



NVIDIA Quadro Professional Drivers ***Release 186 Notes***

Version 186.18

**For Windows Server 2003 32-bit and 64-bit
and Windows Server 2008 32-bit and 64-bit**

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Table of Contents



1. Introduction to Release 186

Notes

Structure of the Document 1
 Changes in this Edition 1

2. Release 186 Driver Changes

Version 186.18 Highlights 4
 What's New in Release 181 4
 What's New in Version 186.18 6
 Limitations in This Release for Windows Server
 2008 7
 Special Instructional Notes for this Release. 7
 NVIDIA Application Configuration Engine (ACE)
 8
 SLI Multi-OS – GPU Assignment in System
 Virtualization 8
 Changes in Version 186.18 9
 Fixed Issues—Windows Server 2003 9
 Open Issues in Version 186.18 11
 Windows Server 2003 Issues 11
 Windows Server 2008 Issues 11
 Not NVIDIA Issues 12
 Unsupported Features under Windows Server
 2008 12
 OpenGL Application Issues for Windows Server
 2008 14
 Known Product Limitations 15
 1280x1024 @ 60 Hz not Available on BenQ
 FP241W Monitors 15
 Image Sharpening Control not Available with
 Quadro FX 4600 and later GPUs. 15
 Applying Workstation Application Profiles 16
 Gigabyte GA-6BX Motherboard 16
 DVD Playback Issues with Dual NVIDIA Quadro
 NVS Cards 16
 PowerDVD 5.0 Does Not Display Correctly in
 nView Span Mode 16
 DirectX Fails When Detaching/Reattaching
 Displays in Dualview Mode 17
 OpenGL Viewport Scaling Problem in Horizontal
 Span Mode 17
 Video Playback in nView Clone and Span
 Modes 17
 No Antialiasing of 3DMark03 Image Quality
 Screen Captures 18

Antialiasing Problems With Certain Applications
 18
 Poor Quality S-Video Output on Some TVs 18

3. The Release 186 Driver

Hardware and Software Support 21
 Supported Operating Systems. 21
 Supported NVIDIA Products. 22
 Supported Languages 23
 Driver Installation 24
 Minimum Hard Disk Space 24
 Before You Begin—Windows Server 2008 24
 Before You Begin—Windows Server 2003 24
 Installation Instructions 26

A. Mode Support for Windows

General Mode Support Information 28
 Default Modes Supported by GPU—Windows
 Server 2008 29
 Understanding the Mode Format 29
 NVIDIA Quadro FX/CX/VX and Quadro NVS
 Family of GPUs 30
 Default Modes Supported by GPU—Windows
 Server 2003 32
 Understanding the Mode Format 32
 NVIDIA Quadro FX/CX/VX and Quadro NVS
 Family of GPUs 33
 TV-Out Modes Supported by TV Encoders 39



List of Tables



Table 3.1	Supported NVIDIA Workstation Products	22
Table A.1	Modes Supported for High Resolution Displays	28
Table A.2	Non-standard Modes Supported	28
Table A.3	Mode Support for S-Video and Composite Out	39
Table A.4	Mode Support for Component YPrPb Out and DVI Out	39

CHAPTER

1

INTRODUCTION TO *RELEASE 186 NOTES*

This edition of *Release 186 Notes* describes the Release 186 Quadro Professional Drivers for Microsoft® Windows® Server 2003 and Windows Server 2008. NVIDIA provides these notes to describe performance improvements and bug fixes in each documented version of the driver.

Structure of the Document

This document is organized in the following sections:

- “[Release 186 Driver Changes](#)” on page 3 gives a summary of changes, and fixed and open issues in this version.
- “[The Release 186 Driver](#)” on page 21 describes the NVIDIA products and languages supported by this driver, the system requirements, and how to install the driver.
- “[Mode Support for Windows](#)” on page 27 lists the default resolutions supported by the driver.

Changes in this Edition

This edition of the *Release 186 Notes* for Windows Server 2003 and Windows Server 2008 includes information about NVIDIA graphics driver version 186.18, and lists changes made to the driver since version 181.20. These changes are discussed beginning with the chapter “[Release 186 Driver Changes](#)” on page 3.

CHAPTER

2

RELEASE 186 DRIVER CHANGES

This chapter describes open issues for version 186.18, and resolved issues and driver enhancements for versions of the Release 186 driver up to version 186.18. The chapter contains these sections:

- “Version 186.18 Highlights” on page 4
- “Limitations in This Release for Windows Server 2008” on page 7
- “Special Instructional Notes for this Release” on page 7
- “Changes in Version 186.18” on page 9
- “Open Issues in Version 186.18” on page 11
- “Not NVIDIA Issues” on page 12
- “Known Product Limitations” on page 15

Version 186.18 Highlights

This section provides highlights of version 186.18 of the NVIDIA Release 186 Driver for Windows Vista.

- [What's New in Release 181](#)
- [What's New in Version 186.18](#)

What's New in Release 181

Release 186 includes several changes in the following areas:

- ["NVIDIA Control Panel Updates"](#) on page 4
- ["Display Driver"](#) on page 5
- ["Video"](#) on page 5
- ["CUDA"](#) on page 6
- ["OpenGL"](#) on page 6

NVIDIA Control Panel Updates

3D Settings Pages

- **Ambient Occlusion** setting (*new* in the Manage 3D Settings page for Windows Server 2008)

Ambient occlusion enhances depth perception and adds realism to 3D scenes by providing a soft shadow effect to objects based on their placement in the scene.

- **SLI Antialiasing** (*new* in the Manage 3D Settings page)
Now available under Windows Server 2008 as well as Windows Server 2003.
- **Workstation/Quad-buffered 3D Stereo** (*new* Stereo-Display mode settings in the Manage 3D Settings page)

Added support for the following stereoscopic 3D hardware and modes:

- GeForce 3D Vision hardware—generic active stereo, via on-board DIN connector, passive (Clone mode) modes, and 3D DLP display
- Generic active stereo
- Horizontal interlaced stereo displays
- Texas Instruments 3D Ready DLP® (Digital Light Processing technology) displays

Display Pages

- **Set up Multiple Displays** (*revised* under Windows Server 2008)

In Release 185, when SLI mode is enabled (2-way and Quad SLI), users can now select a display from different GPUs as long as the GPUs are in the same SLI group.

- Displays must still be connected to the same GPU under Clone mode.
- Quad SLI: When using GeForce X2, Quadro X2, or the GeForce GTX 295 graphics cards, only GPUs that have two display connectors can be used to drive displays. Typically, display connectors lined up on the same slot position are connected to the same GPU.
- 3-way SLI: Multiple displays across different GPUs are not supported in 3-way SLI mode. To use more than one display, they must be connected to the same GPU.
- NVIDIA recommends connecting displays to the same GPU to shorten the driver reload time on the initial setup.
- **Adjust Desktop Color Settings** page (*revised* under Windows Server 2008)
Applications now have the option of controlling the desktop color settings.

Video & Television

- **HDCP Status**
New page for verifying whether the system is HDCP-capable.
- **Adjust TV Color Settings** page (*revised* under Windows Server 2008)
Applications now have the option of controlling the TV color settings.

Display Driver

- **Device Support**
Added support for EDID-like devices.
- **Hotplug Behavior** (applies to Windows Server 2008)
When hotplugging or hot-unplugging a digital display, the driver detects the display and then configures the multi-display mode and display resolution based on the recent record of the displays connected. If no record exists, then the driver applies default settings. A popup message appears at the system notification tray to alert the user of the change.

The automatic display configuration also occurs upon powering on the computer and booting into Windows if the driver detects a change in display connections since the last Windows session.

Video

- Compute-based DVD upscaling

- CUDA Video Encoder 1.1: Added support for CUDA-enabled GPUs with less than 32 cores to the NVIDIA Video Encoding library.

CUDA

- CUDA 2.2
- CUDA Video Encoder V1.1: Added support for CUDA-enabled GPUs with less than 32 cores to the NVIDIA Video Encoding library.

OpenGL

- Support for OpenGL 3.0
- Implemented NVX_shader_buffer_load (OpenGL Shading Language).

What's New in Version 186.18

- See “Changes in Version 186.18” on page 9.

Limitations in This Release for Windows Server 2008

The following are features that are not currently supported or have limited support in this driver release:

- **SDI**

This driver does not support the Serial Display Interface (a standard for driving high color depth displays).

- **Genlock/Frame Lock**

This driver does not support the ability to synchronize multiple display outputs with an external signal.

Features Not Yet Available in the NVIDIA Control Panel

Support for the following control panel features is under development and not yet available under Windows Vista:

- **Display Category**

The Graph tab on the Adjust Desktop Color Settings page is not available.

- **Workstation Category**

The Workstation category page is not available with this driver version.

Special Instructional Notes for this Release

This section clarifies instructions for successfully accomplishing the following tasks:

Turning Off V-Sync to Boost Performance

To get the best benchmark and application performance measurements, turn V-Sync off as follows:

- 1 Open the NVIDIA Control Panel and make sure that *Advanced Settings* is selected from the control panel tool bar.
- 2 From the *Select a Task* pane, under 3D Settings, click **Manage 3D Settings**, then click the Global Settings tab.
- 3 From the Global presets pulldown menu, select **Base profile**.
- 4 From the Settings listbox, select **Vertical sync** and change its value to **Force off**, then click **Apply**.
- 5 From the Global presets pulldown menu, select **3D App - Default Global Settings** (the driver's default profile) or use the application profile that matches the application you are testing, then click **Apply**.

Be sure to close the NVIDIA Control Panel completely —leaving it open will affect benchmark and application performance.

NVIDIA Application Configuration Engine (ACE)

This driver includes the NVIDIA Application Configuration Engine (ACE), which automatically detects the workstation application and configures the appropriate profile settings in the NVIDIA Control Panel.

See the *NVIDIA Quadro Professional Drivers: NVIDIA Control Panel Quick Start Guide* for more information about this feature.

SLI Multi-OS – GPU Assignment in System Virtualization

On systems with two supported graphics cards installed, this driver supports a system virtualization tool's ability to directly assign a GPU to a guest virtual machine (VM). This direct assignment allows the host and guest VM to each run on their own operating system and with their own GPU and driver.

- **Supported Virtualization Software:** Parallels Workstation Extreme
- **Supported Graphics Cards**

Up to two different models can be used in a system, from among the following:

- Quadro FX 5800
- Quadro FX 4800
- Quadro FX 3800

- **Video BIOS Requirement**

- The graphics card assigned to the guest VM needs video BIOS version 62.00.39.00.00 or later.

For a list of SLI Multi-OS certified workstations, virtualization software, and OS combinations, please see http://www.nvidia.com/object/sli_multi_os.html.

Changes in Version 186.18

The following sections list the changes made and issues resolved since driver version 181.20.

- [“Fixed Issues–Windows Server 2003” on page 9](#)

The NVIDIA bug number and driver module are provided for reference.

Fixed Issues–Windows Server 2003

Single-GPU Fixed Issues

- Quadro FX 4600: SCRATCH–there is tiling corruption in the application output windows.

Open Issues in Version 186.18

As with every released driver, version 186.18 of the Release 186 driver has open issues and enhancement requests associated with it. This section includes lists of issues that are either not fixed or not implemented in this version. Some problems listed may not have been thoroughly investigated and, in fact, may not be NVIDIA issues. Others may have workaround solutions.

- [“Windows Server 2003 Issues”](#) on page 11
- [“Windows Server 2008 Issues”](#) on page 11

Windows Server 2003 Issues

- Frame buffer object leaks occur due to `glDeleteFramebuffersEXT`.

Windows Server 2008 Issues

- When running OpenGL demos in Clone mode, moving images on the secondary monitor are cut.

Not NVIDIA Issues

This section lists issues that are not due to the NVIDIA driver as well as features that are not meant to be supported by the NVIDIA driver for Windows Vista.

- “Unsupported Features under Windows Server 2008” on page 12
- “OpenGL Application Issues for Windows Server 2008” on page 14

Unsupported Features under Windows Server 2008

The following are features and functionality that were available in driver releases supporting Windows Server 2003, but are not available in driver releases for Windows Server 2008:

- **High resolution scaling desktop (HRSD)**
- **MultiView Display Mode** (for NVIDIA Quadro NVS graphics cards)
- **NVKeystone**
- **Unified back buffer (UBB) controls**
- **OpenGL Video Overlays**

This is an operating system limitation.

Vista window manager features will provide new ways of accomplishing overlays, but will require application porting.

- **Overclocking**

GPU overclocking is no longer supported in the default GPU driver control panel. This feature is available in the NVIDIA nTune 5.05 software, which you can download from NVIDIA.com.

- **GPU Temperature Monitoring**

Temperature monitoring is no longer supported in the default GPU driver control panel. This feature is available in the NVIDIA nTune 5.05 software, which you can download from NVIDIA.com.

- **AGP Settings Adjustment**

- **Full-screen Video Mirror**

- **Video Zoom**

- **Pan & Scan** - the process of panning across the desktop in order to display a desktop on a monitor with lower resolution

- **Per-display Desktop Color Setting Adjustments**

For Clone mode, the desktop color setting adjustments through the NVIDIA Control Panel can only be made across all displays in a system, and not on a per-display basis.

- **Per-display Video Color Setting Adjustments**

For Dualview mode, the video color setting adjustments through the NVIDIA Control Panel can only be made across all displays in a system, and not on a per-display basis.

- **nView Horizontal and Vertical Span Modes**

Due to architectural changes in the new Windows Vista Window Display Driver Model (WDDM), span mode cannot be supported in NVIDIA graphics drivers. NVIDIA recommends using the built-in Windows Vista multi-display modes.

- **Edge Blending**

- **Run display optimization wizard**

- **Run multiple display wizard**

- **Run television setup wizard**

- **Display/Connection Wizard** (such as was provided with Windows Media Center Edition)

- **DVD/MPEG Extensions** (such as was provided with Windows Media Center Edition)

- **Audio Extensions** (such as was provided with Windows Media Center Edition)

OpenGL Application Issues for Windows Server 2008

The following are known compatibility issues for OpenGL applications developed under Windows XP:

- Mixed GDI and OpenGL rendering does not work.

A number of applications use GDI to render UI components and object highlighting. This is not supported in the Windows Vista driver model.

NVIDIA recommends converting GDI rendering to OpenGL.

The following are some applications that are known to have this issue:

- Maya 7.01
- Applications, Tools, and Benchmarks not supported under Windows Vista
 - GLperf
 - 3ds max 8 (later releases may be supported)
 - CATIA V5R15 (V5R16 is supported)
 - PTC's CDRS 2001
- Front buffered rendering may be slow, especially when DWM is enabled.

Flushing the rendering queue while rendering to the front buffer may cause the window manager to recomposite. Applications should therefore minimize the frequency with which they flush the rendering queue.

Known Product Limitations

This section describes problems that will not be fixed. Usually, the source of the problem is beyond the control of NVIDIA. Following is the list of problems and where they are discussed in this document:

- “1280x1024 @ 60 Hz not Available on BenQ FP241W Monitors” on page 15
- “Image Sharpening Control not Available with Quadro FX 4600 and later GPUs” on page 15
- “Applying Workstation Application Profiles” on page 16
- “Gigabyte GA-6BX Motherboard” on page 16
- “DVD Playback Issues with Dual NVIDIA Quadro NVS Cards” on page 16
- “PowerDVD 5.0 Does Not Display Correctly in nView Span Mode” on page 16
- “DirectX Fails When Detaching/Reattaching Displays in Dualview Mode” on page 17
- “OpenGL Viewport Scaling Problem in Horizontal Span Mode” on page 17
- “Video Playback in nView Clone and Span Modes” on page 17
- “No Antialiasing of 3DMark03 Image Quality Screen Captures” on page 18
- “Antialiasing Problems With Certain Applications” on page 18
- “Poor Quality S-Video Output on Some TVs” on page 18

1280x1024 @ 60 Hz not Available on BenQ FP241W Monitors

Even though the monitor EDID lists 1280x1024 @ 60 Hz, the screen turns blank when using an HDMI connection. This is an issue with the monitor and not the NVIDIA driver.

Because of this issue with the monitor, the NVIDIA driver blocks the problem mode (1280x1024 @ 60 Hz) and makes it unavailable.

Image Sharpening Control not Available with Quadro FX 4600 and later GPUs

With Quadro FX 4600 and later graphics cards, the **Image sharpening** slider on the NVIDIA Control Panel-> Display->Adjust Desktop Color Settings page is grayed out.

This control is intentionally disabled because image sharpening is not supported on Quadro FX 4600 and later GPUs.

Applying Workstation Application Profiles

- **Background**

The workstation application profiles are software settings used by the NVIDIA Display Drivers to provide optimum performance when using a selected application. The profile also works around known application issues and bugs.

If there is an available setting for an application, it should be used, otherwise incorrect behavior or reduced performance is likely to occur.

- **Issues**

Configuration changes require that you restart the application.

Once an application is running, it does not receive notification of configuration changes. Therefore, if you change the configuration while the application is running, you must exit and restart the application for the configuration changes to take effect.

Gigabyte GA-6BX Motherboard

This motherboard uses a LinFinity regulator on the 3.3-V rail that is rated to only 5 A—less than the AGP specification, which requires 6 A. When diagnostics or applications are running, the temperature of the regulator rises, causing the voltage to the NVIDIA chip to drop as low as 2.2 V. Under these circumstances, the regulator cannot supply the current on the 3.3-V rail that the NVIDIA chip requires.

This problem does not occur when the graphics board has a switching regulator or when an external power supply is connected to the 3.3-V rail.

DVD Playback Issues with Dual NVIDIA Quadro NVS Cards

With both AGP and PCI NVIDIA Quadro NVS cards installed in the system, when attempting to play DVDs in full-screen mode on the display connected to the PCI card, the screen is blank.

This is not an NVIDIA bug, but rather a problem with older point releases of PowerDVD and WinDVD.

PowerDVD 5.0 Does Not Display Correctly in nView Span Mode

With nView Horizontal Span mode enabled, when the PowerDVD 5.0 playback window is dragged to the second display and then stretched to fill the display, the right area of the display is corrupted.

This is not an NVIDIA bug, but a problem with PowerDVD.

DirectX Fails When Detaching/Reattaching Displays in Dualview Mode

This problem can be duplicated as follows:

- 1 Enable both displays in Dualview mode.
- 2 Detach monitor 2 and apply settings.
- 3 Reattach monitor 2 and apply settings.

DirectX runtime fails on monitor 1.

This is not an NVIDIA bug, but a limitation in the operating system where DirectX does not enumerate the second device. DirectX can be restored to both displays by rebooting the system

OpenGL Viewport Scaling Problem in Horizontal Span Mode

With nView Horizontal Span mode enabled, when opening an OpenGL model in a viewport, the model image is scaled too large to fit in the viewport. The problem occurs with such applications as Maya 5.0 and 3D Studio MAX 4.26.

This is not an NVIDIA bug, but a limitation in the application's ability to properly maintain the aspect ratio in Horizontal Span mode.

Video Playback in nView Clone and Span Modes

- **Problem**

With nView Clone or Span mode enabled, video playback appears on only one display under the following conditions:

- Under nView Clone mode, when full-screen video mirror is not used.
- Under nView Span mode, when full-screen video mirror is not used and the video is positioned to span across both monitors.

- **Explanation**

With applications that render using the hardware overlay—such as DirectX applications—the default driver behavior is to enable the hardware overlay when nView Clone or Span mode is enabled.

Because the driver supports only one hardware overlay, the video appears on only one display.

No Antialiasing of 3DMark03 Image Quality Screen Captures

- **Problem**

After enabling antialiasing from the NVIDIA Properties page, 3DMark03 screen captures—obtained using the application’s screen capture function—might not be antialiased.

- **Explanation**

This is not an NVIDIA bug, but rather a result of different methods used to render antialiased images.

Depending on a combination of factors, the driver may take advantage of the NVIDIA hardware’s ability to bypass the front buffer while rendering an antialiased image. In this case, the front buffer does not contain antialiased data, so if an application takes data from the front buffer—as is the case with 3DMark03’s Image Quality screen captures—then the resulting image is not antialiased.

To accommodate applications that request use of the front buffer, the NVIDIA software can provide the antialiased data in a buffer to the application. Since this negates the advantages of the NVIDIA hardware capability, this support is enabled only when antialiasing is enabled within the application, and not from the NVIDIA control panel.

In all cases when antialiasing is enabled, screen images as well as screen captures obtained using the Print Screen key are always antialiased.

Antialiasing Problems With Certain Applications

Antialiasing in the NVIDIA Direct3D driver requires each new frame to be rendered from scratch. This requirement adversely affects applications that render only that portion of the content that has changed since the last frame. A common symptom of this problem is geometric structures that incorrectly disappear and re-appear as the scene shifts.

Poor Quality S-Video Output on Some TVs

NVIDIA drivers differentiate an S-video TV from a composite TV by searching for 75-Ohm loads on the chrominance and luminance lines. If the driver detects only one such load, it assumes that it has a composite TV and drives both chroma and luma onto that line. This approach allows both types of TV to display in color.

Unfortunately, some S-video TVs do not apply the correct load to both lines, causing the driver to detect an S-video TV as a composite. The driver, in turn, sends the lower quality signal to the S-video TV. To work around this problem, use the Control Panel to override the **Auto-select** feature. This can be done following these steps:

- 1 In the **Settings** tab of the **Display Properties** Control Panel, click **Advanced**.
- 2 In the **nView** tab, click **Device Settings** and click **Select Output Device**.

- 3** In the **Device Selection** tab, click the **TV** option.
- 4** Change the **Video output format** to **S-video**.

CHAPTER

3

THE RELEASE 186 DRIVER

This chapter covers the following main topics:

- “Hardware and Software Support” on page 21
- “Driver Installation” on page 24

Hardware and Software Support

Supported Operating Systems

This Release 186 driver includes drivers designed for the following Microsoft® operating systems:

- Microsoft Windows Server 2003¹
- Microsoft Windows Server 2008

1. SLI mode is not supported under Microsoft Windows Server 2003 and Windows Server 2008.

Supported NVIDIA Products

Table 3.1 lists the NVIDIA products supported by the Release 186 driver.

Table 3.1 Supported NVIDIA Workstation Products

Product	Windows Server 2003	Windows Server 2008
NVIDIA Quadro FX 5800	X	X
NVIDIA Quadro FX 5600	X	X
NVIDIA Quadro FX 5500	X	X
NVIDIA Quadro FX 4800	X	X
NVIDIA Quadro FX 4700 X2	X	X
NVIDIA Quadro FX 4600	X	X
NVIDIA Quadro FX 4500 X2	X	X
NVIDIA Quadro FX 4500	X	X
NVIDIA Quadro FX 4400	X	X
NVIDIA Quadro FX 4000	X	X
NVIDIA Quadro FX 3800	X	X
NVIDIA Quadro FX 3700	X	X
NVIDIA Quadro FX 3500	X	X
NVIDIA Quadro FX 3450	X	X
NVIDIA Quadro FX 3400	X	X
NVIDIA Quadro FX 1800	X	X
NVIDIA Quadro FX 1700	X	X
NVIDIA Quadro FX 1500	X	X
NVIDIA Quadro FX 1400	X	X
NVIDIA Quadro FX 580	X	X
NVIDIA Quadro FX 570	X	X
NVIDIA Quadro FX 560	X	X
NVIDIA Quadro FX 550	X	X
NVIDIA Quadro FX 540	X	X
NVIDIA Quadro FX 470	X	X
NVIDIA Quadro FX 380	X	X
NVIDIA Quadro FX 370	X	X
NVIDIA Quadro FX 370 low profile	X	X
NVIDIA Quadro FX 350	X	X
NVIDIA Quadro VX 200	X	X
NVIDIA Quadro CX	X	X
NVIDIA Quadro NVS 450	X	X
NVIDIA Quadro NVS 440	X	X
NVIDIA Quadro NVS 420	X	X
NVIDIA Quadro NVS 295	X	X
NVIDIA Quadro NVS 290	X	X
NVIDIA Quadro NVS 285	X	X

Supported Languages

The Release 186 Quadro Professional Drivers supports the following languages in the main driver Control Panel:

English (USA)	German	Portuguese (Euro/Iberian)
English (UK)	Greek	Russian
Arabic	Hebrew	Slovak
Chinese (Simplified)	Hungarian	Slovenian
Chinese (Traditional)	Italian	Spanish
Czech	Japanese	Spanish (Latin America)
Danish	Korean	Swedish
Dutch	Norwegian	Thai
Finnish	Polish	Turkish
French	Portuguese (Brazil)	

Driver Installation

Minimum Hard Disk Space

Windows Server 2008

The hard disk space requirement for 32-bit is minimum 120 MB for English-only, and 185 MB for International.

The hard disk space requirement for 64-bit is minimum 170 MB for English-only, and 230 MB for International.

Windows Server 2003

The hard disk space requirement for 32 bit is minimum 108 MB for English-only, and 190 MB for International.

The hard disk space requirement for 64 bit is minimum 140 MB for English-only, and 220 MB for International.

Before You Begin—Windows Server 2008

If you have previously installed NVIDIA nTune, NVIDIA recommends that you uninstall nTune before installing this driver. After the driver install is complete, you can reinstall NVIDIA nTune.

Before You Begin—Windows Server 2003

- If you do not have System Administrator access privileges, it is assumed that the appropriate person with System Administrator access in your organization will set up and install the NVIDIA graphics driver software on your computer.
- The installation process copies all necessary files for operation into the appropriate directories.
- The nView system files are copied to your **Windows\System** directory.
- nView Desktop Manager Profile files (*.tvp) are saved in the **Windows\Nview** directory.

Depending on the version of the NVIDIA driver previously installed, profiles may also be located in the **Documents and Settings\All Users\Application Data\nView_Profiles** directory.

- As part of the install process, an uninstall is registered in your system.
- The NVIDIA driver is installed in “Dualview mode” display. However, note that the second display is not activated by default, but must be enabled.

Preserving Settings Before Upgrading Your Software

Before uninstalling or installing software, you can preserve your nView Desktop Manager and/or NVIDIA Display settings by using the nView Desktop Manager Profiles features.

Note: Follow the steps below and/or refer to the *NVIDIA nView Desktop Manager User's Guide* for details. Under Windows XP/2000 and Windows NT 4.0, you must have, at least, **Power User** access privileges in order to create or save a profile. (Refer to Windows Help if you need an explanation of Power User access rights.)

Follow the steps below and/or refer to the *NVIDIA nView Desktop Manager User's Guide* for details.

- 1 Open the nView Desktop Manager Profiles page (Figure 4.1).
- 2 To preserve your current settings, you can use either the **Save** or the **New** option from the nView Desktop Manager Profiles page:
 - If you want to overwrite the currently loaded profile with your changed settings, use the **Save** option. Notice that a warning message indicates that you are about to overwrite the selected profile.
 - If you want to retain the currently loaded profile and want to save your changed settings to a new file, click the **New** option. Enter a name and description of the profile in the New Profile dialog box. For example, you can name this profile **My Settings**.
- 3 If you are an “advanced” user and want to customize certain settings in the saved profile, click **Advanced** << to expand the dialog box (Figure 4.2).
- 4 To customize the settings, you can select or clear any of the settings check boxes.
- 5 Click **Save** to return to the main Profiles page.

If you created a new profile, you will see the name of the newly created profile in the profiles list.

If you overwrote a current profile, the same profile name is retained in the list.

Note: nView Desktop Manager profile (.tvp) files are saved in the **Windows\nView** directory. Depending on the version of the NVIDIA driver previously installed, profiles may also be saved in the **Documents and Settings\All Users\Application Data\ nView_Profiles** directory.

- 6 Now you can uninstall your current driver for a driver upgrade.
- 7 After you restart your computer following an NVIDIA new driver install, you can easily load the saved profile from the Profiles page of nView Desktop Manager.

About Using Saved Profiles in Another Computer

You can easily use any saved profile (.tvp file in the **Windows\nView** directory) from one computer and use it in another computer, if you want. You'll need to copy it to the **Windows\nView** directory of a computer that has the NVIDIA ForceWare graphics display driver, etc. installed properly. Then

this profile can be loaded from another computer from the nView Desktop Manager Profiles page just as it can from your original computer.

Uninstalling the NVIDIA Display Driver Software

Note: It is highly recommended that you follow the steps in this section to completely uninstall the NVIDIA Display Driver software before updating to a new version of the software.

To uninstall the nView software, follow these steps:

- 1 From the Windows taskbar, click **Start > Settings > Control Panel** to open the Control Panel window.
- 2 Double-click the **Add/Remove Programs** item.
- 3 Click the **NVIDIA Display Driver** item from the list.
- 4 Click **Change/Remove**.
- 5 Click **Yes** to continue.

A prompt appears asking whether you want to delete all of the saved nView profiles.

- If you click **Yes**, all of the nView software and all of your saved profiles will be deleted.
- If you click **No**, the nView software is removed, but the profile files are saved in the `Windows\nview` directory on your hard disk.

Your system now restarts.

Installation Instructions

- 1 Follow the instructions on the NVIDIA .com Web site driver download page to locate the appropriate driver to download, based on your hardware and operating system.
- 2 On the driver download page, click the NVIDIA Software License Agreement check box if you accept the terms of the agreement.
- 3 Click the **Download** button.
- 4 At the File Download-Security Warning dialog box, either click **Run** to open the file or **Save** to save the file to your PC and open it later.
- 5 Follow the instructions in the NVIDIA InstallShield Wizard to complete the installation.

APPENDIX



MODE SUPPORT FOR WINDOWS

This chapter details the Windows modes supported by the Release 186 driver for NVIDIA products. It contains these sections:

- “General Mode Support Information” on page 28
- “Default Modes Supported by GPU—Windows Server 2008” on page 29
- “Default Modes Supported by GPU—Windows Server 2003” on page 32
- “TV-Out Modes Supported by TV Encoders” on page 39

General Mode Support Information

The NVIDIA graphics driver includes a standard list of display modes that are supported by default. These modes are listed in the section “Default Modes Supported by GPU—Windows Server 2008” on page 29 and “Default Modes Supported by GPU—Windows Server 2003” on page 32.

The actual modes available depend on the capabilities of the display. In addition, the NVIDIA graphics driver has a “dynamic EDID detection” capability and will make available *additional* modes that are listed in the display EDID, provided the graphics hardware can support it.

The NVIDIA graphics driver also supports the high resolutions available with the displays listed in [Table A.1](#) as well as the non-standard modes listed in [Table A.2](#).

Table A.1 Modes Supported for High Resolution Displays

Display	Maximum Resolution	Hardware Requirements
HP LP3065 Flat Panel Monitor (Dual-link DVI)	2560×1600 @ 60 Hz	<ul style="list-style-type: none"> All high-end NVIDIA Quadro FX graphics solutions.
Apple 30" Cinema HD Display (Dual link DVI)	2560×1600 @ 60 Hz	<ul style="list-style-type: none"> All high-end NVIDIA Quadro FX graphic solutions.
Dell WFP 3007 (Dual Link DVI)	2560×1600 @ 60 Hz	<ul style="list-style-type: none"> All High-end NVIDIA Quadro FX graphic solutions.

Table A.2 Non-standard Modes Supported

Resolution
1680 x 1050
1366 x 768

Default Modes Supported by GPU—Windows Server 2008

This section lists the modes that are included by default in the driver INF for the following product families:

- “NVIDIA Quadro FX/CX/VX and Quadro NVS Family of GPUs” on page 30

Understanding the Mode Format

Figure A.1 gives an example of how to read the mode information presented in this section.

Resolution	Color Depth	Refresh Rates
1024 x 768	32 60 70 72 75 85 100 120	140 144 150 170 200

Example entry: 1024 x 768 32 60 70 72 75 85 100 120 140 144 150 170 200

Meaning:

Resolution:	1024 x 768
Color depth:	32 bpp
Refresh rates:	60 Hz, 70 Hz, 72 Hz, 75 Hz, 85 Hz, 100 Hz, 120 Hz, 140 Hz, 144 Hz, 150 Hz, 170 Hz, and 200 Hz

Figure A.1 Mode Format

Note:

- Horizontal spanning modes of 3840x1080 and above, and vertical spanning modes of 1920x2160 and above generally require at least 32 MB of video memory at 32 bpp.
- An “i” next to the refresh rate indicates an interlaced refresh rate.

NVIDIA Quadro FX/CX/VX and Quadro NVS Family of GPUs

This sections lists the supported display resolutions, color depths, and refresh rates for the the products listed in [Table 3.1 on page 22](#).

Standard Modes

640 x 480	8		60 70 72 75 85 100 120 140 144 150 170 200 240
720 x 480	8		60
720 x 576	8	50	
800 x 600	8		60 70 72 75 85 100 120 140 144 150 170 200 240
848 x 480	8		60 70 72 75 85 100 120 140 144 150 170 200 240
960 x 600	8		60 70 72 75 85 100 120 140 144 150 170 200 240
1024 x 768	8		60 70 72 75 85 100 120 140 144 150 170 200 240
1088 x 612	8		60 70 72 75 85 100 120 140 144 150 170 200 240
1152 x 864	8		60 70 72 75 85 100 120 140 144 150 170 200
1280 x 720	8		60
1280 x 768	8		60 70 72 75 85 100 120 140 144 150 170
1280 x 800	8		60 70 72 75 85 100 120 140 144 150 170
1280 x 960	8		60 70 72 75 85 100 120 140 144 150 170
1280 x 1024	8		60 70 72 75 85 100 120 140 144 150 170
1360 x 768	8		60 70 72 75 85 100 120 140 144 150 170
1600 x 900	8		60 70 72 75 85 100 120 140 144 150
1600 x 1024	8		60 70 72 75 85 100 120
1600 x 1200	8		60 70 72 75 85 100 120
1680 x 1050	8		60
1920 x 1080	8		60
1920 x 1200	8		60 70 72 75 85 100
1920 x 1440	8		60 70 72 75 85
2048 x 1536	8		60

640 x 480	16		60 70 72 75 85 100 120 140 144 150 170 200 240
720 x 480	16		60
720 x 576	16	50	
800 x 600	16		60 70 72 75 85 100 120 140 144 150 170 200 240
848 x 480	16		60 70 72 75 85 100 120 140 144 150 170 200 240
960 x 600	16		60 70 72 75 85 100 120 140 144 150 170 200 240
1024 x 768	16		60 70 72 75 85 100 120 140 144 150 170 200 240
1088 x 612	16		60 70 72 75 85 100 120 140 144 150 170 200 240

```

1152 x 864 16      60 70 72 75 85 100 120 140 144 150 170 200
1280 x 720 16      60
1280 x 768 16      60 70 72 75 85 100 120 140 144 150 170
1280 x 800 16      60 70 72 75 85 100 120 140 144 150 170
1280 x 960 16      60 70 72 75 85 100 120 140 144 150 170
1280 x 1024 16     60 70 72 75 85 100 120 140 144 150 170
1360 x 768 16      60 70 72 75 85 100 120 140 144 150 170
1600 x 900 16      60 70 72 75 85 100 120 140 144 150
1600 x 1024 16     60 70 72 75 85 100 120
1600 x 1200 16     60 70 72 75 85 100 120
1680 x 1050 16     60
1920 x 1080 16     60
1920 x 1200 16     60 70 72 75 85 100
1920 x 1440 16     60 70 72 75 85
2048 x 1536 16     60

```

```

-----
640 x 480 32      60 70 72 75 85 100 120 140 144 150 170 200 240
720 x 480 32      60
720 x 576 32      50
800 x 600 32      60 70 72 75 85 100 120 140 144 150 170 200 240
848 x 480 32      60 70 72 75 85 100 120 140 144 150 170 200 240
960 x 600 32      60 70 72 75 85 100 120 140 144 150 170 200 240
1024 x 768 32     60 70 72 75 85 100 120 140 144 150 170 200 240
1088 x 612 32     60 70 72 75 85 100 120 140 144 150 170 200 240
1152 x 864 32     60 70 72 75 85 100 120 140 144 150 170 200
1280 x 720 32     60
1280 x 768 32     60 70 72 75 85 100 120 140 144 150 170
1280 x 800 32     60 70 72 75 85 100 120 140 144 150 170
1280 x 960 32     60 70 72 75 85 100 120 140 144 150 170
1280 x 1024 32    60 70 72 75 85 100 120 140 144 150 170
1360 x 768 32     60 70 72 75 85 100 120 140 144 150 170
1600 x 900 32     60 70 72 75 85 100 120 140 144 150
1600 x 1024 32    60 70 72 75 85 100 120
1600 x 1200 32    60 70 72 75 85 100 120
1680 x 1050 32    60
1920 x 1080 32    60
1920 x 1200 32    60 70 72 75 85 100
1920 x 1440 32    60 70 72 75 85
2048 x 1536 32    60

```

Default Modes Supported by GPU-Windows Server 2003

This section lists the modes that are included by default in the driver INF for the following product families:

- “NVIDIA Quadro FX/CX/VX and Quadro NVS Family of GPUs” on page 33

Understanding the Mode Format

Figure A.2 gives an example of how to read the mode information presented in this section.

Resolution	Color Depth	Refresh Rates
1024 x 768	32 60 70 72 75 85 100 120 140 144 150 170 200	

Example entry:

Meaning:

Resolution:	1024 x 768
Color depth:	32 bpp
Refresh rates:	60 Hz, 70 Hz, 72 Hz, 75 Hz, 85 Hz, 100 Hz, 120 Hz, 140 Hz, 144 Hz, 150 Hz, 170 Hz, and 200 Hz

Figure A.2 Mode Format

Note:

- Horizontal spanning modes of 3840x1080 and above, and vertical spanning modes of 1920x2160 and above generally require at least 32 MB of video memory at 32 bpp.
- An “i” next to the refresh rate indicates an interlaced refresh rate.

NVIDIA Quadro FX/CX/VX and Quadro NVS Family of GPUs

This sections lists the supported display resolutions, color depths, and refresh rates for the products listed in [Table 3.1 on page 22](#):

Standard Modes

640 x 480	8		60 70 72 75 85 100 120 140 144 150 170 200 240
720 x 480	8		60
720 x 576	8	50	60
800 x 600	8		60 70 72 75 85 100 120 140 144 150 170 200 240
848 x 480	8		60 70 72 75 85 100 120 140 144 150 170 200 240
960 x 600	8		60 70 72 75 85 100 120 140 144 150 170 200 240
1024 x 768	8		60 70 72 75 85 100 120 140 144 150 170 200 240
1088 x 612	8		60 70 72 75 85 100 120 140 144 150 170 200 240
1152 x 864	8		60 70 72 75 85 100 120 140 144 150 170 200
1280 x 720	8		60
1280 x 768	8		60 70 72 75 85 100 120 140 144 150 170
1280 x 800	8		60 70 72 75 85 100 120 140 144 150 170
1280 x 960	8		60 70 72 75 85 100 120 140 144 150 170
1280 x 1024	8		60 70 72 75 85 100 120 140 144 150 170
1360 x 768	8		60 70 72 75 85 100 120 140 144 150 170
1600 x 900	8		60 70 72 75 85 100 120 140 144 150
1600 x 1024	8		60 70 72 75 85 100 120
1600 x 1200	8		60 70 72 75 85 100 120
1680 x 1050	8		60
1920 x 1080	8		60
1920 x 1200	8		60 70 72 75 85 100
1920 x 1440	8		60 70 72 75 85
2048 x 1536	8		60

640 x 480	16		60 70 72 75 85 100 120 140 144 150 170 200 240
720 x 480	16		60
720 x 576	16	50	60
800 x 600	16		60 70 72 75 85 100 120 140 144 150 170 200 240
848 x 480	16		60 70 72 75 85 100 120 140 144 150 170 200 240
960 x 600	16		60 70 72 75 85 100 120 140 144 150 170 200 240
1024 x 768	16		60 70 72 75 85 100 120 140 144 150 170 200 240

1088 x 612	16	60 70 72 75 85 100 120 140 144 150 170 200 240
1152 x 864	16	60 70 72 75 85 100 120 140 144 150 170 200
1280 x 720	16	60
1280 x 768	16	60 70 72 75 85 100 120 140 144 150 170
1280 x 800	16	60 70 72 75 85 100 120 140 144 150 170
1280 x 960	16	60 70 72 75 85 100 120 140 144 150 170
1280 x 1024	16	60 70 72 75 85 100 120 140 144 150 170
1360 x 768	16	60 70 72 75 85 100 120 140 144 150 170
1600 x 900	16	60 70 72 75 85 100 120 140 144 150
1600 x 1024	16	60 70 72 75 85 100 120
1600 x 1200	16	60 70 72 75 85 100 120
1680 x 1050	16	60
1920 x 1080	16	60
1920 x 1200	16	60 70 72 75 85 100
1920 x 1440	16	60 70 72 75 85
2048 x 1536	16	60

640 x 480	32	60 70 72 75 85 100 120 140 144 150 170 200 240
720 x 480	32	60
720 x 576	32	50 60
800 x 600	32	60 70 72 75 85 100 120 140 144 150 170 200 240
848 x 480	32	60 70 72 75 85 100 120 140 144 150 170 200 240
960 x 600	32	60 70 72 75 85 100 120 140 144 150 170 200 240
1024 x 768	32	60 70 72 75 85 100 120 140 144 150 170 200 240
1088 x 612	32	60 70 72 75 85 100 120 140 144 150 170 200 240
1152 x 864	32	60 70 72 75 85 100 120 140 144 150 170 200
1280 x 720	32	60
1280 x 768	32	60 70 72 75 85 100 120 140 144 150 170
1280 x 800	32	60 70 72 75 85 100 120 140 144 150 170
1280 x 960	32	60 70 72 75 85 100 120 140 144 150 170
1280 x 1024	32	60 70 72 75 85 100 120 140 144 150 170
1360 x 768	32	60 70 72 75 85 100 120 140 144 150 170
1600 x 900	32	60 70 72 75 85 100 120 140 144 150
1600 x 1024	32	60 70 72 75 85 100 120
1600 x 1200	32	60 70 72 75 85 100 120
1680 x 1050	32	60
1920 x 1080	32	60
1920 x 1200	32	60 70 72 75 85 100
1920 x 1440	32	60 70 72 75 85

2048 x 1536 32 60

Horizontal Spanning Modes

1280 x 480	8	60 70 72 75 85 100 120 140 144 150 170 200 240
1600 x 600	8	60 70 72 75 85 100 120 140 144 150 170 200 240
1696 x 480	8	60 70 72 75 85 100 120 140 144 150 170 200 240
1920 x 600	8	60 70 72 75 85 100 120 140 144 150 170 200 240
2048 x 768	8	60 70 72 75 85 100 120 140 144 150 170 200 240
2176 x 612	8	60 70 72 75 85 100 120 140 144 150 170 200 240
2304 x 864	8	60 70 72 75 85 100 120 140 144 150 170 200
2560 x 720	8	60
2560 x 768	8	60 70 72 75 85 100 120 140 144 150 170
2560 x 800	8	60 70 72 75 85 100 120 140 144 150 170
2560 x 960	8	60 70 72 75 85 100 120 140 144 150 170
2560 x 1024	8	60 70 72 75 85 100 120 140 144 150 170
2720 x 768	8	60 70 72 75 85 100 120 140 144 150 170
3200 x 900	8	60 70 72 75 85 100 120 140 144 150
3200 x 1024	8	60 70 72 75 85 100 120
3200 x 1200	8	60 70 72 75 85 100 120
3360 x 1050	8	60
3840 x 1080	8	60
3840 x 1200	8	60 70 72 75 85 100
3840 x 1440	8	60 70 72 75 85
4096 x 1536	8	60

1280 x 480	16	60 70 72 75 85 100 120 140 144 150 170 200 240
1600 x 600	16	60 70 72 75 85 100 120 140 144 150 170 200 240
1696 x 480	16	60 70 72 75 85 100 120 140 144 150 170 200 240
1920 x 600	16	60 70 72 75 85 100 120 140 144 150 170 200 240
2048 x 768	16	60 70 72 75 85 100 120 140 144 150 170 200 240
2176 x 612	16	60 70 72 75 85 100 120 140 144 150 170 200 240
2304 x 864	16	60 70 72 75 85 100 120 140 144 150 170 200
2560 x 720	16	60
2560 x 768	16	60 70 72 75 85 100 120 140 144 150 170
2560 x 800	16	60 70 72 75 85 100 120 140 144 150 170
2560 x 960	16	60 70 72 75 85 100 120 140 144 150 170
2560 x 1024	16	60 70 72 75 85 100 120 140 144 150 170

2720 x 768	16	60 70 72 75 85 100 120 140 144 150 170
3200 x 900	16	60 70 72 75 85 100 120 140 144 150
3200 x 1024	16	60 70 72 75 85 100 120
3200 x 1200	16	60 70 72 75 85 100 120
3360 x 1050	16	60
3840 x 1080	16	60
3840 x 1200	16	60 70 72 75 85 100
3840 x 1440	16	60 70 72 75 85
4096 x 1536	16	60

1280 x 480	32	60 70 72 75 85 100 120 140 144 150 170 200 240
1600 x 600	32	60 70 72 75 85 100 120 140 144 150 170 200 240
1696 x 480	32	60 70 72 75 85 100 120 140 144 150 170 200 240
1920 x 600	32	60 70 72 75 85 100 120 140 144 150 170 200 240
2048 x 768	32	60 70 72 75 85 100 120 140 144 150 170 200 240
2176 x 612	32	60 70 72 75 85 100 120 140 144 150 170 200 240
2304 x 864	32	60 70 72 75 85 100 120 140 144 150 170 200
2560 x 720	32	60
2560 x 768	32	60 70 72 75 85 100 120 140 144 150 170
2560 x 800	32	60 70 72 75 85 100 120 140 144 150 170
2560 x 960	32	60 70 72 75 85 100 120 140 144 150 170
2560 x 1024	32	60 70 72 75 85 100 120 140 144 150 170
2720 x 768	32	60 70 72 75 85 100 120 140 144 150 170
3200 x 900	32	60 70 72 75 85 100 120 140 144 150
3200 x 1024	32	60 70 72 75 85 100 120
3200 x 1200	32	60 70 72 75 85 100 120
3360 x 1050	32	60
3840 x 1080	32	60
3840 x 1200	32	60 70 72 75 85 100
3840 x 1440	32	60 70 72 75 85
4096 x 1536	32	60

Vertical Spanning Modes

640 x 960	8	60 70 72 75 85 100 120 140 144 150 170 200 240
800 x 1200	8	60 70 72 75 85 100 120 140 144 150 170 200 240
848 x 960	8	60 70 72 75 85 100 120 140 144 150 170 200 240
960 x 1200	8	60 70 72 75 85 100 120 140 144 150 170 200 240

1024 x 1536	8	60 70 72 75 85 100 120 140 144 150 170 200 240
1088 x 1224	8	60 70 72 75 85 100 120 140 144 150 170 200 240
1152 x 1728	8	60 70 72 75 85 100 120 140 144 150 170 200
1280 x 1440	8	60
1280 x 1536	8	60 70 72 75 85 100 120 140 144 150 170
1280 x 1600	8	60 70 72 75 85 100 120 140 144 150 170
1280 x 1920	8	60 70 72 75 85 100 120 140 144 150 170
1280 x 2048	8	60 70 72 75 85 100 120 140 144 150 170
1360 x 1536	8	60 70 72 75 85 100 120 140 144 150 170
1600 x 1800	8	60 70 72 75 85 100 120 140 144 150
1600 x 2048	8	60 70 72 75 85 100 120
1600 x 2400	8	60 70 72 75 85 100 120
1680 x 2100	8	60
1920 x 2160	8	60
1920 x 2400	8	60 70 72 75 85 100
1920 x 2880	8	60 70 72 75 85
2048 x 3072	8	60

640 x 960	16	60 70 72 75 85 100 120 140 144 150 170 200 240
800 x 1200	16	60 70 72 75 85 100 120 140 144 150 170 200 240
848 x 960	16	60 70 72 75 85 100 120 140 144 150 170 200 240
960 x 1200	16	60 70 72 75 85 100 120 140 144 150 170 200 240
1024 x 1536	16	60 70 72 75 85 100 120 140 144 150 170 200 240
1088 x 1224	16	60 70 72 75 85 100 120 140 144 150 170 200 240
1152 x 1728	16	60 70 72 75 85 100 120 140 144 150 170 200
1280 x 1440	16	60
1280 x 1536	16	60 70 72 75 85 100 120 140 144 150 170
1280 x 1600	16	60 70 72 75 85 100 120 140 144 150 170
1280 x 1920	16	60 70 72 75 85 100 120 140 144 150 170
1280 x 2048	16	60 70 72 75 85 100 120 140 144 150 170
1360 x 1536	16	60 70 72 75 85 100 120 140 144 150 170
1600 x 1800	16	60 70 72 75 85 100 120 140 144 150
1600 x 2048	16	60 70 72 75 85 100 120
1600 x 2400	16	60 70 72 75 85 100 120
1680 x 2100	16	60
1920 x 2160	16	60
1920 x 2400	16	60 70 72 75 85 100
1920 x 2880	16	60 70 72 75 85
2048 x 3072	16	60

640 x 960	32	60 70 72 75 85 100 120 140 144 150 170 200 240
800 x 1200	32	60 70 72 75 85 100 120 140 144 150 170 200 240
848 x 960	32	60 70 72 75 85 100 120 140 144 150 170 200 240
960 x 1200	32	60 70 72 75 85 100 120 140 144 150 170 200 240
1024 x 1536	32	60 70 72 75 85 100 120 140 144 150 170 200 240
1088 x 1224	32	60 70 72 75 85 100 120 140 144 150 170 200 240
1152 x 1728	32	60 70 72 75 85 100 120 140 144 150 170 200
1280 x 1440	32	60
1280 x 1536	32	60 70 72 75 85 100 120 140 144 150 170
1280 x 1600	32	60 70 72 75 85 100 120 140 144 150 170
1280 x 1920	32	60 70 72 75 85 100 120 140 144 150 170
1280 x 2048	32	60 70 72 75 85 100 120 140 144 150 170
1360 x 1536	32	60 70 72 75 85 100 120 140 144 150 170
1600 x 1800	32	60 70 72 75 85 100 120 140 144 150
1600 x 2048	32	60 70 72 75 85 100 120
1600 x 2400	32	60 70 72 75 85 100 120
1680 x 2100	32	60
1920 x 2160	32	60
1920 x 2400	32	60 70 72 75 85 100
1920 x 2880	32	60 70 72 75 85
2048 x 3072	32	60

TV-Out Modes Supported by TV Encoders

Table A.3 and Table A.4 list the NTSC, PAL, and HDTV TV-Out modes supported by the NVIDIA driver.

Table A.3 Mode Support for S-Video and Composite Out

Resolution	Bit depth	Comments
320x200	8, 16, 32	DirectDraw mode; not selectable as a Windows desktop
320x240	8, 16, 32	DirectDraw mode; not selectable as a Windows desktop
640x400	8, 16, 32	DirectDraw mode; not selectable as a Windows desktop
640x480	8, 16, 32	
720x480	8, 16, 32	Overscans (for video)
720x576	8, 16, 32	Overscans (for video)
800x600	8, 16, 32	
1024x768	8, 16, 32	Conexant 25871 only

Table A.4 Mode Support for Component YPrPb Out and DVI Out

Resolution	Comments
480i (SDTV)	Supported on graphics boards with Conexant 875 or Philips 7108 TV encoders and compatible connectors, and compatible GeForce 6 Series and GeForce 7 Series GPUs.
480p (EDTV)	
720p (HDTV)	
1080i (HDTV)	
576i (PAL)	
576p (PAL)	

The driver supports manual overscan correction for component and DVI outputs. See the *NVIDIA Quadro Professional Driver User's Guide* for instructions on how to use the overscan correction features in the control panel.