- Stencil operation wrap
- Post-texturing specular

Additional Features

- SuperScene full-scene multisampled anti-aliasing: Point sampled with eight samples, sample location jittering, dynamic sample allocation, dynamic sample backoff
- Two video look-up tables
- Eight stencil planes
- Eight double-buffered overlay planes
- 32-bit Z buffer
- High-performance DACs that directly drive display devices

- ♦ DDC2B Display Data Channel standard

- ♦ Head-mounted displays and shutter glasses (frame sequential and interlaced stereo required)

- ♦ Onboard texture memory with full mipmapped trilinear interpolated texture processing

- ♦ Digital Video Interface (DVI)-I digital flat panel display support

External Connectors

The Intense3D Wildcat 4110 video card has three standard external connectors (see Figure 1):

- ♦ 3-Pin, MiniDIN stereo sync output connector

- ♦ 15-Pin, D-sub analog video output connector

- ♦ DVI-I output connector
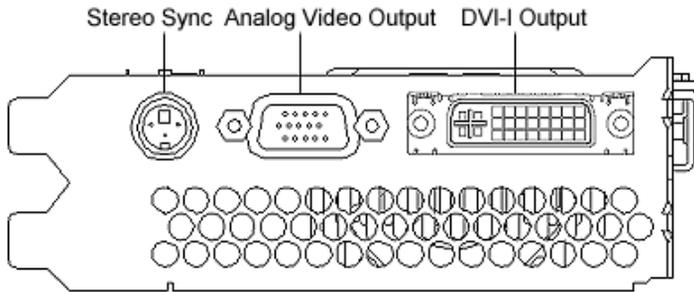
Figure 1. Wildcat 4110 External Connectors

See Appendix B, "Connectors," for detailed information on each of the Intense3D Wildcat 4110 connectors.

2   Setup

This chapter provides step-by-step instructions for installing the video card and related software, and connecting the monitor and stereo display device.

If you purchased your Intense3D Wildcat 4110 video card as part of a system, it was installed before shipment, along with its driver software. The instructions in this chapter are necessary only if you purchased a customer kit or need to reinstall your video card or its driver software.

Preparing for Installation

If you are installing an Intense3D Wildcat 4110 video card, take the following steps to prepare.

Make Sure Your Computer is Ready

General system requirements include:

♦   Pentium II or greater processor

♦   Microsoft Windows NT 4.0 with Service Pack 4 or later

♦   Accelerated Graphics Port (AGP) Pro50 or AGP Pro expansion slot

NOTE   Intense3D Wildcat 4110 video card cannot plug into a standard AGP slot.

♦   An open Peripheral Component Interconnect (PCI) slot adjacent to the AGP Pro50 or AGP Pro slot for cooling purposes

♦   32 MB DRAM minimum (64 MB recommended)

♦   Industry-standard, multiple-frequency monitor or a DVI-compliant digital display device

♦   3 MB of free space on the computer's primary system disk for the driver software

Collect Materials and Tools

Make sure you have the following items:

♦   Intense3D Wildcat 4110 video card

♦   Delivery media with the Intense3D Wildcat 4110 video display driver

♦   Flat-head or Phillips screwdriver

♦   Monitor cable supplied with your computer or with the monitor

♦   Your computer's documentation

♦   Grounding wrist strap

Take Anti-static 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.

CAUTION: **Physically remove the power cord from the system and wait 15 to 30 seconds for standby power to dissipate. Damage can occur to add-in components if power is not physically removed from the system during installation procedures.**

♦ Touch the metal chassis of the computer to drain off static electricity before touching the card.

♦ Wear a properly connected grounding wrist strap when handling the card or working in the computer.

♦ Do not wear wool or polyester clothing.

♦ Work in an area with a relative humidity of at least 50 percent.

♦ Keep the card in the anti-static bag until you are ready to install it.

♦ Handle the card as little as possible and only by the edges.

Installing the Video Card

Refer to your computer's documentation for instructions on opening and closing the system, identifying the AGP Pro50 or AGP Pro expansion slot, identifying Peripheral Component Interconnect (PCI) expansion slots, and adding expansion cards.

To install the Intense3D Wildcat 4110 video card:

1. Turn off power to the computer and to the monitor, and disconnect the cables from the computer.

2. Open the computer to gain access to the AGP Pro50 or AGP Pro expansion slot.

3. Remove the existing card. Keep the screws; you will use them to secure the Intense3D Wildcat 4110 card to the chassis.

4. Align the Wildcat 4110 card with the AGP Pro50 or AGP Pro expansion slot, as required. Make sure the gold-fingered connections on the card's edge are aligned properly with the slot connector (see Figure 2; these connectors are labeled on the left side of the image).

5. Push the card into the expansion slot firmly and evenly until it is fully seated in the slot connector.

6. Visually inspect the connection. If it does not appear to be correct, remove and reinstall the card.
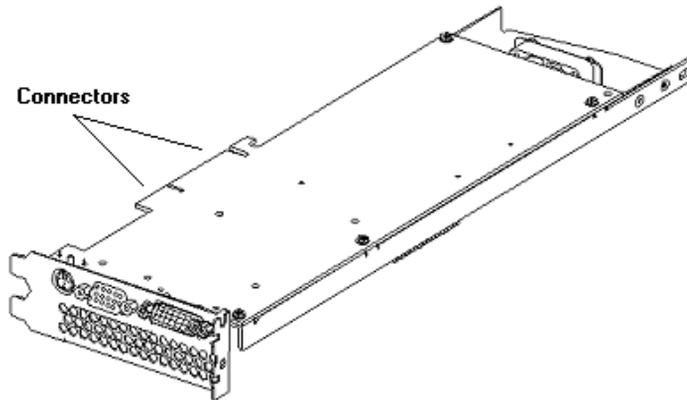
Figure 2. Wildcat 4110 Video Card

7. Use the screws you removed previously to secure the card to the computer's chassis.

8. Close the workstation and reconnect the power cord. See "Connecting the Monitor" in this chapter for instructions on connecting a display device to the Wildcat 4110 video card.

Connecting the Monitor

To connect the monitor:

1. Make sure the power to the computer is turned off.

2. Connect the workstation monitor's video cable to the appropriate output port on the Intense3D Wildcat 4110 video card. See the documentation that came with your monitor for information on the type of connection that is required. Typically, you will connect the monitor cable to the analog video output port (see Figure 3).
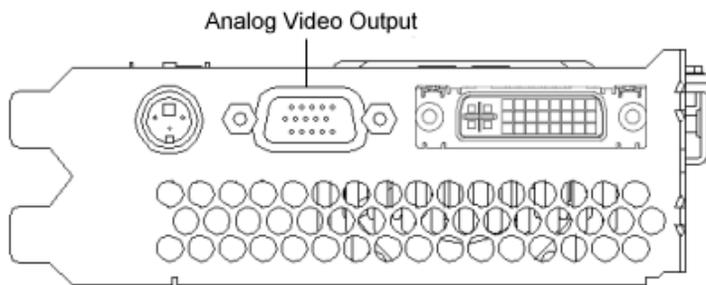

Figure 3. Wildcat 4110 Analog Video Output

NOTE If your monitor does not have a 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 monitor. See the documentation delivered with your monitor for more information.

3. Turn on power to the workstation. If the monitor's Power On LED does not illuminate or the monitor does not display the startup sequence, consult Chapter 4, "Troubleshooting."

NOTE If you installed the video card yourself, the computer will boot into VGA mode. Go to "Installing the Software" in this chapter for instructions on installing the video drivers.

NOTE See "Connecting a Stereo Display Device" in this chapter for instructions on connecting other devices to the video card.

NOTE If you ordered the Intense3D Wildcat 4110 video card with a system, it was installed and configured before shipment. See Chapter 3, "Using the Video Card," for instructions on adjusting the resolution, color depth, and refresh rate.

Installing the Software

If you are installing an Intense3D Wildcat 4110 video card or reinstalling its driver software, take the following steps. Refer to the Microsoft Windows NT documentation and online Help for more information on installing drivers and software application programs.

Make Sure Your Computer is Ready

Make sure your workstation has the following before installing Wildcat driver software:

♦ Microsoft Windows NT Workstation 4.0 operating system with Service Pack 4 (or later)

♦ 3MB of free space on the computer's primary system disk

CAUTION You must have the correct driver for the Windows NT 4.0 operating system. If you are unsure, refer to the README file on the driver delivery media for this information.

If you are reinstalling the Intense3D Wildcat 4110 driver, you must remove the current driver before installing the update.

To remove the existing Intense3D Wildcat 4110 driver:

1. Log on to Windows NT using an account that has administrative privileges.

2. From the operating system Start menu, go to Settings/Control Panel and double-click Add/Remove Programs.

3. On the Add/Remove Programs Properties Install/Uninstall tab, highlight the Intense3D Display Driver and click Add/Remove.

4. Click Yes when prompted to confirm the driver removal, and follow the prompts.

To install the Wildcat 4110 video driver:

1. Log on to Windows NT using an account that has administrative privileges.

2. Insert the delivery media into the appropriate device (for diskettes or CD).

3. From the operating system Start menu, go to Settings/Control Panel/Display/Settings/Display Type/Change.

4. In the Change Display dialog box, click Have Disk.

5. In the Install From Disk dialog box, type the path to the directory that contains the delivery media.

6. In the Change Display dialog box, verify that the Wildcat 4110 driver is highlighted, and then click OK.

7. Click Yes when asked if you want to install a third-party driver.

8. After the driver files are copied, a message that the driver successfully installed displays. Click OK.

9. Click Close to exit the Display Type dialog box, and again to exit the Display Properties dialog box.

10. 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.

11. After the system restarts and you log in, a message displays stating 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. Click OK.

See Chapter 3, "Using the Video Card," for instructions on defining the display properties.

Verify the Default Video Display Driver

To verify the default video display driver:

1. From the operating system Start menu, go to Settings/Control Panel/Display, and click the Settings tab.

2. Click Display Type, then verify that Intense3D Wildcat 4110 is listed under Adapter Type. This indicates that the appropriate driver is installed.

3. Click Cancel to dismiss the Adapter Type list without making any changes.

4. Click Cancel to close the Display Properties dialog box.

Verify the System Startup Version

To verify the default system startup version:

1. From the operating system Start menu, go to Settings/Control Panel/System, and click the Startup/Shutdown tab.

2. Verify that Windows NT Workstation Version 4.x is selected in the Startup list. If it is not, select it from the list and click Apply.

NOTE	Do not select the VGA version of the operating system. The video display runs in VGA mode when the Intense3D Wildcat 4110 graphics driver is not running.

3. Click OK to close the System dialog box.

Check the Video Image

To check the video image:

1. If the Display Properties dialog box is not already displayed, go to the operating system Start menu and select Settings/Control Panel/Display and click the Settings tab.

2. Click Test to test the display resolution.

3. Click OK to dismiss the Display Properties dialog box.

See Chapter 3, "Using the Video Card," for instructions on defining the display properties.

Connecting a Stereo Display Device

The following instructions apply only if you are connecting a stereo video display device to the Wildcat 4110 video card.

To connect a stereo display device:

1. Connect one end of the stereo emitter cable to the input port on your stereoscopic display device.

NOTE	See the documentation delivered with your stereoscopic display device for information on the connectors and proper cables.

2. Connect the other end of the stereo emitter cable to the stereo output port on the Wildcat 4110 video card (see Figure 4).

3. Configure the display settings to enable stereo display. See Chapter 3, "Using the Video Card," for step-by-step instructions.
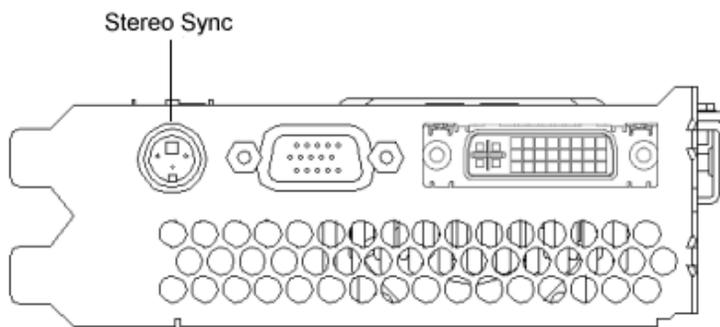

Figure 4. Wildcat 4110 Stereo Output Port

3   Using the Video Card

This chapter contains instructions for configuring the video display and enabling the stereo display.

NOTE   If you ordered this video card with a system, it was configured for use prior to shipment. The following instructions apply only if you purchased the card as an upgrade or add-on.

Configuring the Video Display

Once the drivers are installed properly, the Display Properties dialog box will have two additional tabs: Intense3D Configuration and Intense3D Monitor.

To use the Intense3D Configuration tab:

1. Make sure you are logged into the non-VGA version of Windows NT.

2. Close any open applications.

3. From the operating system Start menu, go to Settings/Control Panel/Display and click the Intense3D Configuration tab if it is not already displayed (see Figure 5).

4. On the Intense3D Configuration tab, click Hardware Information to view current hardware settings; click View Configuration to view the current display configuration; or click Configuration Wizard to modify the current display configuration or create a new one.
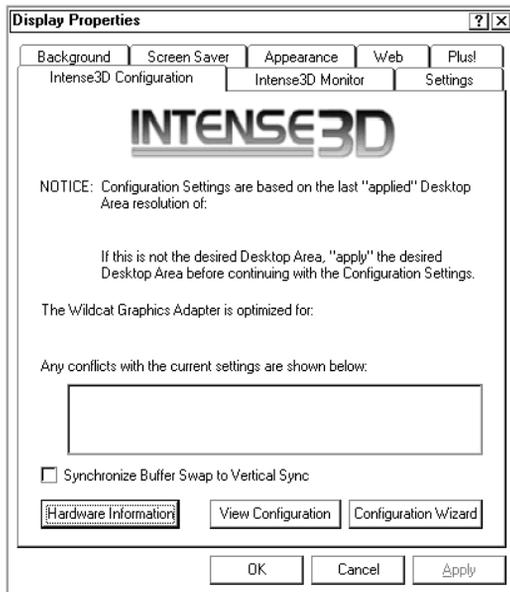
Figure 5. Intense3D Configuration Tab

To use the Intense3D Monitor tab:

1. On the Display Properties dialog box, click the Intense3D Monitor tab (see Figure 6). This tab contains commands for adjusting the resolution, color depth, and refresh rate. See the steps under "Intense3D Configuration Tab" to open the Display Properties dialog box.
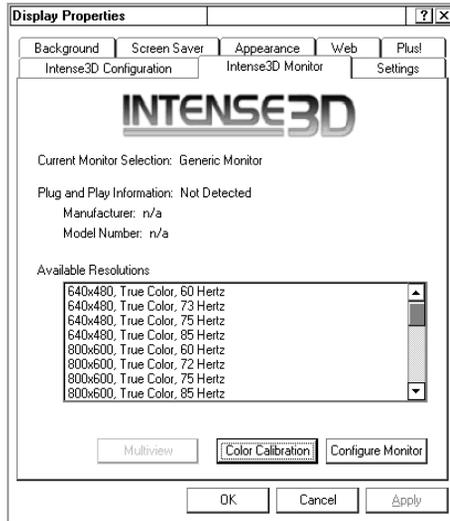
Figure 6. Intense3D Monitor Tab

2. Click Color Calibration to change the color settings (see Figure 7). Make changes, and then click OK to accept the changes and dismiss the Color Calibration dialog box, or click Cancel to close the Color Calibration dialog box without making any changes. You are returned to the Intense3D Monitor Display Properties dialog box.
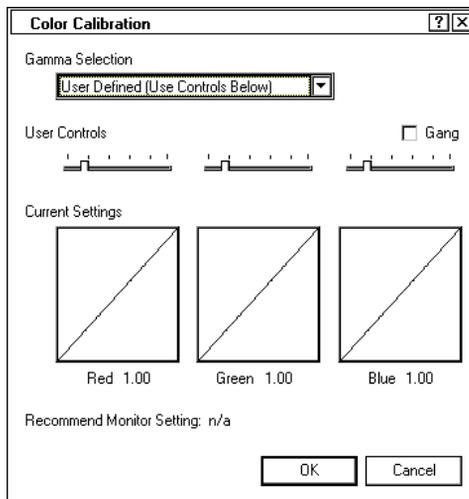

Figure 7. Color Calibration

3. On the Intense3D Monitor Display Properties dialog box, click Configure Monitor to change the display mode, select a monitor type, and change the resolution/refresh rate (see Figure 8). Once you have made the changes you require, click OK to accept the new configuration and dismiss the Configure Monitor dialog box. You are returned to the Intense3D Monitor Display Properties dialog box.

4. Click OK on the Display Properties dialog box to accept the changes, or click Cancel to close the dialog box without accepting any modifications.

5. Restart the workstation if you are prompted to do so. Most changes will take effect without restarting.

NOTE See Appendix A, "Specifications," for a list of available monitor resolutions.

NOTE See "Enabling Stereo Display," for instructions on changing the Display Mode.
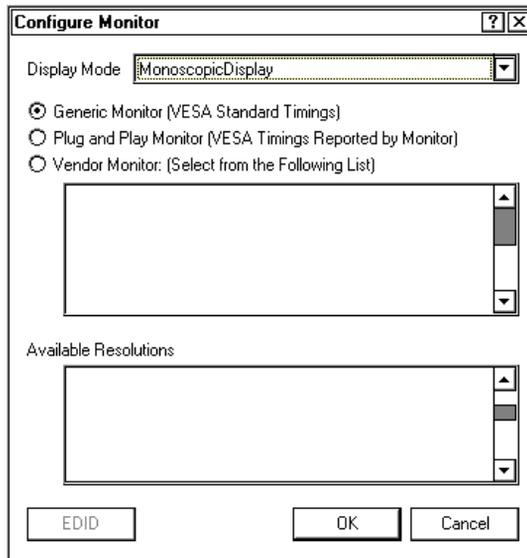
Figure 8. Configure Monitor

Enabling Stereo Display

If you connect a device to the stereo port on the Wildcat 4110 card, you must change the display mode to view in stereo. See Figure 2 in Chapter 2, "Setup," for an illustration of the stereo output port.

NOTE The Display Properties dialog box must be displayed. See "Configuring the Video Display" in this chapter for instructions on activating the Display Properties dialog box and selecting the Intense3D Monitor tab.

To enable stereo display:

1. Make sure your stereo display device is properly connected to the stereo output port on the Wildcat 4110 card. See Chapter 2, "Setup," for more information.

2. On the Intense3D Monitor tab under Display Properties, click Configure Monitor. The Configure Monitor dialog box displays (see Figure 8, above).

3. Select one of the Stereoscopic Display modes from the Display Mode pulldown, then click OK. You are returned to the Display Properties dialog box.

4. If you are prompted with the following message: "The selected monitor cannot display the current desktop area. Select a new resolution before applying these changes," click OK then select a resolution from the list of available resolutions.

5. Click OK if the display is correct and you wish to keep the new settings. The Display Properties dialog box is dismissed.

6. Click OK to accept the new display mode and dismiss the Display Properties dialog box.

NOTE   You must disable stereo mode when you no longer wish to view in stereo. Follow the steps above, and select Monoscopic Display under Display Mode to disable stereo mode.

4 Troubleshooting

This chapter describes common problems and solutions, how to get a usable video resolution, how to reinstall the video driver software, and how to get help.

Common Problems and Solutions

Monitor Checks

Problem	Cause	Solution
Display is black, not synchronized, or distorted	Display properties are not set correctly.	Use the Last Known Good option, or restart Windows NT in VGA mode and select a supported resolution and refresh rate. Instructions for both of these solutions are provided later in this chapter.
Monitor does not support a selected resolution or refresh rate	The selected settings are not compatible with your monitor and video card.	Restart Windows NT in VGA mode and select a supported resolution and refresh rate.
		Reinstall the video driver.
There is no VGA boot screen	The connections may not be set up properly.	Verify that the monitor cable is securely fastened to the video card.
		Make sure the monitor and computer are plugged into electrical outlets and are receiving power.
		Check any other external display connectors, if applicable.
		Verify that the video card is seated properly in its expansion slot.
Screen image is off-center	Monitor settings may be configured improperly.	Refer to your monitor's documentation for instructions on making horizontal and vertical adjustments.

Color balance is wrong	Monitor settings may be configured improperly.	Refer to your monitor's documentation for instructions on adjusting the color display.
There is no picture	Improper software setup or hardware problem.	Verify that the display properties are configured correctly 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. See "Obtaining a Usable Video Resolution" in this chapter for instructions on determining if you have a defective unit.
Screen image defects appear	Possible indication of a hardware problem.	Run diagnostics to check the graphics hardware.

Diagnostics

Diagnostics utilities for checking the video card and instructions for using these utilities may be available from your computer vendor.

Getting a Usable Video Resolution

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, press CTRL+ALT+DEL but do not log on to the Windows NT operating system. Instead, shut down then use the Last Known Good option to return to the last known good configuration recorded by Windows NT.

Last Known Good Option

To use the last known good option:

1. Restart the system.

2. Press the space bar when prompted to invoke the Last Known Good menu.

If this option fails to correct the video display problem, restart the system in VGA mode and reconfigure your display to 640 x 480 resolution, 60 Hz refresh rate. Then restart Windows NT again in non-VGA mode.

Restarting the System in VGA Mode

To restart in VGA mode:

1. Restart the system.

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

Determining a Defective Unit

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 system.

CAUTION: Always turn off the power to the system 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, see Getting Help in this section.

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, see Getting Help in this section.

Reinstalling the Video Driver

Refer to the Microsoft Windows NT documentation and online Help for more information on installing drivers and software application programs.

CAUTION You must have the correct driver for the Windows NT 4.0 operating system. If you are unsure, refer to the README file on the driver delivery media for this information.

If you are reinstalling the Intense3D Wildcat 4110 driver, you must remove the current driver prior to installing the update.

To remove the existing Intense3D Wildcat 4110 driver:

1. Log on to Windows NT using an account that has administrative privileges.

2. From the operating system Start menu, go to Settings/Control Panel and double-click Add/Remove Programs.

3. On the Add/Remove Programs Properties Install/Uninstall tab, highlight the Intense3D Display Driver and click Add/Remove.

4. Click Yes when prompted to confirm the driver removal, and follow the prompts.

6. On the Add/Remove Programs Properties Install/Uninstall tab, highlight the Intense3D Display Driver and click Add/Remove.

7. Click Yes when prompted to confirm the driver removal, and follow the prompts.

To reinstall the video driver:

1. Log on to Windows NT using an account that has administrative privileges.

2. Insert the delivery media into the appropriate device (for diskettes or CD).

8. From the operating system Start menu, go to Settings/Control Panel/Display/Settings/Display Type/Change.

3. In the Change Display dialog box, click Have Disk.

4. In the Install From Disk dialog box, type the path to the directory that contains the delivery media.

5. In the Change Display dialog box, verify that the Wildcat 4110 driver is highlighted, and then click OK.

6. Click Yes when asked if you want to install a third-party driver. The files are copied from the delivery media.

7. After the driver files are copied, a message that the driver successfully installed displays. Click OK.

8. Click Close to exit the Display Type dialog box.

9. Click Close to exit the Display Properties dialog box.

10. 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.

11. After the system restarts and you log in, a message displays stating 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. Click OK.

Getting Help

If the troubleshooting procedures in this document do not resolve the problem, please contact your vendor for technical assistance (refer your system documentation for instructions). For information about your warranty, see your system documentation.

A   Specifications

General

- ♦ Manufacturer—Intense3D
- ♦ Model number—Wildcat 4110

Functional

- ♦ System—If you ordered this video card with a system, it was preinstalled and configured for use in your system before shipment.
- ♦ Interface—AGP Pro50 and AGP Pro
- ♦ Graphic controller—High-speed Wildcat chipset technology
- ♦ DAC speed—220 MHz
- ♦ Data width—Frame buffer 128 bits; texture buffer 64 bits; DirectBurst 64 bits
- ♦ Connectors—3-pin miniDIN stereo sync output; 15-pin D-sub analog video output; DVI-I output
- ♦ Interrupts—PCI-assigned; Interrupt A for Wildcat 4110
- ♦ DMA channels—PCI, AGP 2x
- ♦ Video memory—Frame buffer 64 MB; texture buffer 64 MB; DirectBurst 8 MB

Resolutions

Supported monitor resolutions and refresh rates may vary depending on the monitor.

Monitor Resolutions (bits per pixel)	Refresh Rates (Hz)
1920x1200 (96)	60
1600x1200 (96, 128)	60, 65, 70, 75, 80
1280x960 (96, 128)	60, 75, 85
1280x1024 (96, 128)	60, 75, 85
1024x768 (96, 128)	60, 75, 85
800x600 (96, 128)	60, 75, 85
640x480 (96, 128)	60, 75, 85

3D Performance

Performance numbers reflect maximum hardware rate. Numbers may vary depending on the application.

♦   3D Gourad-shaded triangles, Z-buffered, 15-pixel—6.0 M tri/sec

♦   3D Gourad-shaded triangles, Z-buffered, 25-pixel—4.3 M tri/sec

♦   3D Vectors, solid color, 10-pixel—12.0 M vec/sec

Dimensions

♦   Height—1.01 inches

♦   Length—13.34 inches

♦   Width—4.25 inches

Slots Required

♦   One AGP Pro50 or one AGP Pro slot

♦   One adjacent PCI slot for cooling purposes

Power Requirements

♦   50 W maximum

♦   12.0 V 140 mA maximum

♦   5.0 V 1.8 A maximum

♦   3.3 V 12.8 A maximum

B Connectors

The Intense3D Wildcat 4110 is an AGP Pro50 card designed for systems that have a 50-Watt AGP Pro50 slot or a 110-Watt AGP Pro slot.

NOTE   The Intense3D Wildcat 4110 cannot plug into a standard AGP slot.

**NOTE**   If you ordered this video card with a system, it was installed and configured for use prior to shipment.
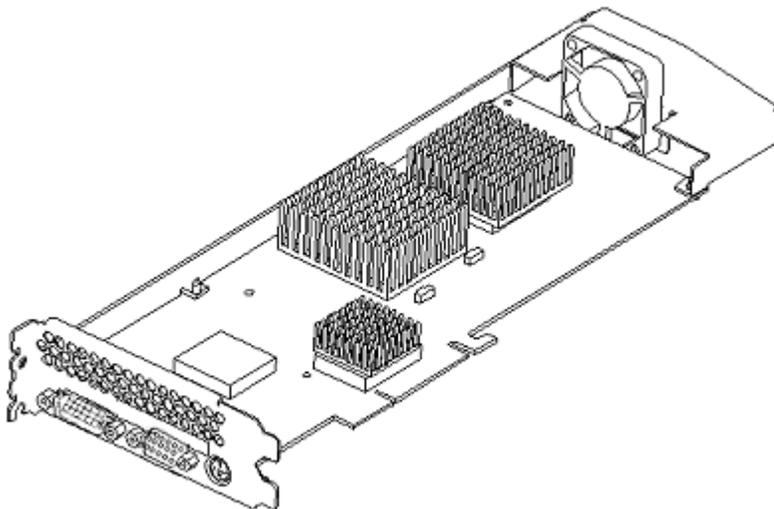
Figure 9. Bottom View
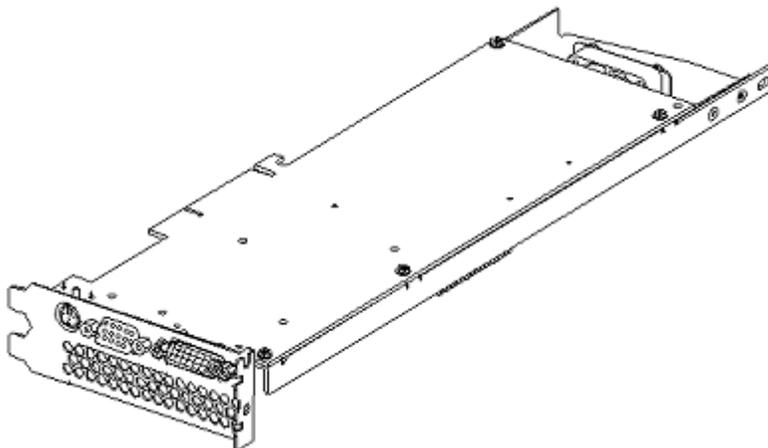
Figure 10. Top View
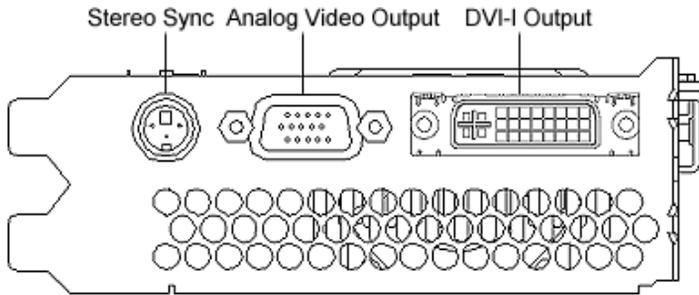
Figure 11. Connectors

Stereo Sync Output

The stereo port (female, 3-pin, mini-DIN connector) provides connection to a LCD shutter glasses emitter module or to other stereo shutter devices.

Analog Video Output

The video port (female, 15-pin, D-SUB connector) provides connection to an analog CRT display.

DVI-I Output

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. This port supports pixel rates up to 112 MHz using the SII150A PanelLink device from Silicon Image. The port is 100 percent compliant to the DVI specification, and supports digital and analog displays.