

WILDCAT REALiZM[®]

3DLABS WILDCAT REALiZM USER'S GUIDE

WILDCAT REALiZM 800 WILDCAT REALiZM 500
WILDCAT REALiZM 200 WILDCAT REALiZM 100

©Copyright 2005 by 3Dlabs – A Creative Company

3Dlabs and Wildcat are registered trademarks, and Realizm, SuperScene, and DirectBurst are trademarks of 3Dlabs. Pentium and Xeon are registered trademarks of Intel. OpenGL is a registered trademark of SGI. AutoCAD is a registered trademark of AutoDesk Inc. Microsoft, Direct X, Windows 2000, and Windows XP are registered trademarks of the Microsoft Corporation. Athlon, Opteron, and 3DNow! are registered trademarks of AMD. All other trademarks and registered trademarks are the property of their respective holders.

Caution: Changes or modifications to your 3Dlabs Graphics Accelerator Card not expressly approved by 3Dlabs, Inc. voids the user's warranty.

FCC Notice: 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 in a residential installation. This equipment generates, uses, and can radiate radio frequency energy. If product is not installed and used in accordance with the instruction guide, 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, the user is encouraged to try to correct the interference by one or more of the following measures:

1. Re-orient or relocate the receiving antenna.
2. Increase the separation between the equipment and receiver.
3. Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
4. Consult 3Dlabs or an experienced radio/TV technician for assistance.

Compliance with FCC Rules requires that a shielded cable be used to connect to other equipment. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: 1) this device may not cause harmful interference, and 2) this device must accept any interference received, including interference that may cause undesired operation.

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

3Dlabs, Inc. makes no representation that the use of its products in the manner described in this publication will not infringe on existing or future patent rights, nor do descriptions contained in this publication imply the granting of licenses to make, use, or sell equipment or software in accordance with the description.

FOR USE ONLY WITH UL LISTED INFORMATION TECHNOLOGY EQUIPMENT (ITE) HAVING INSTRUCTIONS ON HOW TO ADD/REMOVE ADD ON DEVICES.

Specifications subject to change without notice.

P/N 62-000012-001

Rev C

Contents	iii
Introduction	5
Welcome to 3Dlabs!	5
System Requirements	5
Setup	6
Preparing for Installation.....	6
Before you begin your installation	6
Installing your Wildcat Realizm Graphics Accelerator Card.....	6
Connecting Power to the Graphics Card.....	8
Connecting power to the Wildcat Realizm 800.....	8
Connecting power to the Wildcat Realizm 200 or 100	9
If you are upgrading the graphics card in your system.....	10
Connecting the Display	11
Connecting a DVI monitor	12
Connecting a VGA monitor	12
Attaching a Stereo Device.....	13
Installing the Driver Software	14
Ready your computer.....	14
Removing an existing driver under Windows 2000	14
Removing an existing driver under Windows XP	14
Installing the Wildcat Realizm driver	15
Verify the Default Video Display Driver	15
Verifying under Windows 2000	15
Verifying under Windows XP.....	16
Verify the System Startup Version	16
Verifying under Windows 2000	16
Verifying under Windows XP.....	16
Registering Your 3Dlabs Graphics Accelerator Card.....	16
Software Configuration	17
The 3Dlabs Graphics Accelerator Card Driver	17
The Task Bar-based Configuration Manager	17
The Display Control Panel.....	17
In the Display Properties window:	18
Configuring OpenGL Options	19
Full-scene Antialiasing	19
Anisotropic Filtering	20
Buffer Swap Mode	20

Wait for Vertical Sync	20
Stereo Output	20
Configuring your 3Dlabs Graphics Accelerator Card for Stereo Viewing	21
To set up and configure stereo viewing:	21
Configuring DirectX Options.....	22
Full-scene Antialiasing	22
Wait for Vertical Sync	22
Configuring Display Settings	23
Configuring Display Rotation Options	24
Orientation	24
Display Rotation.....	24
Configuring Display Configuration	26
Configuring Dual Head Mode.....	26
Cloning your desktop	26
Advanced Display Configuration.....	27
Configuring Edge Blending and Overlap Options	27
Pixel Overlap	27
Blending Type.....	28
Optimize Settings	29
Acuity Applications: 3Dlabs Acuity Windows Manager.....	29
Configuring Acuity Windows Manager Options.....	30
Application Windows.....	31
Dialog Boxes.....	31
Effects.....	32
Taskbars.....	32
Desktop	33
HotKeys	34
Appendix A- Enabling Multiview and Genlock	35
Setting up Multiview.....	35
Configuring the Driver for Genlock.....	37
Appendix B – Specifications	38
Specifications	38
Supported Resolutions.....	42
Appendix C – Software License.....	43
SOFTWARE LICENSE AGREEMENT	43
Software License and Restrictions.....	43
Limited Warranty.....	43
Limited Liability	44
Restricted Rights Notice	44
Termination.....	44
General.....	44
Appendix D –Regulatory Statements	45

INTRODUCTION

Welcome to 3DLabs!

Thank you for selecting a 3DLabs® Wildcat® Realizm™ Graphics Accelerator Card!

This User Guide provides information about Wildcat Realizm Graphics Accelerator Cards. In addition to this guide, you are strongly encouraged to use the online help included in the 3DLabs driver software Help screens.

System Requirements

	Wildcat Realizm 100	Wildcat Realizm 200	Wildcat Realizm 500	Wildcat Realizm 800
System Hardware	Intel® Pentium® and Xeon®, AMD Athlon™ or compatible processor (Athlon 64, Pentium4, Xeon, Xeon processors with EM64T or Opteron® recommended for best performance). NOTE: Wildcat Realizm 800 requires PCI Express High-end power support.			
Operating System	Microsoft® Windows® 2000, Windows XP, or Red Hat® Linux® Enterprise Edition (version 3.0 or later)			
Bus Connector	One AGP (3.0) slot with adjacent empty slot for cooling solution (AGP 8x recommended)		One x16 PCI Express slot	One x16 PCI Express slot with adjacent empty slot for cooling
External Power Support	Auxiliary system power connection		None	PCI Express High-end support 150W-ATX Specification 1.0
Available System Power	75 Watts	85 Watts	53 Watts	150 Watts
Recommended System Memory	512 MB			
Free Disk Space	25 MB recommended for driver software and optimal performance.			

For detailed information on your operating system, refer to the documentation delivered with the system.

Preparing for Installation

NOTE: *If you purchased your Wildcat Realizm Graphics Accelerator Card as part of a system, it was preconfigured to operate in your system before shipment. No other modifications are necessary. Also, your system's graphics accelerator drivers were installed before shipment and are operative when you receive the system. No further installation or configuration is necessary unless you purchased a custom kit or need to reinstall your video card. Store the driver delivery media that came with your system in a safe place in case you ever need to reinstall the drivers.*

Before you begin your installation

Save any work in progress, exit all open applications, and disable any software you may have running such as virus scan software. Always back up your system before you install any new hardware or software.

1. Turn off power to the computer.

IMPORTANT: *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.*

2. Take every possible precaution against static electricity as you prepare to install the card. Static can damage components. If an anti-static wrist strap was included in your box, please use it during hardware installation. You should also try to work in a static free area (such as on a tile floor rather than carpet).
 - Touch the metal chassis of the computer to drain off any static electricity before touching the card.
 - 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 your Wildcat Realizm Graphics Accelerator Card

Refer to your computer's documentation for instructions on opening and closing the computer, identifying the AGP 8x or PCI Express expansion slots and adding expansion cards.

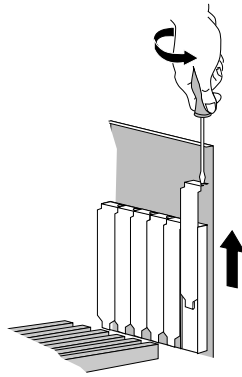
SETUP

NOTE: *If you are replacing a graphics card, be sure to uninstall your old video driver software before tuning off your system and removing your old graphics card. Refer to Installing the Driver Software later in this chapter for details on uninstalling drivers.*

1. Turn off power to the computer and to the monitor and disconnect the cables from the computer (follow the instructions under “Before you begin your installation”).
2. Remove the cover from your system so you can access the slots into which you will be installing your Wildcat Realizm Graphics Accelerator Card. Check your system documentation to locate the appropriate slots in which to install your card.

IMPORTANT: *All Wildcat Realizm 100, 200 and 800 cards must have an adjacent slot empty for cooling purposes. You must also have the appropriate power supply wattage for the Wildcat Realizm card you are installing. Please check you system and/or your system documentation for these specifications.*

3. If you have not already removed any existing graphics card(s) from your system, then do so now.



4. If necessary, remove the back panel covers from the slot(s) into which you are installing your Wildcat Realizm Graphics Accelerator Card, using a Phillips-head screwdriver.
5. If an anti-static wrist strap was included in your box, attach it to your wrist and attach the other end to a bare metal (as opposed to painted or sticker covered) surface on your system's chassis.
6. Remove your Wildcat Realizm Graphics Accelerator Card from its anti-static packaging. Write down the serial number for product registration and future use. The serial number is located on a board label and looks similar to this:



7. Before you install your Wildcat Realizm graphics card, take special care to ensure that the motherboard and system you are placing the graphics card into do not violate the physical space

SETUP

that the graphic card requires. Also, ensure that there is space for drive cable connections to the motherboard and existing power or communication cable routings. For some systems, the extender bracket on the back of the Wildcat Realizm graphics card may need to be removed for proper installation.

IMPORTANT: *The Wildcat Realizm 800 is a full-length, double-width, graphics card complying with the PCI Express™ x16 Graphics 150W-ATX Specification 1.0. You should verify that the motherboard and the system in which you are installing the graphics card comply with this specification. This will ensure that there are no physical conflicts to prevent proper installation of the Wildcat Realizm 800.*

8. Place the card into the correct slot, seat firmly, and secure the card to the chassis. See your system documentation for instructions on securing the card to the chassis. Loose cards and connections can cause grounding and operating problems.

NOTE: *The cooling fan on the graphics card must have sufficient clearance to ensure proper airflow. Blocked airflow can cause the graphics card to overheat.*

Ensure there are no cables or wires around the fan that could block airflow to the card or catch in the fan, preventing the fan blades from turning properly.

Connecting Power to the Graphics Card

WARNING: You MUST CONNECT AUXILIARY POWER TO THE WILDCAT REALIZM 100, 200, OR 800 GRAPHICS CARD. FAILING TO FOLLOW THE INSTRUCTIONS FOR CONNECTING THE POWER SUPPLY TO THE CARD WILL DAMAGE THE CARD.

NOTE: THE WILDCAT REALIZM 500 DOES NOT REQUIRE AN AUXILIARY POWER CONNECTION.

Before you restore power to the system, you must connect auxiliary power *from* the system power supply to the graphics card (the Wildcat Realizm 500 is an exception to this). If you do not have the available cable(s) to plug into the graphics card, you probably do not have a power supply which will support the graphics card. See “System Requirements” in the *Introduction* section for the specific power supply requirement for your card.

Connecting power to the Wildcat Realizm 800

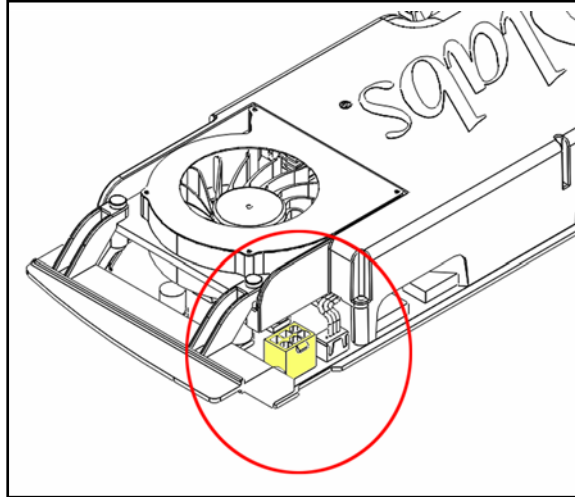
The Wildcat Realizm 800 (which conforms to the PCI Express™ x16 Graphics 150W-ATX Specification 1.0 for graphics accelerators) uses power from the system power supply via a High-End power connector specifically designed to plug directly into a x16 PCI Express graphics card.

If your system power supply does not have the High-End power connector, it does not conform to the PCI Express High-End power specification. **Before you continue installation of your card, you must ensure your system has the minimum recommended power requirements.** In addition, you will need to use the power Y cable supplied with your card to connect the to the system power supply. The power Y cable will allow you to connect two independent power cables from the system power to supply power to the card. The cable connectors must be the initial connection closest to the power supply.

WARNING: FAILURE TO FOLLOW THE INSTRUCTIONS BELOW WILL JEOPARDIZE THE FUCNTIONALITY OF THE GRAPHICS CARD.

SETUP

1. Locate the power connection on the Wildcat Realizm 800 (see diagram below). Connect the single end of the power Y cable to the Wildcat Realizm 800.

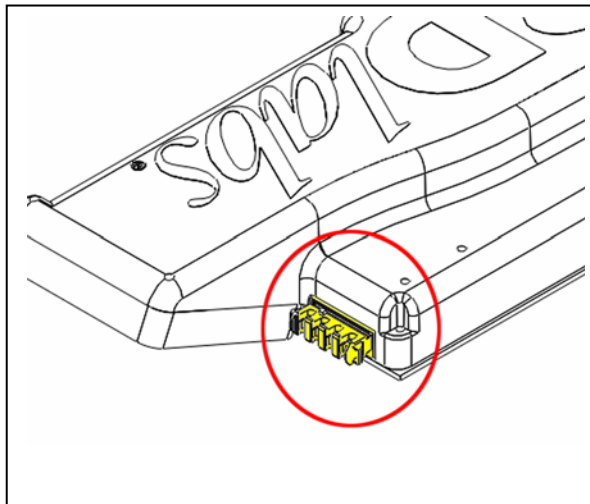


2. Locate a single connector each on two independent system power supply cables. The cables must be independent of one another and the connectors must be the first ones closest to the power supply.
3. Plug each of the two connectors from the power Y cable (the one you plugged into the Wildcat Realizm 800) into the two system power supply cables.
4. Remove the anti-static wrist strap, if used, and replace the cover on your system.
5. Reconnect the power cord.

Connecting power to the Wildcat Realizm 200 or 100

WARNING: FAILURE TO FOLLOW THE INSTRUCTIONS BELOW WILL JEOPARDIZE THE FUNCTIONALITY OF THE GRAPHICS CARD.

1. Locate the power connection on the Wildcat Realizm 200 or 100 (see diagram below).



SETUP

2. Locate an unused system power supply cable. If your power supply cable cannot reach the card, you will have to purchase a longer cable.
3. Connect the power cable to the graphics card. Remove the anti-static wrist strap, if used, and replace the cover on your system.
4. Reconnect the power cord.

If you are upgrading the graphics card in your system

NOTE: These instructions may be different from how you normally upgrade your graphics card or other devices, but have been found to be the best method of insuring a successful installation of your new hardware and software.

1. Uninstall the drivers for your old graphics card. Refer to your old graphics card's documentation or Help files for instructions on removing or uninstalling the old graphics card's driver software.
2. Remove the existing graphics card from your system. To install your Wildcat Realizm Graphics Accelerator Card, see the hardware installation instructions above.
3. Install the Wildcat Realizm Graphics Accelerator Card driver software; see "Installing the Driver Software" later in this chapter.

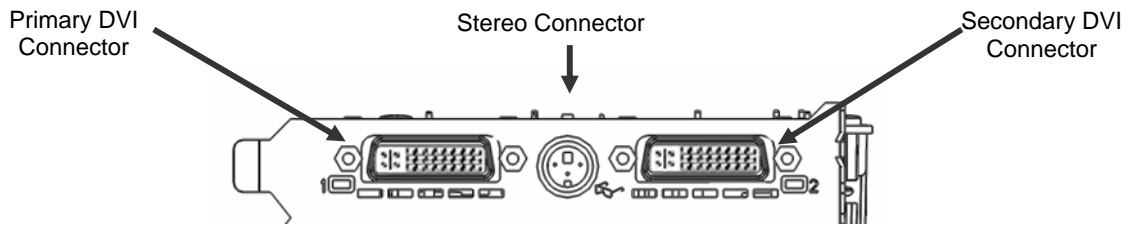
Connecting the Display

Display Connector Support

The following chart outlines the different display configurations available with Wildcat Realizm:

Wildcat Realizm 800	<p>Two DVI-I analog/digital video output ports – dual-link DVI capable supporting the following configurations:</p> <ul style="list-style-type: none"> ▪ One or two analog display devices ▪ One or two single-link digital display devices ▪ One or two dual-link digital display devices ▪ One single-link or one dual-link digital display devices and one analog display device <p>Stereo Sync Support</p> <ul style="list-style-type: none"> ▪ VESA-standard frame sequential stereo ▪ 3-pin, mini-DIN connector provides connection to LCD shutter glasses or other stereo shutter devices
Wildcat Realizm 500	<p>Two DVI-I analog/digital video output ports – single-link DVI capable supporting the following configurations:</p> <ul style="list-style-type: none"> ▪ One or two analog display devices ▪ One or two single-link digital display devices ▪ One single-link display device and one analog display device <p>Stereo Sync Support</p> <ul style="list-style-type: none"> ▪ VESA-standard frame sequential stereo ▪ 3-pin, mini-DIN connector provides connection to LCD shutter glasses or other stereo shutter devices
Wildcat Realizm 200	<p>Two DVI-I analog/digital video output ports – dual-link DVI capable supporting the following configurations:</p> <ul style="list-style-type: none"> ▪ One or two analog display devices ▪ One or two single-link digital display devices ▪ One or two dual-link digital display devices ▪ One single-link or one dual-link digital display device and one analog display device <p>Stereo Sync Support</p> <ul style="list-style-type: none"> ▪ VESA-standard frame sequential stereo ▪ 3-pin, mini-DIN connector provides connection to LCD shutter glasses or other stereo shutter devices
Wildcat Realizm 100	<p>Two DVI-I analog/digital video output ports – single-link DVI capable supporting the following configurations:</p> <ul style="list-style-type: none"> ▪ One or two analog display devices ▪ One or two single-link digital display devices ▪ One single-link display device and one analog display device <p>Stereo Sync Support</p> <ul style="list-style-type: none"> ▪ VESA-standard frame sequential stereo ▪ 3-pin, mini-DIN connector provides connection to LCD shutter glasses or other stereo shutter devices

SETUP



Wildcat Realizm Input/Output panel

Connecting a DVI monitor

1. Make sure the power to the computer is turned off.
2. See the documentation that came with your monitor for information on the type of connection that is required. Your monitor cable will have either a Digital Video Interface (DVI)-I connector or a 15-pin VGA connector depending on monitor type. If your monitor is a VGA monitor, see “Connecting a VGA monitor” in this chapter.
3. Connect the workstation monitor’s video cable to the primary DVI-I port on the Wildcat Realizm video card. This connector is labeled “1” in the picture above and on the I/O panel of your card.

CAUTION: *If you are connecting only one monitor to the Wildcat Realizm, you must plug that monitor into the Primary DVI-I port (labeled “1” on the I/O panel of your card).*

NOTE: *If you are connecting an additional monitor to the Wildcat Realizm, connect the additional workstation monitor’s video cable to the secondary DVI-I port. See “Enabling the Dual Monitor Feature” later in this document for information on configuring dual displays.*

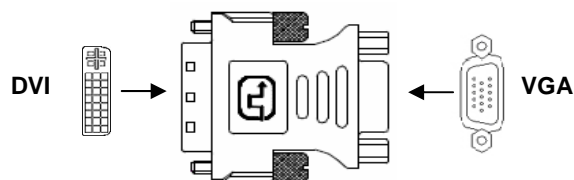
Connecting a VGA monitor

NOTE: *You must use a DVI-to-Analog adapter – included with your card – to connect a VGA monitor to the Wildcat Realizm.*

1. Connect the monitor’s 15-pin VGA connector to the VGA end (see below) of the DVI-to-Analog adapter.
2. Connect the DVI-I end of the adapter to the primary DVI-I port (label “1”) on the 3Dlabs Wildcat Realizm video card.

NOTE: *If you are connecting both a VGA and digital flat panel monitor, you must connect the VGA monitor to the primary DVI-I port (labeled “1”).*

SETUP



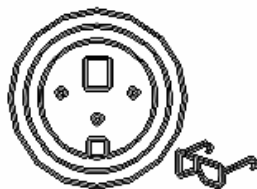
NOTE: *If your monitor does not have a built-in video cable, use a shielded video cable with either a DVI-I receptacle or a 15-pin VGA video connector (with adapter) at one end for the video output port on the card, and the appropriate connectors at the other end for the video input port on the monitor. See the documentation delivered with your monitor for more information.*

NOTE: *If you ordered the Wildcat Realizm 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.*

Attaching a Stereo Device

Power off your system and connect the stereo hardware to the round, stereo connector on the card. See the documentation that came with your stereo hardware for information on how to use stereoscopic display. Plug in and start up your system, including peripherals, and log on to your operating system.

NOTE: *To configure the display settings for stereo display, see Chapter 3, "Using the Video Card" for step-by-step instructions.*



3-Pin Mini-DIN Stereo Connector

Installing the Driver Software

NOTE: *If you received your Wildcat Realizm Graphics Accelerator with a system, the graphics drivers were installed before shipment. This section only applies if you purchased your Wildcat Realizm as an upgrade, are reinstalling the driver, or are updating the operating system.*

Ready your computer

- Make sure your workstation has the correct system requirements for the card and driver installation. See “System Requirements” in the *Introduction* section.
- Save any work in progress, exit all open applications, and disable any software you may have running such as virus scan software. Always back up your system before you install any new hardware or software.

IMPORTANT: You must have the correct Wildcat driver for the Windows operating system you are running. If you are unsure, refer to the *README.TXT* file located on the driver delivery media for this information. Refer to Microsoft Windows documentation and online Help for more information on installing drivers and software application programs.

If you are installing your Wildcat Realizm graphics card into a Linux Operating System, please see the 3Dlabs driver download area for driver and installation instructions. This information can be found at <http://www.3dlabs.com/support/drivers/> Removing an existing driver under Windows 2000

1. Log on to Windows 2000 using an account that has administrative privileges. Please consult your system administrator or Microsoft Windows 2000 User's Manual for more information on Administrator privileges.
2. From the Start menu, go to Settings/Control Panel and click Add/Remove Programs.
3. Under Change or Remove Programs, highlight the current Display Driver and click Change/Remove.
4. Click Yes when prompted to confirm the driver removal, and follow the prompts to complete the driver removal.
5. Click OK when notified that the driver removal is complete and reboot your system before installing the new Wildcat Realizm driver.

Removing an existing driver under Windows XP

1. Log on to Windows XP using an account that has administrative privileges. Please consult your system administrator or Windows XP User's Manual for more information on Administrator privileges.

SETUP

2. From the Start menu, go to Control Panel.
3. Under Change or Remove Programs, highlight the current Display Driver and click Change/Remove.
4. Click Yes when prompted to confirm the driver removal.
5. Click OK when notified you must reboot your system for driver removal to occur and reboot your system before installing the new Wildcat Realizm driver.

Installing the Wildcat Realizm driver

NOTE: We recommend downloading the latest drivers from our website. Custom drivers for specific applications are located on our web site.

1. A user with Windows Administrator privileges must install this driver. Please consult your system administrator or Microsoft operating systems User's Manual for more information on Administrator privileges.
2. Start Windows. If the *Found New Hardware Wizard* appears, click Cancel to dismiss the dialog box. In Windows XP, dismiss the balloon asking if you want Windows XP to set your resolution.
3. Locate the driver delivery media, which contains the 3Dlabs Wildcat Realizm driver. Insert the media in the appropriate drive or change directories to locate the driver.
4. In the Wildcat Realizm Driver Installation Message dialog box, click OK to begin the driver install procedure.
5. You must restart your workstation for the new settings to take effect. Remove the delivery media from the disk drive (if applicable). Click Yes to restart the workstation. In Windows XP, choose Log off, then choose Turn off computer, then Restart.
6. Under Microsoft Windows 2000: on the first occasion that you install the driver you will be asked to reboot a second time so that a dual head driver can be registered for your Wildcat Realizm card. This will allow you to run in dual head mode with two monitors should you wish to – see the “Configuring Display Settings” section of this manual for further details. Subsequent driver installs will only require a single reboot.
7. Under Microsoft Windows XP: the dual head driver will already be registered and a second reboot is not required.

Verify the Default Video Display Driver

Verifying under Windows 2000

1. From the Windows Start menu, go to Settings/Control Panel/System/Hardware/Device Manager.
2. Under Display Adapters, verify that the Wildcat Realizm device is listed. This indicates that the appropriate driver is installed.
3. Exit the Device Manager and Control Panels.

Verifying under Windows XP

1. From the Windows Start menu, go to Control Panel/Performance and Maintenance/System/Hardware/ Device Manager.
2. Under Display Adapters, verify that the Wildcat Realizm device is listed. This indicates that the appropriate driver is installed.
3. Exit the Device Manager and Control Panels

Verify the System Startup Version

Verifying under Windows 2000

1. From the operating system Start menu, go to Settings/Control Panel/System/Advanced.
2. Click Startup and Recovery.
3. On the Startup and Recovery dialog box, verify that "Microsoft Windows 2000 Professional" is the listed as the Default operating system. It is IMPORTANT that your operating system matches the driver you installed. Click OK.
4. Click OK again to close the System Properties dialog box.

Verifying under Windows XP

1. From the operating system Start menu, go to Control Panel/Performance and Maintenance/System/Advanced. This is different if you run in Classic View and instructions should be as for Windows 2000.
2. Click the Settings button under Startup and Recovery.
3. On the Startup and Recovery dialog box, verify that "Microsoft Windows XP Professional" is the listed as the Default operating system. It is IMPORTANT that your operating system matches the driver you installed. Click OK.
4. Click OK again to close the System Properties dialog box.

Registering Your 3Dlabs Graphics Accelerator Card

When you register your 3Dlabs Graphics Accelerator Card you:

- Activate your warranty
- Receive notification of software updates
- Qualify for technical support

Register on-line once your hardware and software installations are complete.

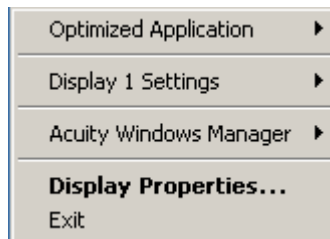
- Go to <http://www.3dlabs.com> and click on the support link, then the register link. Fill out the registration form that appears on your screen, and click Submit when you are finished.

The 3Dlabs Graphics Accelerator Card Driver

The 3Dlabs driver software lets you optimize the working relationship between your card, your system, and your applications. The 3Dlabs Display Control Panel allows you to customize and create driver settings. The Taskbar-based Configuration Manager provides quick and convenient access to most of the Display Control Panel features, and allows you to quickly switch between alternative driver settings.

The Task Bar-based Configuration Manager

When you install your 3Dlabs Graphics Accelerator Card and software, a small yellow box with “3D” appears in your system tray, also called the task bar. Click the logo with your right mouse button to access the Display Configuration Manager and its shortcuts to these configuration tools:



- *Optimized Application* enables you to quickly configure your graphics adapter to use optimal settings for a specific application.

NOTE: Changing these settings can overwrite changes made to the OpenGL or DirectX pages. It is advisable to select an Optimized Application before making changes to the other pages.

- *Display 1 Settings* brings up a pop-up list of supported resolutions. Each resolution has an associated pop-up list of available refresh rates. If you are in dual monitor mode, then *Display 1 Settings* and *Display 2 Settings* will appear.
- *Acuity Windows Manager* allows you to enable, disable, and change the properties of the 3Dlabs Acuity Windows Manager.
- *Display Properties* reaches the display control panel.
- *Exit* closes the dialog box.

The Display Control Panel

Access the configuration tools through the Display Properties Control Panel via one of the following options:

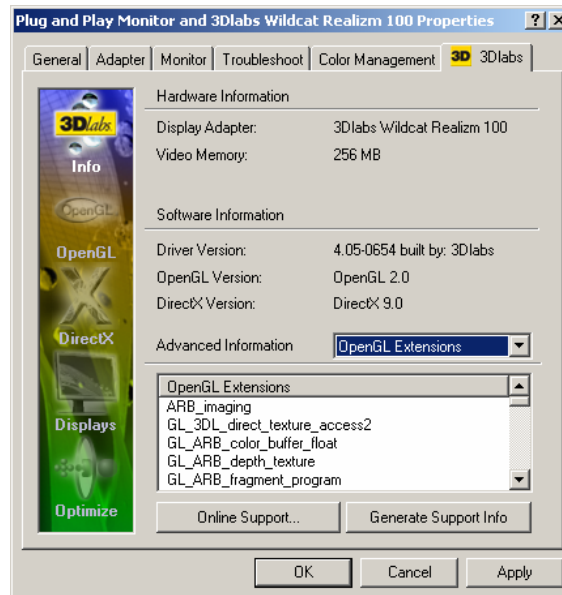
Option 1: Click the desktop with your right mouse button (or left click if you've changed your mouse options) and click Display Properties.

Option 2: Click the “3D” in the system tray to access the Task Bar-based Configuration Manager, and then click Display Properties.

In the Display Properties window:

1. Choose the Settings tab.
2. Click the Advanced button.
3. Select the 3Dlabs tab.

When you first click the 3Dlabs tab in the Display Control Panel, this introductory page appears:



Note: This is only an example. Your own panel displays the information specific to your board, BIOS, and driver version.

This first window provides the following information:

- Hardware Information:
 - Display Adapter
 - Video Memory
- Software Information:
 - Driver Version
 - OpenGL Version
 - DirectX Version
- Advanced Information:
 - OpenGL Extensions
 - Direct3D Device Caps
- Online Support (links to www.3dlabs.com, the 3Dlabs customer support site. An Internet connection is required.)
- Generate Support Info (generates a text file containing system info including 3Dlabs driver and graphics card BIOS versions that assist 3Dlabs technical support personnel in evaluating system problems.)

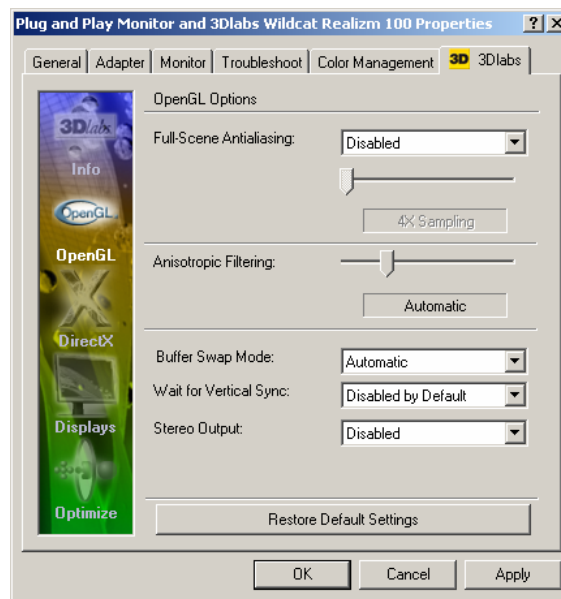
You can also navigate to the full set of 3Dlabs driver customization tools via the icons on the left side:

- OpenGL Options – Full scene antialiasing, Anisotropic filtering, Stereo, Buffer Swap Mode, Vertical Sync
- DirectX Options - Full scene antialiasing, Vertical Sync
- Display Settings – Clone mode, Color control, Display rotation, Edge blending/overlap
- Optimize Settings – Application optimization, Acuity Windows manager, Task bar

These customization tools are discussed in more detail later in this chapter.

Configuring OpenGL Options

This window provides customization of the following features:



Full-scene Antialiasing

Choose from the following:

Disabled: Full-scene antialiasing is disabled in all applications.

Automatic: Full-scene antialiasing is disabled by default, but can be enabled by applications. If enabled, the application will use the sample count indicated by the slider.

Force On: Full-scene antialiasing is enabled in all applications. Applications will use the sample count indicated on the slider.

4X Sampling: This setting forces the graphics adapter to use antialiasing with four samples per pixel. This is the fastest of the antialiasing options.

8X Sampling: This setting forces the graphics adapter to use antialiasing with eight samples per pixel. This setting will produce the smoothest image

Anisotropic Filtering

Disabled: Anisotropic filtering is disabled in all OpenGL applications.

Automatic: Anisotropic filtering is disabled by default but applications may specifically enable it.

Force 2X Sampling: Anisotropic filtering with two samples per texel will be used for all OpenGL applications.

Force 4X Sampling: Anisotropic filtering with four samples per texel will be used for all OpenGL applications.

Force 8X Sampling: Anisotropic filtering with eight samples per texel will be used for all OpenGL applications. This is the highest quality setting

Buffer Swap Mode

Automatic: The graphics adapter will default to Page Flipping mode, in which the front and back buffers are simply alternated, unless specifically overridden by the application. This option will generally give the best performance.

Force Swap Copy: Data is copied from the back buffer to the display buffer. This behavior is generally slower than Page Flipping, however some applications may require this behavior as they cache information in the back buffer. Use this setting if an application is not displaying images correctly

Wait for Vertical Sync

This option sets the vertical sync behavior to be used in OpenGL applications. Vertical Synchronization means that applications must wait until the display device is ready before they can perform drawing operations. This places an upper limit on the frame rate an application can achieve, but is sometimes necessary to prevent 'tearing' artifacts caused by drawing operations from one frame bleeding into the next.

Enabled: Vertical synchronization is enabled in all OpenGL applications.

Disabled by Default: Vertical synchronization is disabled unless an application specifically enables it

Stereo Output

See "Configuring your 3Dlabs Graphics Accelerator Card for Stereo Viewing" in this section.

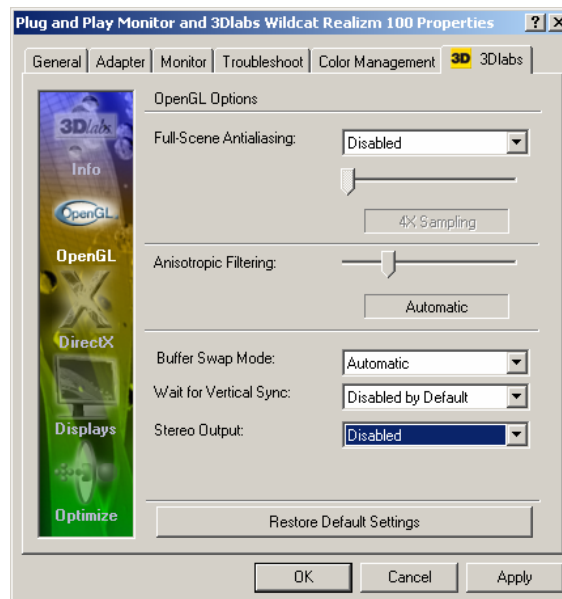
Configuring your 3Dlabs Graphics Accelerator Card for Stereo Viewing

Your Wildcat Realizm graphics accelerator card is equipped with a VESA standard stereo sync signal connector (3-pin mini-DIN) and supports 3D stereo viewing. To view stereoscopic images on your Windows PC, you will need to connect the appropriate equipment such as stereo glasses to the 3-pin mini-DIN connector on the card.

For optimal stereo viewing, it is recommended that you use a monitor with a screen refresh frequency of at least 100 Hz and that you turn off all fluorescent lighting before viewing stereo images to prevent possible headache.

To set up and configure stereo viewing:

1. Connect the stereo hardware to the round stereo connector on the card. See the documentation that came with your stereo hardware.
2. Click the desktop with your right mouse button to access the Display Control Panel.
3. Select Properties from the menu that appears.
4. Choose the Settings tab.
5. Click the Advanced button and then select the 3Dlabs tab.
6. Click the OpenGL icon on the left navigation bar.
7. In the OpenGL screen, choose the desired stereo output format from the dropdown menu to the right of Stereo Output, frame sequential stereo, or passive stereo [single display mode only].
8. Click Apply and then click OK.
9. Select an appropriate refresh rate on the Display Properties Settings Page (e.g. 118 Hz)



NOTE: For information on suitable frequencies please refer to the documentation for your stereo glasses

Configuring DirectX Options

Full-scene Antialiasing

Choose one of the following from the dropdown menu:

Disabled: Full-scene antialiasing is disabled in all applications.

Automatic: Full-scene antialiasing is disabled by default, but can be enabled by applications. If enabled, the application will use the sample count indicated by the slider.

Force On: Full-scene antialiasing is enabled in all applications. Applications will use the sample count indicated on the slider.

4X Sampling: This setting forces the graphics adapter to use antialiasing with four samples per pixel. This is the fastest of the antialiasing options.

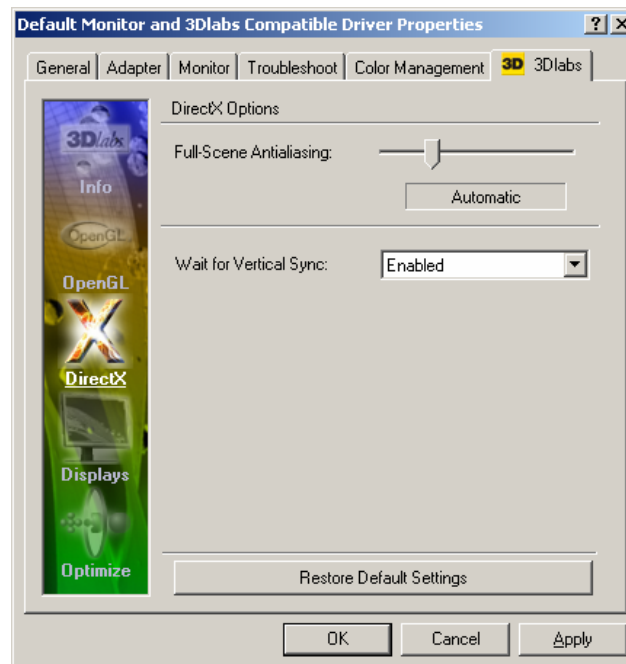
8X Sampling: This setting forces the graphics adapter to use antialiasing with eight samples per pixel. This setting will produce the smoothest image

Wait for Vertical Sync

This option sets the vertical sync behavior to be used by Direct3D applications in full-screen mode. Vertical Synchronization means that applications must wait until the display device is ready before they can perform drawing operations. This places an upper limit on the frame rate an application can achieve, but is sometimes necessary to prevent 'tearing' artifacts caused by drawing operations from one frame bleeding into the next.

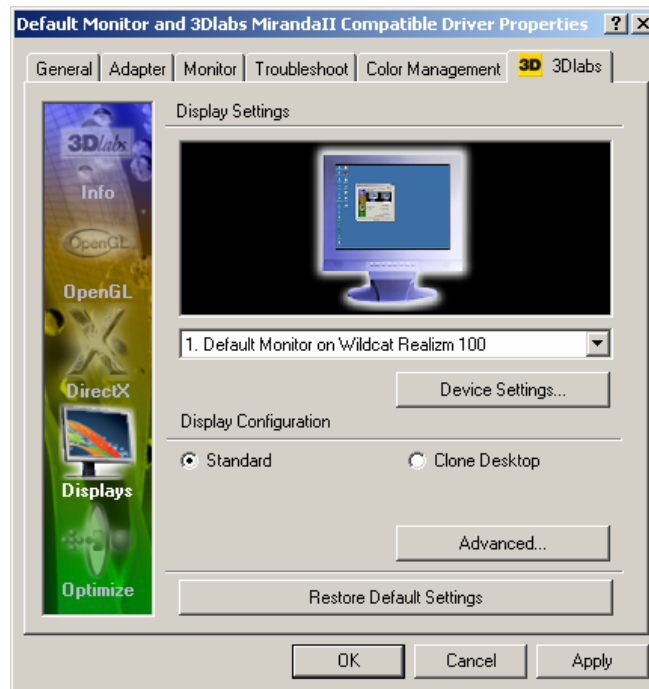
Enabled: Vertical synchronization is enabled in Direct3D applications in full-screen mode.

Disabled by Default: Vertical synchronization is disabled unless an application specifically enables it.



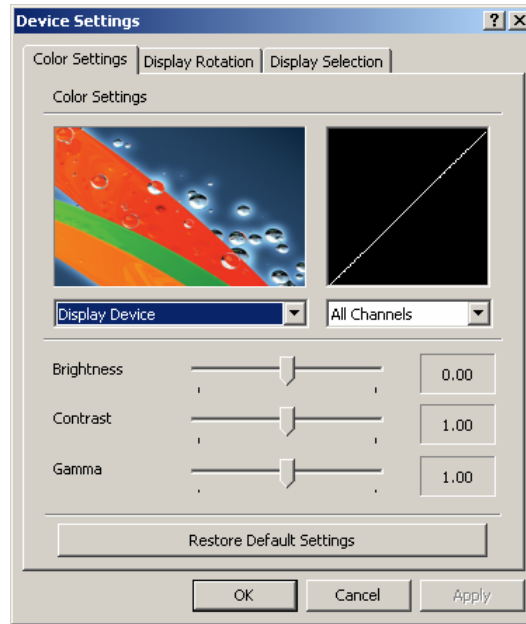
Configuring Display Settings

To configure your display settings, select a display device from the graphical display or the drop down list, and click the “Device Settings” button. Another window opens with Color Settings, Display Rotation, and Display Selection option tabs.



From the **Color Settings** tab, you can configure the following:

- Select one of the following from the drop down menu for color setting changes:
 - Display Device: Color settings are applied directly to the frame buffer for the display device.
 - Overlay: Color settings are only applied to overlays. Use this setting to alter color settings for DVD playback. Note that this control does not affect OpenGL overlays but only those accessed through the DirectX API.
- Select the **Color Channels** you wish to modify (All Channels, Red, Green, or Blue) and then use the slider bars to configure the **Brightness**, **Contrast**, and **Gamma** settings for the chosen color channel(s)."



The **Display Rotation tab** allows you to check or redetect the automatic orientation of your display (if supported in the display hardware). It also provides controls to manually rotate your display as needed.

Configuring Display Rotation Options

Orientation

Redetect Orientation: Some display devices have built-in hardware support for rotation. If your display device supports hardware rotation, click this button to use the desired orientation format.

Note: You must configure your display first.

Display Rotation

If your display does not support hardware rotation, use these display rotation controls to manually rotate the display through 0, 90, 180 and 270 degrees.

Rotation Arrows: In 90 degree increments clockwise or counter clockwise, allows the display rotation options to be stepped through.

0 degrees: Default display orientation.

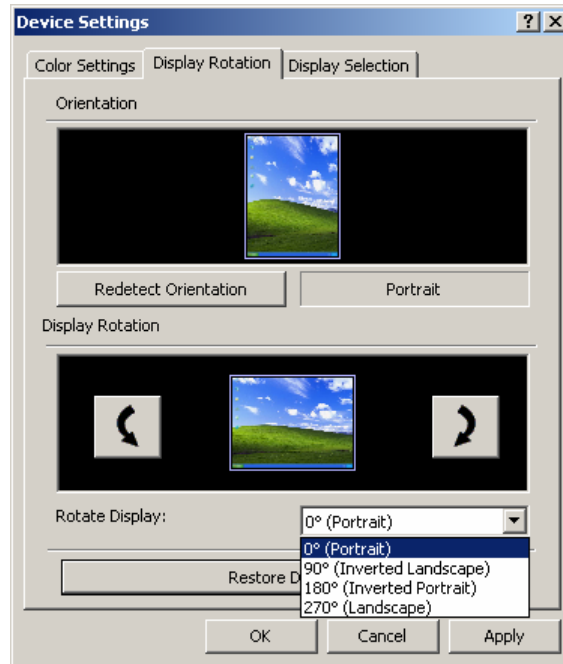
90 degrees: Rotates the display 90 degrees clockwise from the default display orientation.

180 degrees: Rotates the display 180 degrees clockwise from the default display orientation.

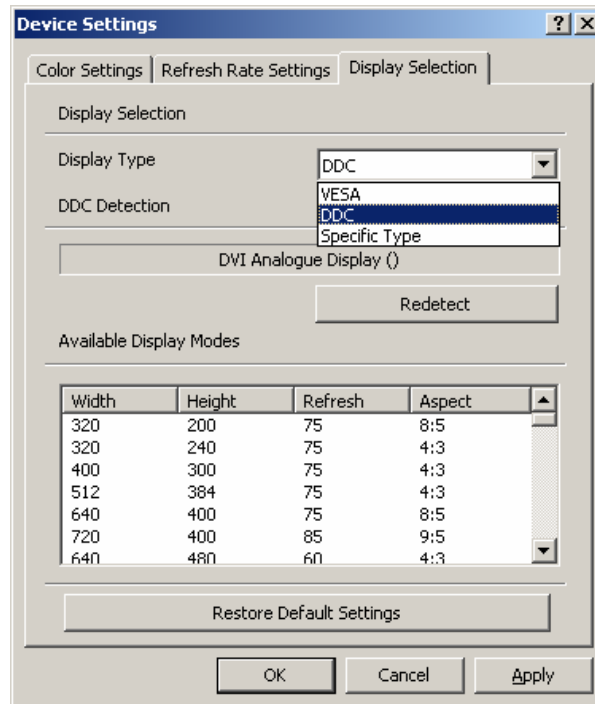
270 degrees: Rotates the display 270 degrees clockwise from the default display orientation.

NOTE: Display rotation is available on the Wildcat Realizm 100, 200, and 500 graphics accelerators. [It is not available for the Wildcat Realizm 800.]

SOFTWARE CONFIGURATION

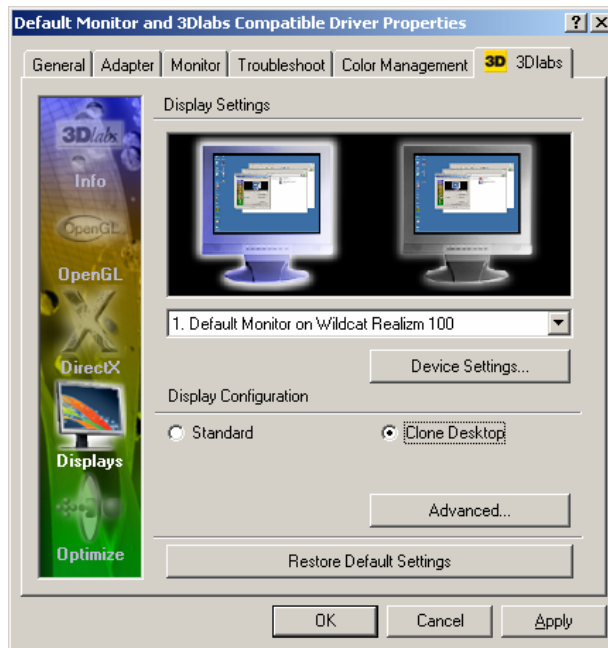


Under the **Display Selection** tab, you can choose to auto detect or manually select your specific type display. You may also view available display modes.



Configuring Display Configuration

To configure your display configuration, select Standard or Clone Desktop mode. Click on the “Advanced” button to access display features for edge blending and overlap.



Configuring Dual Head Mode

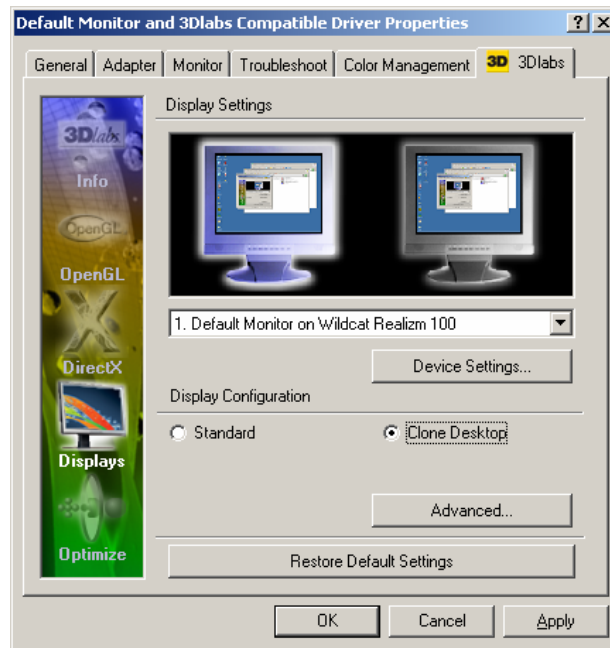
1. Click the desktop with your right mouse button (or left-click if you've changed your default mouse setup) to access the Display Control Panel. Select Properties from the menu that appears.
2. Choose the Settings tab.
3. Select the grayed out monitor
4. Check the box “Extend my Windows desktop onto this monitor.”
5. Click the “Apply” button.

To revert to single head mode repeat the above procedure, but this time complete it by unchecking the button “Extend my Windows desktop onto this monitor.”

Cloning your desktop

1. To clone your desktop onto a second monitor, you must first have your secondary monitor properly plugged into your graphics card. See “Connecting the Display” in the *Software Configuration* section for instructions. Click the desktop with your right mouse button (or left-click if you've changed your default mouse setup) to access the Display Control Panel.
2. Select Properties from the menu that appears.
3. Choose the Settings tab.
4. Click the Advanced button and then select the 3Dlabs tab.
5. Click the Displays icon on the left, then from the dropdown menu, select option 2.

6. If the Clone desktop option button is not selected, then you are presently running in Dual head mode and must first revert to single head mode.
7. You can then select “Clone Desktop” followed by “Apply” to duplicate your desktop on the second monitor.



Advanced Display Configuration

Click on the “Advanced” button to access settings for Edge Blending and Overlap controls. Edge Blending and Overlap settings are used with display projectors to create, manage, and align output from multiple display projectors such that a seamless single desktop can be visually displayed.

Before using the Edge Blending and Overlap controls, make sure that the display projectors are physically aligned with the desired overlap and are set for the same resolution and size of projected image.

From the **Edge Blending/Overlap** tab, check the ‘Enable Display Overlapping’ box. You can then configure the following:

- Pixel Overlap: Controls the desired amount of pixel overlap at the seam where the projected images meet.
- Blending Type: Controls the type of blending desired that removes the visual seam where the projected images overlap.

Configuring Edge Blending and Overlap Options

Pixel Overlap Slider: You can set the projected display overlap to be almost the entire range of available pixels. The pixel overlap controls the actual available projected desktop size. The larger the overlap, the less physical size of the projected desktop. Example: For two display projectors configured for 1280 x 1024 and oriented for side-by-side projection, the available pixel overlap can be 0 to 1120 pixels.

As the Pixel Overlap Slider is adjusted, colored reference outlines of the display overlap area will be shown in the Edge Blending/Overlap control panel. The reference outlines are provided to show the overlap effect in the display projectors seam area and the effect on overall available screen size.

NOTE: To enable overlapping, you must ensure the following criteria are met:

1. There must be two display devices attached to your graphics adapter.
2. Both displays must be at the same resolution and color depth.
3. The displays must be aligned vertically and horizontally.

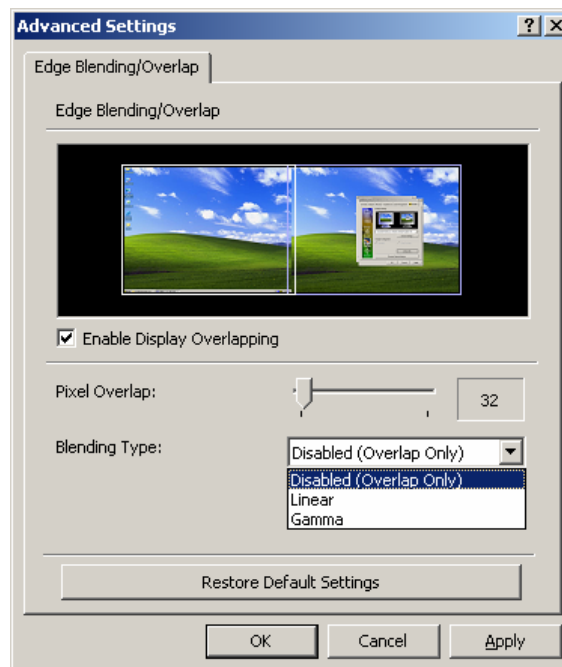
Blending Type

Select the blending method to apply to the overlap region.

Disabled (Overlap Only): No edge blending will be performed in the overlap region.

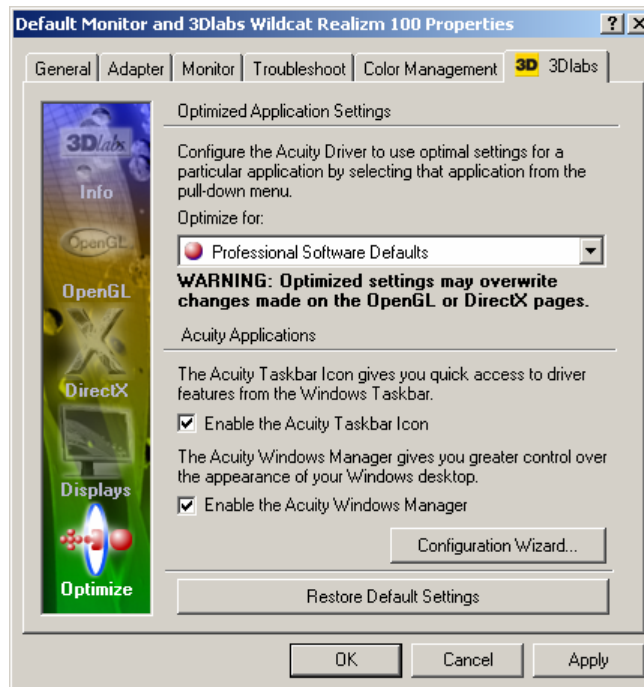
Linear: In the overlap area a linear fade of overall pixel intensity is created from one display to the next.

Gamma: In the overlap area, a fade effect is dynamically created based on the gamma values of pixels in the overlap region.



Optimize Settings

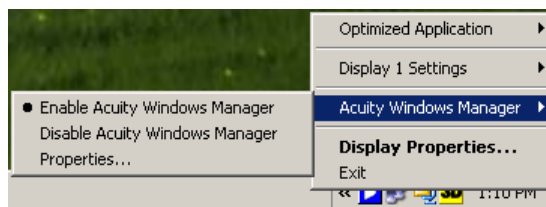
Configure the Acuity Driver to use optimal settings for a particular application by selecting that application from the pull-down menu.



Acuity Applications: 3Dlabs Acuity Windows Manager

The 3Dlabs Acuity Taskbar Icon gives you quick access to driver features from the Windows Taskbar and greater control over the appearance of your Windows desktop. To configure the Acuity Windows Manager click Configuration Wizard to begin.

You may also access the Acuity Windows Manager by right clicking the 3D icon in the system tray and choosing from the Acuity Windows Manager selections.



In order to use the Acuity Windows Manager feature, it must be enabled via the 'Enable the Acuity Windows Manager' check box in the Optimize Settings control panel, or through the 3D icon and Acuity Windows Manager selections in your windows desktop system tray. To access Acuity Windows Manager properties, right click on the desktop and then select "3Dlabs Properties" from the pulldown.

When the Acuity Windows Manager is enabled, right clicking an application in the task bar will provide options for moving the application between displays and virtual desktops.

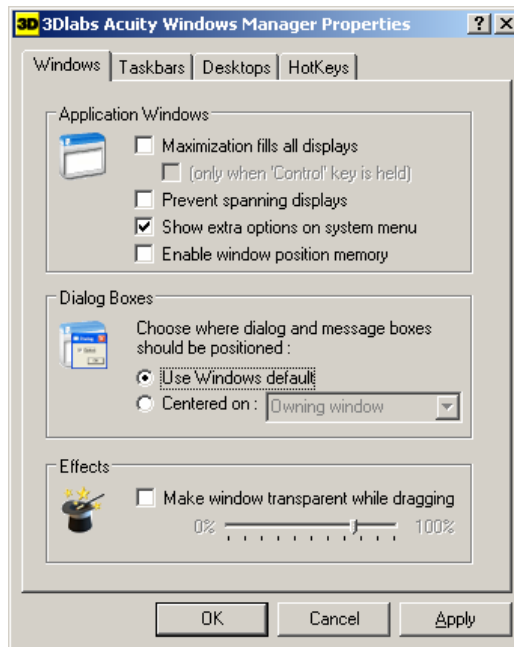
The Acuity Windows Manager allows you to configure the following:

- Window maximization control
- Display boundary control
- Application Dialog box positioning
- Window transparency
- 3Dlabs Window menu extensions
- Windows position memory
- Dual Display taskbar
- Task switching
- Enable multiple desktops
- Define Hotkeys

Configuring Acuity Windows Manager Options

This window provides customization of the Windows, Taskbar, Desktops, and Hot Keys features of the Acuity Windows Manager:

The **Windows Tab** provides options for controlling how application windows and dialog boxes function when the Acuity Windows Manager is enabled.



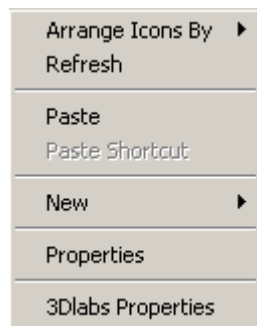
Application Windows

Choose from the following options:

Maximization fills all displays: This option controls how an application behaves when using multiple displays. Click the check box to enable maximization of an application window across all displays. An additional option is provided that allows single display maximization to occur as normal, with maximization across all displays only occurring when the CTRL key is pressed while maximizing the application.

Prevent spanning displays: When moving applications or dialog windows across multiple displays, this option prevents the window from being placed in a manner that allows parts of the window to be split across both displays.

Show extra options on system menu: When enabled, adds a “3Dlabs Properties” option to most right click pop-up menus for easy access to the Acuity Windows Manager features. It also adds controls for the movement of applications to multiple displays and virtual desktops.



Enable window positions memory: Some applications remember their window position so that they start in the same position where they previously closed. For applications that don't normally support this functionality, click on the check box and the Acuity Windows Manager will emulate this feature.

Dialog Boxes

When using multiple displays, sometimes the placement of dialog boxes and alerts is not consistent and may not appear on the display being viewed. The Acuity Windows Manager can help manage this situation:

Use Windows Default: The Acuity Windows Manager is not enabled for management of dialog boxes and alerts.

Centered on: Select this drop down menu to choose how the Acuity Windows Manager should manage the placement of dialog boxes and alerts:

Display containing cursor – on the display the cursor is currently located on.

Owning Display - on the display that the master application is running on.

Owning Window - on the same display the window they are associated with is on.

Display 1 - on display 1.

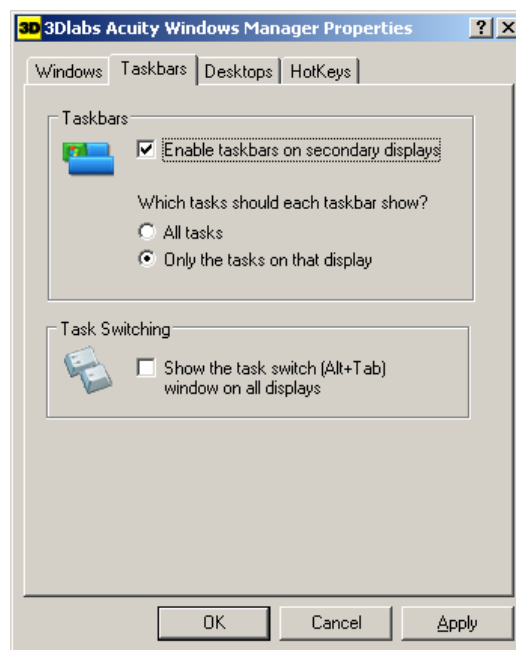
Display 2 - open on display 2.

Effects

The Acuity Windows Manager allows your application window to become transparent when you click and hold on the application title bar. This is a great tool to see what is behind the application window without having to move it out of the way.

Make windows transparent while dragging – Click the check box to enable the transparent feature. Use the slider to control the percentage of transparency. A 0% selection will leave the application window completely solid and a 100% selection will cause the application to be completely transparent.

The **Taskbars Tab** provides options for controlling how the taskbar and windows task switching are displayed in a multiple display configuration, when the Acuity Windows Manager is enabled.



Taskbars

Choose from the following options:

Enable taskbars on secondary displays: Click this check box to enable the taskbar to appear on all displays in a multiple display configured system. If this option is not checked, the task bar will only appear on the primary display.

There are two modes of taskbar display:

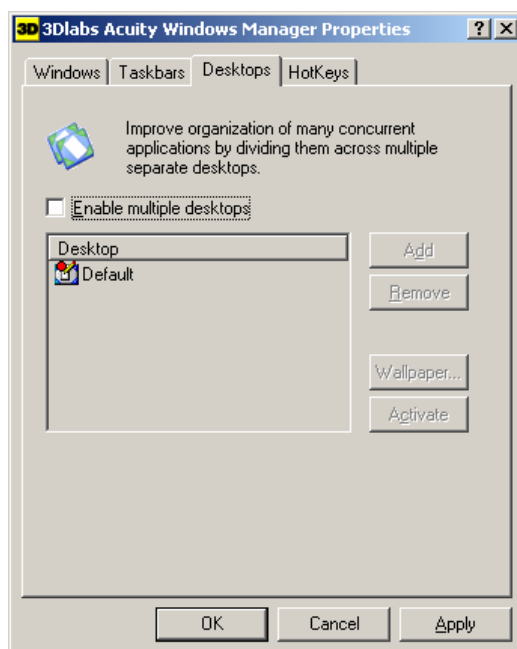
All Tasks – When selected, the taskbar will display all applications open, regardless of the display they are running on.

Only the tasks on that display – When selected, the taskbar will only display the applications that are running on that display. In multiple display systems, this is very useful for organization and knowing what display a particular application is located on.

Task Switching – Select this check box to make the windows task switching feature (ALT+Tab) appears on all displays. If this feature is not enabled, task switching will only appear on the primary display.

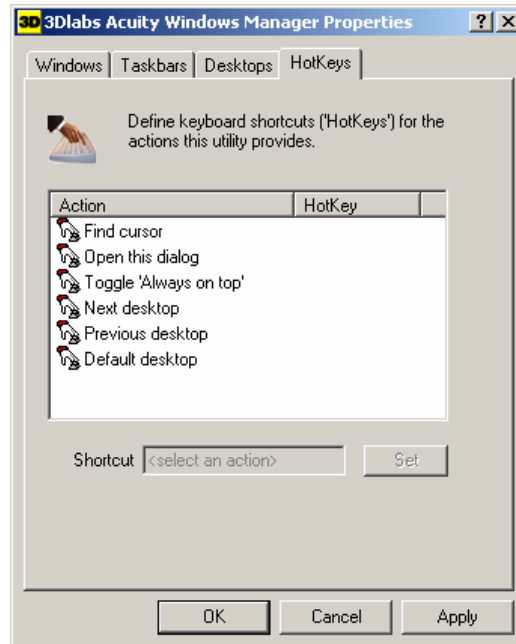
Desktop

The **Desktop Tab** provides options for enabling multiple virtual desktops. This can be very useful for organizing the many multiple applications in use. When enabled, right clicking the application name in the task bar or in the application title bar will provide selections for moving the application between virtual desktops and/or displays.



HotKeys

The **HotKeys Tab** provides options for configuring your keyboard for multiple hotkey selections, which will reduce mouse clicks or keyboard selections for Acuity Windows Manager features.



To use, perform the following:

1. Select the action to define a hotkey.
2. Press the keys that will define the hotkey feature. Typically, this includes first pressing ALT, CTRL, SHIFT in some combination and then a specific letter or number key.
3. Click the Set button to assign the hotkey key press sequence to the selected action.

Available actions when Hotkey is assigned:

Find cursor – Causes a circle to flash around the cursor. This feature is very useful on high resolution displays and multiple display systems.

Open this dialog – Opens the hotkey properties window.

Toggle 'Always on Top' – Allows the selected open application to always be on top of other applications.

Next desktop – Switches display to the next virtual desktop.

Previous desktop – Switches display to the previous virtual desktop.

Default desktop – Switches display to the default desktop.

APPENDIX A- ENABLING MULTIVIEW AND GENLOCK

The Wildcat Realizm Multiview Option Kit enables the Multiview and Genlock features of your Wildcat Realizm graphics accelerator.

The Multiview feature allows you to run the same application on multiple workstations and treat the multiple displays as a single "virtual canvas" such that they all refresh as one.

Genlock enables you to lock one or more graphics cards to some external synchronization source such as a studio sync (the cards may be housed in a single workstation or distributed across multiple workstations).

NOTE: *Your Wildcat Realizm graphics adapter must specifically support the Wildcat Realizm Multiview option. Visit www.3dlabs.com to confirm your Wildcat Realizm graphics adapter Multiview support capability.*

The Genlock signal formats supported are:

- NTSC Composite Video
- PAL Composite Video
- HDTV
- TTL, LVTTTL, or CMOS level compatible periodic signal (50Hz - 180Hz) with a minimum low or high pulse width of 100ns

The Genlock features supported are:

- Genlock to vertical sync from an NTSC, PAL, or HDTV signal
- Genlock to field sync from an NTSC, PAL, or HDTV signal
- Genlock to a TTL signal
- Genlock to either the rising, falling, or both edges of the input signal
- Genlock to every 1st, 2nd, 3rd, 4th, 5th, or 6th input signal
- Delay the genlock signal to align to the external source

IMPORTANT: *Your application must support Multiview for Multiview to work. Refer to your application documentation for using Multiview and Genlock.*

Setting up Multiview

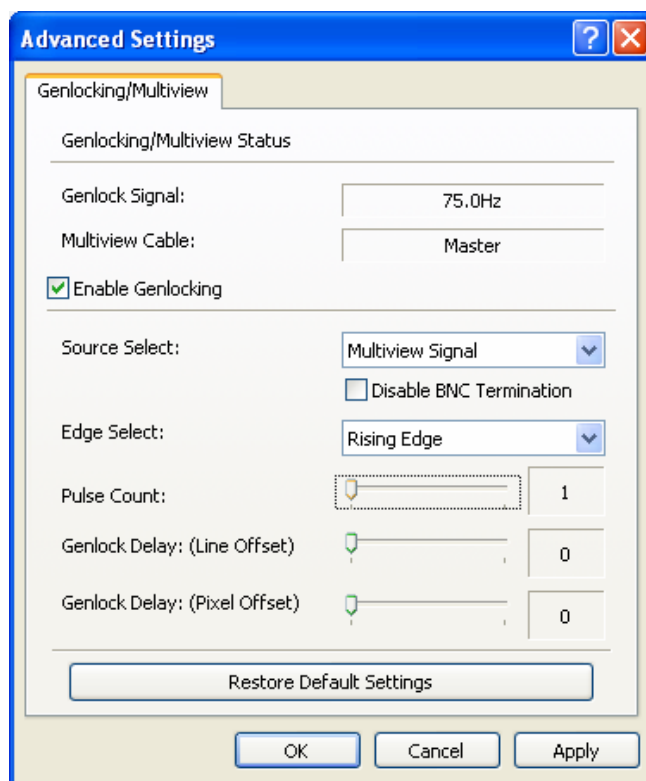
Once the Multiview Option Kit is properly installed in all systems in the array (see your Multiview Installation Guide for installation instructions), you may then begin linking the system(s) together. The Wildcat Realizm driver software automatically determines the Master or Slave status of the workstation by the Multiview port connections.

To configure Multiview

1. Insert one end of the Multiview cable (included in your Wildcat Realizm Multiview Option Kit) into the Multiview Out port of the first workstation. This workstation becomes the “Master”
2. Insert the other end of the cable into the Multiview In port of the second workstation. This workstation becomes a “Slave.”
3. If connecting more than two workstations, continue linking workstations to one another by connecting the Multiview Out port of one workstation to the Multiview In port of the next. The last workstation should only have a cable plugged into the Multiview In port. No external termination is required for the last workstation as this is provided by the Multiview hardware.

Confirming Multiview cables are detected

1. Click the desktop with your right mouse button (or left-click if you’ve changed your default mouse setup) to access the Display Control Panel.
2. Select Properties from the menu that appears.
3. Choose the Settings tab.
4. Click the Advanced button and then select the 3Dlabs tab.
5. Click the Displays icon on the left, then click “Advanced.”
6. Under the “Genlocking/Multiview” tab (default tab) and under Genlocking/Multiview Status, you’ll see either Master or Slave (depending on which workstation you are viewing) listed after “Multiview Cable.” If you see “Not Detected,” then check to make sure your Multiview cable is seated firmly in the Multiview In port.



Configuring the Driver for Genlock

1. Connect the external timing source to the Genlock In port (BNC connector) on the workstation you've identified as the "Master."
2. Click the desktop with your right mouse button (or left-click if you've changed your default mouse setup) to access the Display Control Panel.
3. Select Properties from the menu that appears.
4. Choose the Settings tab.
5. Click the Advanced button and then select the 3Dlabs tab.
6. Click the Displays icon on the left, then click "Advanced."
7. Under the "Genlocking/Multiview" tab (default tab) click the check box beside "Enable Genlocking." This enables the synchronization of a display device's refresh cycle to some other device, such as a video recorder or additional display devices. The frequency of the Genlock Signal will appear in the box above.
8. Choose the appropriate signal source from the Source Select pull-down menu. This selection tells the Multiview card what type of signal to expect.
9. Click the check box beside "Disable BNC Termination" if this Multiview is NOT the last card in an array of Multiview cards using the external Genlock signal or if external termination is being used for the Genlock signal cable. Checking this box prevents the graphics adapter from terminating the BNC cable connection at this workstation, allowing you to create a chain of genlocked workstations. For a single external signal source to the Multiview card, point-to-point connection, leave this box unchecked.
10. Choose the appropriate signal edge configuration from the Edge Select pull-down menu for the external signal source being used.
11. Configure the Pulse Count, Line Offset, and Pixel Offset appropriate for your application and hardware setup to achieve proper display refresh synchronization across all systems. Click Apply.

NOTE: *Some monitors require custom timing file entries for Genlock to be properly maintained. Please refer to the documentation delivered with your monitor for further information.*

APPENDIX B – SPECIFICATIONS

Specifications

Manufacturer	3Dlabs
Functional Specifications	
<i>NOTE: IF YOU ORDERED THIS VIDEO CARD WITH A SYSTEM, IT WAS PREINSTALLED AND CONFIGURED FOR USE IN YOUR SYSTEM BEFORE SHIPMENT.</i>	
Graphic controller	High-speed Wildcat Realizm Visual Processing Unit
DAC speed	400 MHz (355 MHz for the Wildcat Realizm 500)
Memory configuration and data width	Wildcat Realizm 800 <ul style="list-style-type: none"> • 512 MB GDDR3 unified memory with 512-bit interface bus • 128 MB GDDR3 DirectBurst memory with 128-bit wide interface bus • 64 KB of flashable EEPROM memory for VGA bios and product configuration storage
	Wildcat Realizm 500 <ul style="list-style-type: none"> • 256 MB GDDR3 unified memory • 64 KB of flashable EEPROM memory for VGA bios and product configuration storage • 256-bit wide interface bus
	Wildcat Realizm 200 <ul style="list-style-type: none"> • 512 MB GDDR3 unified memory • 64 KB of flashable EEPROM memory for VGA bios and product configuration storage • 256-bit wide interface bus
	Wildcat Realizm 100 <ul style="list-style-type: none"> • 256 MB GDDR3 unified memory • 64 KB of flashable EEPROM memory for VGA bios and product configuration storage • 256-bit wide interface bus
Virtual memory	Virtual memory support allowing (i) on-board memory to be used as an efficient L2 cache, (ii) seamless handling of huge datasets, (iii) automatic paging out of unused buffers, and (iv) very large individual texture sizes.
Programmable shaders	Wildcat Realizm 800 <ul style="list-style-type: none"> • 32 programmable 36-bit Vertex shaders supporting up to 1 K instructions, 32 light sources, subroutines, loops, and conditionals • 96 programmable Fragment shaders supporting up to 256 K instructions, subroutines, loops and predicates
	Wildcat Realizm 500 Wildcat Realizm 200 Wildcat Realizm 100 <ul style="list-style-type: none"> • 16 programmable 36-bit Vertex shaders supporting up to 1 K instructions, 32 light sources, subroutines, loops, and conditionals • 48 programmable Fragment shaders supporting up to 256 K instructions, subroutines, loops and predicates

Connectors	Wildcat Realizm 800	<p>Two DVI-I analog/digital video output ports – dual-link DVI capable supporting the following configurations:</p> <ul style="list-style-type: none"> • One or two analog display devices • One or two single-link digital display devices • One or two dual-link digital display devices • One single-link or dual-link digital display device and one analog display device <p><i>Stereo Sync Support</i></p> <ul style="list-style-type: none"> • VESA-standard frame sequential stereo • 3-pin, mini-DIN connector provides connection to LCD shutter glasses or other stereo shutter devices
	Wildcat Realizm 500	<p>Two DVI-I analog/digital video output ports – single-link DVI capable supporting the following configurations:</p> <ul style="list-style-type: none"> • One or two analog display devices • One or two single-link digital display devices • One single-link display device and one analog display device <p><i>Stereo Sync Support</i></p> <ul style="list-style-type: none"> • VESA-standard frame sequential stereo • 3-pin, mini-DIN connector provides connection to LCD shutter glasses or other stereo shutter devices
	Wildcat Realizm 200	<p>Two DVI-I analog/digital video output ports – dual-link DVI capable supporting the following configurations:</p> <ul style="list-style-type: none"> • One or two analog display devices • One or two single-link digital display devices • One or two dual-link digital display devices <p>One single-link or dual-link digital display device and one analog display device</p> <p><i>Stereo Sync Support</i></p> <ul style="list-style-type: none"> • VESA-standard frame sequential stereo • 3-pin, mini-DIN connector provides connection to LCD shutter glasses or other stereo shutter devices

APPENDIX B

	Wildcat Realizm 100	<p>Two DVI-I analog/digital video output ports – single-link DVI capable supporting the following configurations:</p> <ul style="list-style-type: none"> • One or two analog display devices • One or two single-link digital display devices • One single-link display device and one analog display device <p><i>Stereo Sync Support</i></p> <ul style="list-style-type: none"> • VESA-standard frame sequential stereo • 3-pin, mini-DIN connector provides connection to LCD shutter glasses or other stereo shutter devices
Interrupts	PCI-assigned, interrupt A	
Bus Connector	Wildcat Realizm 800	x16 PCI Express High-End
	Wildcat Realizm 500	x16 PCI Express
	Wildcat Realizm 200	AGP 3.0 support, 4x and 8x modes of operation, (AGP 8x recommended)
	Wildcat Realizm 100	AGP 3.0 support, 4x and 8x modes of operation, (AGP 8x recommended)

Mechanical Specifications		
Mechanical Components	Wildcat Realizm 800	<ul style="list-style-type: none"> • 2-slot I/O bracket • Plastic card guide • 70 mm x 70 mm x 20 mm dual ball bearing fan • Heat sinks for memory, the VSU chip, the two VPU's • Shroud
	Wildcat Realizm 500	<ul style="list-style-type: none"> • 1-slot I/O bracket • Plastic extender bracket (can be removed for a shorter configuration) • 110 mm x 86 mm x 13 mm fansink assembly, copper
	Wildcat Realizm 200 Wildcat Realizm 100	<ul style="list-style-type: none"> • 2-slot I/O bracket • Plastic extender bracket (can be removed for a shorter configuration) • 60 mm x 60 mm x 10 mm dual ball bearing fan • Heat sinks for memory • Shroud
Power Requirements	Wildcat Realizm 800	<p>150 Watts (Total)</p> <p>PCI Express 2.5 Amps at 3.3 Volts PCI Express 5.0 Amps at 12 Volts Auxiliary 6.25 Amps at 12 Volts</p>
	Wildcat Realizm 500	<p>53 Watts (Total)</p> <p>PCI Express 1.5 Amps at 3.3 Volts PCI Express 4.0 Amps at 12 Volts</p>

APPENDIX B

	Wildcat Realizm 200	85 Watts (Total) AGP 2.76 Amps at 3.3 Volts AGP 0.7 Amps at 5 Volts AGP 0.12 Amps at 12 Volts Auxiliary 1.8 Amps at 5 Volts Auxiliary 3.5 Amps at 12 Volts
	Wildcat Realizm 100	75 Watts (Total) AGP 2.92 Amps at 3.3 Volt AGP 0.53 Amps at 5 Volt AGP 0.1 Amps at 12 Volts Auxiliary 1.4 Amps at 5 Volts Auxiliary 2.8 Amps at 12 Volts
Thermal Specifications	For storage conditions: <ul style="list-style-type: none"> • Temperature: –40°C to 65°C • Humidity: 10 to 95% non-condensing humidity 	
Thermal Sensor	The graphics card includes a thermal sensor circuit to protect the card from an over-temperature situation, such as might occur if the fan fails. If the sensor reaches a certain temperature, the card will shut down the on-board power supplies, thus eliminating all power consumption. Once the sensor shuts down the on-board power supplies, the user must power off the system and correct the cooling problem. Then the system can be powered on and the card will restart operation. The sensor circuit will not give the user any indication that an over temperature situation is occurring.	

Supported Resolutions

NOTE: *These are maximum supported monitor resolutions and refresh rates. Resolutions and refresh rates may vary depending on your monitor display and Wildcat Realizm product.*

Resolution	Aspect Ratio	Refresh Rates (Hz)
3840 x 2400	16:10	50
2456 x 1536	16:10	60
2728 x 1536	16:9	60
2048 x 1536	4:3	75,60
2048 x 1280	16:10	85,75,60
1920 x 1200	16:10	100,85,75,60
1920 x 1080	16:9	100,85,75,60
1600 x 1200	4:3	120,118,100,85,75,60
1520 x 856	16:9	120,106,100,85,75,60
1440 x 900	16:10	120,100,85,75,60
1360 x 766	16:9	120,118,100,85,75,60
1280 x 1024	5:4	120,118,104,100,96,90,85,84, 75, 60
1280 x 960	4:3	120,118,112,106,100,85,75,60
1280 x 800	16:10	120,112,100,85,75,60
1280 x 720	16:9	120,110,100,85,75,60
1152 x 864	4:3	120,118,100,85,75,60
1152 x 720	16:10	120,110,100,85,75,60
1024 x 768	4:3	140,120,118,84,100,85,75,60
856 x 480	16:9	100,85,75,60
800 x 600	4:3	120,100,85,75,60
640 x 480	4:3	120,100,85,75,60
512 x 384	4:3	118,100,85,75,60
320 x 240	4:3	118

APPENDIX C – SOFTWARE LICENSE

SOFTWARE LICENSE AGREEMENT

THIS IS A LEGAL CONTRACT BETWEEN YOU, THE END USER, AND 3DLABS, INC. LTD. BY USING THE SOFTWARE ACCOMPANYING THIS GUIDE OR PRE- INSTALLED ON YOUR SYSTEM, YOU ARE ACCEPTING AND AGREEING TO BE BOUND BY THE TERMS OF THIS SOFTWARE LICENSE AGREEMENT. IF YOU ARE NOT WILLING TO BE BOUND BY THE TERMS OF THIS SOFTWARE LICENSE AGREEMENT, PROMPTLY RETURN THIS SOFTWARE LICENSE AGREEMENT WITH THE UNOPENED SOFTWARE ENVELOPE, WILDCAT REALISM CARD AND ANY OTHER ACCOMPANYING ITEMS AND 3DLABS PRODUCTS TOGETHER WITH YOUR RECEIPT TO YOUR PLACE OF PURCHASE FOR A FULL REFUND.

Software License and Restrictions

The SOFTWARE delivered to you may embody and include, without limitation, certain software programs in object code form (machine-readable but not human-readable form) and documentation. Use of the SOFTWARE can result in the production of FEATURES that are human-readable, including, without limitation, documentation, report formats, menus, audible prompts and tone sequences. Such SOFTWARE and FEATURES constitute copyrighted property proprietary to 3DLABS, INC. LTD. or its licensors, and 3DLABS, INC. LTD. or its licensors retain title to the SOFTWARE (excluding media on which recorded), FEATURES, all copies thereof, and all intellectual property rights therein. No title to the SOFTWARE, FEATURES, any copies thereof or any intellectual property rights therein, are transferred to you. You are hereby granted, for your own internal use only, a nontransferable, nonexclusive, perpetual, revocable license to use one (1) copy of the SOFTWARE and FEATURES on the computer on which the SOFTWARE was originally mounted or installed. Except as specifically authorized by this AGREEMENT, you may not copy the SOFTWARE or FEATURES for any purpose (except that you may make a use one (1) copy of the SOFTWARE solely for backup purposes). You shall not, whether through the use of disassemblers or any other means whatsoever (including, but not limited to, Guide, mechanical or electrical means), reverse engineer, decompile, disassemble, destroy, disable, derive rules of protocol embodied in the SOFTWARE or derive source code from the SOFTWARE OR FEATURES, or attempt to permit any third party to do any of the foregoing. Any attempt to do any of the foregoing shall be a material breach of this AGREEMENT and the license granted herein, which shall immediately entitle 3DLABS, INC. LTD. to exercise any remedy that may exist at law or in equity. You may not transfer, loan, rent, lease, distribute or grant any rights in the SOFTWARE, FEATURES, copies thereof, or accompanying documentation in any form without the prior written consent of 3DLabs, Inc.

Limited Warranty

3DLABS, INC. LTD. warrants that the SOFTWARE AND FEATURES licensed to you under this AGREEMENT will perform in accordance with 3DLABS, INC. LTD. published specifications for use on the same operating system as used by you at the time of purchase of the SOFTWARE or the system on which the SOFTWARE is initially mounted or installed (WARRANTY) for a period of ninety (90) days after the date of delivery to you as evidenced by your receipt (WARRANTY PERIOD). If the SOFTWARE or FEATURES does not conform during the WARRANTY PERIOD, you agree to provide written notice of such failure to 3DLABS, INC. LTD. and 3DLABS, INC. LTD. will, at its sole option, repair or replace the SOFTWARE. 3DLABS, INC. LTD. does not warrant that the use of the SOFTWARE or FEATURES will be uninterrupted or error- free and hereby disclaims all liability on account thereof. THE REMEDIES PROVIDED HEREIN ARE YOUR SOLE AND EXCLUSIVE REMEDIES FOR BREACH OF WARRANTY.

THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OR CONDITIONS OF MERCHANTABILITY, NONINFRINGEMENT AND FITNESS FOR A PARTICULAR PURPOSE. SOME STATES OR COUNTRIES DO NOT ALLOW THE EXCLUSION OF IMPLIED WARRANTIES OR CONDITIONS, SO THE ABOVE EXCLUSION MAY NOT APPLY TO YOU.

Limited Liability

NOTWITHSTANDING ANY PROVISION IN THIS LICENSE TO THE CONTRARY, NEITHER 3DLABS, INC. LTD. NOR ITS LICENSORS OR SUPPLIERS WILL BE LIABLE FOR ANY SPECIAL, INCIDENTAL, INDIRECT OR CONSEQUENTIAL DAMAGES, HOWEVER CAUSED, OR ANY THEORY OF LIABILITY, WHETHER OR NOT 3DLABS, INC., ITS LICENSORS OR SUPPLIERS HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGE OR LOSS. IN NO EVENT SHALL 3DLABS, INC., ITS LICENSORS' OR SUPPLIERS' LIABILITY ARISING UNDER THIS LICENSE EXCEED THE AMOUNT PAID BY YOU [FOR THE PRODUCT OR SOFTWARE] GIVING RISE TO SUCH LIABILITY. THIS LIMITATION IS INTENDED TO LIMIT THE LIABILITY OF 3DLABS, INC., ITS LICENSORS OR ITS SUPPLIERS AND SHALL APPLY NOTWITHSTANDING ANY FAILURE OF ESSENTIAL PURPOSE OF ANY LIMITED REMEDY. SOME STATES OR COUNTRIES MAY NOT ALLOW THE FOREGOING LIMITATION, SO THE FOREGOING MAY NOT APPLY TO YOU.

Restricted Rights Notice

Use, duplication or disclosure by the United States Government is subject to restrictions as set forth in subparagraphs ©(1) and ©(2) of the Commercial Computer Software - Restricted Rights clause at FAR Section 52.277-19 or ©(1)(ii) of the Rights in Technical Data and Computer Software clause at DFARS Section 252.277-7013, as applicable. Unpublished - rights reserved under the copyright laws of the United States. Contractor: 3Dlabs Inc., Ltd., Clarendon House, PO Box HM 1022, Hamilton, Bermuda HM DX.

Termination

You may terminate the license granted hereunder at any time by destroying all copies, [mergers or modifications] of the SOFTWARE, FEATURES and accompanying materials. 3DLABS, INC. LTD. may immediately terminate the license granted to you hereunder upon notice for failure to comply with the terms and conditions of this AGREEMENT. Upon such termination, you agree to destroy all copies, mergers and modifications of the SOFTWARE and FEATURES and accompanying documents. You agree that a breach of this AGREEMENT will result in irreparable damages to 3DLABS, INC. LTD. This AGREEMENT is the entire agreement between you and 3DLABS, INC. LTD. with respect to the use and licensing of the SOFTWARE provided with this AGREEMENT, and supersedes all proposals, warranties, prior agreements or any other communications between the parties relating to the subject matter hereof.

General

This AGREEMENT will be governed by and construed in accordance with the laws of California without regard to conflicts of law principles or the UN Convention on the Sale of Goods. If for any reason a court of competent jurisdiction finds any provision of this AGREEMENT, or portion thereof, to be unenforceable, that provision of the AGREEMENT shall be enforced to the maximum extent permissible so as to effect the intent of the parties, and the remainder of this AGREEMENT shall continue in full force and effect. Should you have any questions concerning this AGREEMENT, please write to: 3Dlabs Inc., Ltd., 9668 Madison Blvd., Madison, Alabama 35758.

APPENDIX D –REGULATORY STATEMENTS

EC Declaration of Conformity

We:

3Dlabs Ltd, Meadlake Place, Thorpe Lea Road,
Egham, Surrey. TW20 8HE

declare under our sole legal responsibility that the following product/s:

Model: Wildcat Realizm 100 Graphics Accelerator Card
Wildcat Realizm 200 Graphics Accelerator Card

is in conformance with the following relevant harmonised standards:

EN 55022:1998 (Class B Radiated Electric Field Emissions)
EN 55022:1998 (Class B Power Line Conducted Emissions)
EN 55024:1998 (IEC 61000-4-2)
EN 55024:1998 (IEC 61000-4-3)
EN 55024:1998 (IEC 61000-4-4)
EN 55024:1998 (IEC 61000-4-5)
EN 55024:1998 (IEC 61000-4-6)
EN 55024:1998 (IEC 61000-4-11)

for the light industrial, office and home environments following the provisions of Council Directive 89/336/EEC on the approximation of the laws of member states relating to electromagnetic compatibility, as amended by Council Directive 92/31/EEC.

Name: Nalin Patel

Position: Principal Production Engineer
3Dlabs Engineering Division

Signature:



Date: 30-06-2004

DECLARATION OF CONFORMITY

Manufacturer's Name: 3Dlabs Ltd
Manufacturer's Address: Meadlake Place, Thorpe Lea Road, Egham, Surrey.
 TW20 8HE

declares that the product/s

Product Name: Wildcat Realizm 100 Graphics Accelerator Card
 Wildcat Realizm 200 Graphics Accelerator Card

conforms to the following product specifications:

Following provisions of the 89/336/EEC Directive

<i>Specification</i>	<i>Class / Level</i>
EN 55022:1998 (CISPR 22 limits)	Class B Radiated Electric Field Emissions
EN 55022:1998 (CISPR 22 limits)	Class B Power Line Conducted Emissions
47 CFR Part 15, Subpart B (ANSI C63.4:2001)	Class B Radiated Electric Field Emissions
47 CFR Part 15, Subpart B (ANSI C63.4:2001)	Class B Power Line Conducted Emissions
VCCI V-4/97.04	Class B Radiated Electric Field Emissions
VCCI V-4/97.04	Class B Power Line Conducted Emissions
AS/NZS 3548:1995	Class B Radiated Electric Field Emissions
AS/NZS 3548:1995	Class B Power Line Conducted Emissions
EN 55024:1998 (IEC 61000-4-3)	Radiated Electromagnetic Field Immunity
EN 55024:1998 (IEC 61000-4-2)	Electrostatic Discharge Immunity
EN 55024:1998 (IEC 61000-4-4)	Electrical Fast Transient/Burst Immunity
EN 55024:1998 (IEC 61000-4-6)	Conducted Disturbance Immunity
EN 55024:1998 (IEC 61000-4-11)	Voltage Dips and Interruptions Immunity
EN 55024:1998 (IEC 61000-4-5)	Surge Immunity
CNS 13438 (8473.30.10.90)	Class B Taiwanese EMI Emissions and Immunity

Date of Declaration: 30-06-04...

Issued by:  Principal Production Engineer, 3Dlabs Ltd. +44 (0) 1784 476646

This product complies with Part 15 of FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interferences that may cause undesired operation.

This Class B digital apparatus complies with Canadian ICES-003.

This Class B digital apparatus meets the Korean criteria for preventing electromagnetic interference for Information Technology Equipment using specifications outlined in ANSI C63.4 and CISPR22.

UL 1950 PAG 1.7-003: This graphics card is for use with UL Listed personal computers that have installation instructions detailing user installation of card cage accessories.

EC Declaration of Conformity

We:

3Dlabs Ltd, Huntsville, Alabama, USA. 35824

declare under our sole legal responsibility that the following product/s:

Model: Wildcat Realizm 800 Graphics Accelerator Card

is in conformance with the following relevant harmonised standards:

EN 55022:1998
Class B Radiated Electric Field Emissions
Class B Power Line Conducted Emissions
EN 55024:1998
IEC 61000-4-2 Electrostatic Discharge Immunity
IEC 61000-4-3 Radiated RF Immunity
IEC 61000-4-4 Electrical Fast Transients/Bursts
Immunity
IEC 61000-4-5 Surge Immunity
IEC 61000-4-6 Conducted RF Immunity
IEC 61000-4-11 Voltage Dips and Short Interrupts
Immunity

for the light industrial, office and home environments following the provisions of Council Directive 89/336/EEC on the approximation of the laws of member states relating to electromagnetic compatibility, as amended by Council Directive 92/31/EEC.

Name: Nalin Patel

Position: Principal Production Engineer
3Dlabs Engineering Division

Signature:



Date: 30-06-2004

DECLARATION OF CONFORMITY

Manufacturer's Name: 3Dlabs Ltd
Manufacturer's Address: Huntsville, Alabama, USA. 35824
declares that the product

Product Name: Wildcat Realizm 800 Graphics Accelerator Card

conforms to the following product specifications:
 Following provisions of the 89/336/EEC Directive

<i>Specification</i>	<i>Class / Level</i>
EN 55022:1998	Class B Radiated Electric Field Emissions
EN 55022:1998	Class B Power Line Conducted Emissions
EN 55024:1998 (IEC 61000-4-3)	Radiated Electromagnetic Field Immunity
EN 55024:1998 (IEC 61000-4-2)	Electrostatic Discharge Immunity
EN 55024:1998 (IEC 61000-4-4)	Electrical Fast Transient/Burst Immunity
EN 55024:1998 (IEC 61000-4-6)	Conducted Disturbance Immunity
EN 55024:1998 (IEC 61000-4-11)	Voltage Dips and Interruptions Immunity
EN 55024:1998 (IEC 61000-4-5)	Surge Immunity
47 CFR Part 15, Subpart B (ANSI C63.4:2001)	Class B Radiated Electric Field Emissions
47 CFR Part 15, Subpart B (ANSI C63.4:2001)	Class B Power Line Conducted Emissions
VCCI V-4/2003-04	Class B Radiated Electric Field Emissions
VCCI V-4/2003-04	Class B Power Line Conducted Emissions
AS/NZS CISPR 22:2002	Class B Radiated Electric Field Emissions
AS/NZS CISPR 22:2002	Class B Power Line Conducted Emissions
CNS 13438 (8473.30.10.90)	Class B Taiwanese EMI Emissions and Immunity

Date of Declaration: 30.06.04...

Issued by: Principal Production Engineer, 3Dlabs Ltd. +44 (0) 1784 476646

This product complies with Part 15 of FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interferences that may cause undesired operation.

This Class B digital apparatus complies with Canadian ICES-003.

This Class B digital apparatus meets the Korean criteria for preventing electromagnetic interference for Information Technology Equipment using specifications outlined in ANSI C63.4 and CISPR22.

UL 1950 PAG 1.7-003: This graphics card is for use with UL Listed personal computers that have installation instructions detailing user installation of card cage accessories

EC Declaration of Conformity

We:

3Dlabs Ltd, Meadlake Place, Thorpe Lea Road,
Egham, Surrey. TW20 8HE

declare under our sole legal responsibility that the following product/s:

Model: Wildcat Realizm 500 Graphics Accelerator Card

is in conformance with the following relevant harmonised standards:

EN 55022:1998 (Class B Radiated Electric Field Emissions)
EN 55022:1998 (Class B Power Line Conducted Emissions)
EN 55024:1998 (IEC 61000-4-2)
EN 55024:1998 (IEC 61000-4-3)
EN 55024:1998 (IEC 61000-4-4)
EN 55024:1998 (IEC 61000-4-5)
EN 55024:1998 (IEC 61000-4-6)
EN 55024:1998 (IEC 61000-4-11)

for the light industrial, office and home environments following the provisions of Council Directive 89/336/EEC on the approximation of the laws of member states relating to electromagnetic compatibility, as amended by Council Directive 92/31/EEC.

Name: Nalin Patel

Position: Principal Production Engineer
3Dlabs Engineering Division

Signature:



Date: 10-06-2005

DECLARATION OF CONFORMITY

Manufacturer's Name: 3Dlabs Ltd
Manufacturer's Address: Meadlake Place, Thorpe Lea Road, Egham, Surrey. TW20 8HE
Product Name: Wildcat Realizm 500 Graphics Accelerator Card

declares that the product/s
conforms to the following product specifications:

Following provisions of the 89/336/EEC Directive

<i>Specification</i>	<i>Class / Level</i>
EN 55022:1998 (CISPR 22 limits)	Class B Radiated Electric Field Emissions
EN 55022:1998 (CISPR 22 limits)	Class B Power Line Conducted Emissions
47 CFR Part 15, Subpart B (ANSI C63.4:2001)	Class B Radiated Electric Field Emissions
47 CFR Part 15, Subpart B (ANSI C63.4:2001)	Class B Power Line Conducted Emissions
VCCI V-4/97.04	Class B Radiated Electric Field Emissions
VCCI V-4/97.04	Class B Power Line Conducted Emissions
AS/NZS 3548:1995	Class B Radiated Electric Field Emissions
AS/NZS 3548:1995	Class B Power Line Conducted Emissions
EN 55024:1998 (IEC 61000-4-3)	Radiated Electromagnetic Field Immunity
EN 55024:1998 (IEC 61000-4-2)	Electrostatic Discharge Immunity
EN 55024:1998 (IEC 61000-4-4)	Electrical Fast Transient/Burst Immunity
EN 55024:1998 (IEC 61000-4-6)	Conducted Disturbance Immunity
EN 55024:1998 (IEC 61000-4-11)	Voltage Dips and Interruptions Immunity
EN 55024:1998 (IEC 61000-4-5)	Surge Immunity
CNS 13438 (8473.30.10.90)	Class B Taiwanese EMI Emissions and Immunity

Date of Declaration: 10-06-05...

Issued by:  Principal Production Engineer, 3Dlabs Ltd. +44 (0) 1784 476646

This product complies with Part 15 of FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interferences that may cause undesired operation.

This Class B digital apparatus complies with Canadian ICES-003.

This Class B digital apparatus meets the Korean criteria for preventing electromagnetic interference for Information Technology Equipment using specifications outlined in ANSI C63.4 and CISPR22.

UL 1950 PAG 1.7-003: This graphics card is for use with UL Listed personal computers that have installation instructions detailing user installation of card cage accessories