



Release 367 Graphics Drivers for Windows, Version 368.81

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Windows XP

Release Notes



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1 INTRODUCTION TO RELEASE NOTES

This edition of *Release Notes* describes the Release 367 family of graphics drivers (versions 367.xx to 368.xx) for Microsoft® Windows® XP. 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 367 Driver Changes for Windows XP” on page 2 gives a summary of changes, and fixed and open issues in this version.
- ▶ “The Release 367 Driver for Windows XP” on page 13 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 21 lists the default resolutions supported by the driver.

Changes in this Edition

This edition of the *Release Notes* for Windows XP includes information about NVIDIA graphics driver version 368.81 WHQL, and lists changes made to the driver since version 368.69. These changes are discussed beginning with the chapter “Release 367 Driver Changes for Windows XP” on page 2.

2 RELEASE 367 DRIVER CHANGES FOR WINDOWS XP

This chapter describes open issues for version 368.81 WHQL, and resolved issues and driver enhancements for versions of the Release 367 driver up to version 368.81 WHQL.

The chapter contains these sections:

- ▶ “Version 368.81 WHQL Highlights” on page 2
- ▶ “Open Windows XP Issues in Version 368.81 WHQL” on page 1
- ▶ “Issues Not Caused by NVIDIA Drivers” on page 2
- ▶ “Known Product Limitations” on page 5

Version 368.81 WHQL Highlights

This section provides highlights of version 368.81 WHQL of the NVIDIA Release 367 Driver.

- ▶ What’s New in Version 368.81 WHQL
- ▶ What’s New in Release 367
- ▶ Limitations in This Release
- ▶ Unsupported Features Under Windows XP
- ▶ Advanced Driver Information

What's New in Version 368.81 WHQL

Game Ready Drivers provide the best possible gaming experience for all major new releases, including Virtual Reality games. Prior to a new title launching, our driver team works up until the last minute to ensure every performance tweak and bug fix is included for the best gameplay on day one.

Game Ready

Provides the optimal experience for new and upcoming Virtual Reality titles including NVIDIA VR Funhouse, Everest VR, Obduction, Raw Data, and The Assembly.

Application SLI Profiles

Added or updated the following SLI profiles:

- **Obduction - *disabled SLI***

Software Modules

- **NView - 148.03**
- **HD Audio Driver - 1.3.34.15**
- **NVIDIA PhysX System Software - 9.16.0318**
- **GeForce Experience - 2.11.4.0**

What's New in Release 367

The section summarizes the driver changes previously introduced in Release 367.

Application SLI Profiles

Added or updated the following SLI profiles:

- **Armored Warfare** - *added DirectX 11 SLI profile*
- **Dangerous Golf** - *added SLI-Single profile*
- **Everybody's Gone to the Rapture** - *updated*
- **Homefront: The Revolution** - *added*
- **iRacing: Motorsport Simulator** - *added DirectX 11 SLI profile*
- **Lost Ark** - *added DirectX 9 SLI profile*
- **Mirror's Edge: Catalyst** - *updated*
- **The Witcher 3** - *updated*
- **Tiger Knight** - *added SLI-Single profile*
- **Total War: WARHAMMER** - *added*

Limitations in This Release

This release requires a GeForce 400 Series or newer GPU. (Driver releases for legacy GPUs can be found on the NVIDIA [website](#).) See the section [Supported NVIDIA Desktop Products](#) for specific products. The following are features that are not currently supported or have limited support in this driver release:

► Support for Notebook PCs

Starting with Release 270 drivers, NVIDIA Verde drivers for notebook PCs will only be available for Windows Vista and later. Notebooks running Windows XP are supported by the latest Release 266 WHQL-certified driver here: <http://www.nvidia.com/object/notebook-winxp-266.58-whql-driver.html>.

► SLI Support

The following SLI features are not supported on Windows XP:

- GeForce GTX 680 SLI
- Quad SLI technology using GeForce GTX 590
- 3-way SLI technology
- Hybrid SLI
- SLI multi-monitor support

► Negative LOD Bias Clamp

Negative LOD bias clamp for DirectX applications is not supported on Fermi-based GPUs and later.

Unsupported Features Under Windows XP

The following are either features that are not supported under Windows XP, or feature limitations that exist under Windows XP:

Kepler GPU Limitations

► Multi-display support

The 4-display support of Kepler GPUs¹ is not available under Windows XP. Multi-display support is limited to two displays per Kepler GPU.

► SLI Support

- There is no support for SLI frame rendering (AFR/SFR) or SLI FSAA.

Unsupported Features

- DisplayPort 1.2 functionality is not supported, including increased bandwidth (HBR2 mode) and multi-display streaming.
- 4k × 2k @ 60 Hz tiled displays are not supported.
- G-SYNC technology
- NVIDIA Surround

Advanced Driver Information

This section contains the following additional information about the driver:

- [Differing GPU Voltages in SLI Mode](#)
- [Help for Resizing Your HDTV Desktop](#)

Differing GPU Voltages in SLI Mode

When non-identical GPUs are used in SLI mode, they may run at different voltages. This occurs because the GPU clocks are kept as close as possible, and the clock of the higher performance GPU is limited by that of the other. One benefit is that the higher performance GPU saves power by running at slightly reduced voltages.

An end-user gains nothing by attempting to raise the voltage of the higher performance GPU because its clocks must not exceed those of the other GPU.

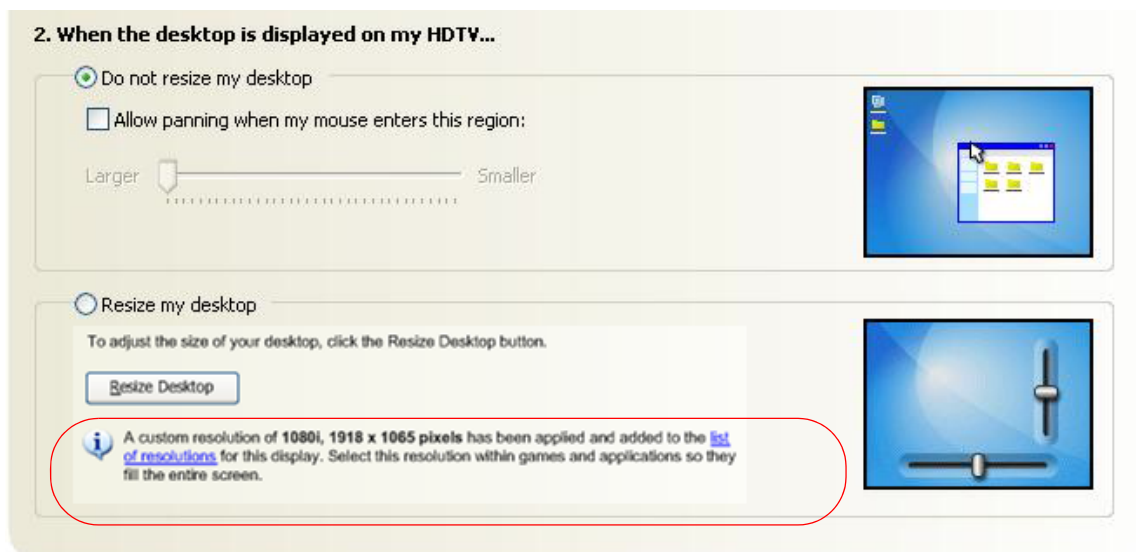
1. Examples of Kepler GPU products include the NVIDIA GeForce GTX 680, GTX 690, and GeForce GTX TITAN.

Help for Resizing Your HDTV Desktop

After resizing the HDTV desktop, the new custom resolution created is now added to the list of available resolutions for that display, and also added to the resolution list within the game or application.

In Release 190 and later drivers, the method for resizing the HDTV desktop has changed to provide better image quality when applying underscan. This method results in a new custom resolution being created which needs to be selected from games or applications to apply the resizing.

In the example displayed in the following screenshot, the underscan has created a new resolution (1918 × 1065). Although this resolution looks different, it is still in HD format. Remember to select this resolution in your game or other application in order to take advantage of it.



Note: Some games or applications may not support the new resolution.

Open Windows XP Issues in Version 368.81 WHQL

As with every released driver, version 368.81 WHQL 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.

- ▶ “NVIDIA Recommendations” on page 1
- ▶ “Windows XP 32-bit Issues” on page 1

NVIDIA Recommendations

- ▶ Single display modes such as TV-only, DFP/LCD-only, or CRT-only provide the best performance and quality from Windows Media Center Edition.

Dual display modes such as Dualview and nView Clone and Span modes are not recommended when using the Windows Media Center.

Windows XP 32-bit Issues

NVIDIA Issues—Single-GPU

- ▶ [NVIDIA Control Panel] On the *Manage 3D Settings* page, if an executable name is added for an application that does not have a pre-existing profile, the application icon does not appear in the list.

To workaround, close and then re-open the NVIDIA Control Panel.

Issues Not Caused by NVIDIA Drivers

This section lists issues that are not due to the NVIDIA driver.

- ▶ “Application Issues” on page 2
- ▶ “Not NVIDIA Issues–SLI Mode” on page 3

Application Issues

All GPUs

- ▶ Sims 2–“Smooth Edges (AA)” option is not available with Release 100 drivers. [272477]

This occurs because of an incorrect driver version check in the application. NVIDIA has worked around this issue in the operating system by changing the way the driver version is reported to this application.

- ▶ S.T.A.L.K.E.R. Shadow of Chernobyl: This application is not compatible with the *Override any application setting* or *Enhance the application setting* antialiasing modes from the NVIDIA Control Panel Manage 3D Settings page.

Please use the in-game antialiasing options.

- ▶ Age of Empires 3: Setting application to 1600 × 1200 with shader quality set to ‘very high’ causes menus and game to become corrupted.

This issue can be fixed by installing the v1.07 game patch.

- ▶ Elder Scrolls 4 Oblivion: Running at 2560 × 1600 with NVIDIA Enhanced Application mode 16xQ, extremely rare 1-2 second pauses occur during some fighting. [262685]

This appears to be an application issue in how large textures are created during the in-game fighting.

- ▶ Half-Life 2 Lost Coast: Color corruption occurs in the video stress test after changing the display mode.

This is a known application issue.

- ▶ Quake4: Random pauses occur during gameplay. [260029]

This appears to be an application issue that affects testing on Quake4 with dual-core optimizations turned on. Turning off the SMP value in Quake4 eliminates this problem.

- ▶ Age of Empires 3: Vertical sliver appears near the right side of the introduction videos. [221738]

- ▶ Battlefield 1942 hangs after playing for a few minutes. [265230]

This is an application issue with dual-core CPUs.

- ▶ Counter-Strike–the application crashes to the desktop if the resolution or bit-depth is changed from the in-game video options menu. [416582]

This is an application issue, and does not occur if you change the resolution or bit-depth from the game’s main menu and not while in the game.

Not NVIDIA Issues-SLI Mode

- ▶ With SLI enabled, the SLI split line does not appear when VSync is forced on. [193105]

This is not a bug, and the applications are, in fact, running in SLI mode. The SLI split line/load bar is not supposed to appear when Vsync is enabled in SLI mode.

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:

- ▶ “No PhysX Acceleration Using the GPU” on page 6
- ▶ “Previous Driver Files Remain After Overinstalling with Release 256 or Earlier Drivers” on page 6
- ▶ “Using HDMI Audio with Displays That Have a High Native Resolution” on page 7
- ▶ “Using HDMI/DisplayPort Audio in Dualview or Clone Mode” on page 7
- ▶ “GPU Runs at a High Performance Level (full clock speeds) in Multi-display Modes” on page 7
- ▶ “1280 × 1024 @ 60 Hz Not Available on BenQ FP241W Monitors” on page 8
- ▶ “Display Output Selection Not Available on “Bridgeless” SLI” on page 8
- ▶ “More Monitors are Listed in the Windows Device Manager Than are Actually Connected” on page 8
- ▶ “DirectX Fails When Detaching/Reattaching Displays in Dualview Mode” on page 8
- ▶ “OpenGL Viewport Scaling Problem in Horizontal Span Mode” on page 9
- ▶ “Video Playback in nView Clone and Span Modes” on page 9
- ▶ “No Antialiasing of 3DMark03 Image Quality Screen Captures” on page 9
- ▶ “Medal of Honor Under Windows XP and Windows 2000” on page 10
- ▶ “Windows XP/2000 Issue with Settings Tab Monitor Positioning” on page 10
- ▶ “Antialiasing Problems with Certain Applications” on page 11
- ▶ “AGP and PCI-E Programs May Hang With AMD K7 and K8 Processors” on page 11
- ▶ “Desktop Manager Does Not Re-center Logon Screen” on page 12

No PhysX Acceleration Using the GPU

If after installing the PhysX System Software you find that there is no PhysX acceleration on supported applications, repeat the PhysX setup as follows:

- 1 Reboot the PC.
- 2 Open the NVIDIA Control Panel and then, under 3D Settings, click **Set PhysX configuration** to open that page.
- 3 Under **Select a PhysX processor**, verify that either **auto-select** or a specific NVIDIA GPU is selected.
- 4 Click **Apply**.

Previous Driver Files Remain After Overinstalling with Release 256 or Earlier Drivers

Issue

When installing a Release 256 or earlier driver over a Release 260 or later driver, some of the previous driver files remain on the hard disk, resulting in potential conflicts.

Workaround

After installing a Release 260 or later driver, you must uninstall the driver first before installing a Release 256 or earlier driver.

Uninstalling Drivers Using Device Manager is Not Supported

Issue

On all supported versions of Microsoft Windows, uninstalling the NVIDIA driver using the Windows Device Manager may not remove associated files or applications.

Explanation

Microsoft has confirmed that this behavior is by design.

If you wish to uninstall the NVIDIA driver, it is recommended that you do so using Add and Remove programs.

See the [Microsoft KB article 2278714](#).

Using HDMI Audio with Displays That Have a High Native Resolution

To use HDMI audio with some displays that have a native resolution higher than 1920 × 1080, you must set the display to a lower HD resolution.

Some HDMI displays have a native resolution that exceeds the maximum supported HD mode. For example, displays with a native resolution of 1920 × 1200 exceed the maximum supported HD mode of 1920 × 1080.

Applying this native mode results in display overscan which cannot be resized using the NVIDIA Control Panel since the mode is not an HD mode.

To avoid this situation and provide a better user experience, the driver treats certain TVs—such as the Viewsonic VX2835wm and the Westinghouse LVM-37w3—as a DVI monitor when applying the native mode. Because the driver does not treat the TV as an HDMI in this case, the HDMI audio is not used.

Using HDMI/DisplayPort Audio in Dualview or Clone Mode

Two Audio-enabled Ports

In a multi-display configuration where both HDMI/DisplayPort audio ports are enabled, only the primary display will provide the audio.

One Audio-enabled Port

In a multi-display configuration where only one audio port is enabled, such as when one display is a DVI display, then the HDMI/DisplayPort display can provide the audio whether is it the primary or secondary display.

GPU Runs at a High Performance Level (full clock speeds) in Multi-display Modes

This is a hardware limitation and not a software bug. Even when no 3D programs are running, the driver will operate the GPU at a high performance level in order to efficiently drive multiple displays. In the case of SLI or multi-GPU PCs, the second GPU will always operate with full clock speeds; again, in order to efficiently drive multiple displays. Today, all hardware from all GPU vendors have this limitation.

1280 × 1024 @ 60 Hz Not Available on BenQ FP241W Monitors

Even though the monitor EDID lists 1280 × 1024 @ 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 (1280 × 1024 @ 60 Hz) and makes it unavailable.

Display Output Selection Not Available on “Bridgeless” SLI

On graphics cards that can operate in SLI mode without the SLI connector (such as the GeForce 6600), you cannot select which monitor to display the output. On the SLI display property page, the option box to select the output display is not available.

More Monitors are Listed in the Windows Device Manager Than are Actually Connected

► Problem

Many monitors are listed in the Windows Device Manager hardware tree even when only a few are actually connected or enabled.

► Explanation

NVIDIA chooses to expose all potential monitors even though they are not yet connected. Such an implementation makes multiple device handling easier in certain situations, such as when a user unplugs a monitor and plugs another one in at a different port.

The only impact is a cosmetic in the plug-and-play manager. There is no functional impact at all and the GDI is not aware of the multiple monitor listing.

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.

Medal of Honor Under Windows XP and Windows 2000

► Problem

The Electronic Arts game Medal of Honor uses a hard coded buffer to parse the OpenGL extension string. This can cause a system crash under Windows XP and Windows 2000.

► Workaround

NVIDIA has implemented Medal of Honor application detection to work around this extension string crash.

Windows XP/2000 Issue with Settings Tab Monitor Positioning

► Problem

In the Windows **Display Properties > Settings** tab, the secondary monitors cannot be positioned directly above monitor #1 without snapping horizontally to a position diagonal to monitor #1.

► When the Problem Occurs

The problem occurs when four monitors are connected to the graphics adapter card, but only two of them are enabled.

► Cause and Workaround

This is a Microsoft—not an NVIDIA—bug, and there is no workaround to correct the positioning of the monitor icons. However, the actual positioning of the displays on the desktop can be corrected using the nView Desktop Manager window as follows:

- a Under the Tools tab in the Desktop Manager windows, make sure Automatically Align Displays is checked.
- b In the Settings tab, position the appropriate monitor icon above monitor #1, then click **Apply**.

The mouse cursor movement between monitor desktops will correspond to a vertical orientation of the monitors, even though the monitor icons in the Settings tab are diagonal to each other.



Note: This will be the case even if the monitor icons are deliberately positioned diagonal to each other.

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.

AGP and PCI-E Programs May Hang With AMD K7 and K8 Processors

► Issue

Microsoft® Windows® 2000 and Windows XP systems using AMD K7 and K8 processors can hang when an AGP or PCI-E program is used.

► Root Cause

There is a known problem with Microsoft® Windows® 2000 and Windows XP systems using AMD K7 and K8 CPUs that results in the Microsoft operating system allocating overlapping 4M cached pages with 4k write-combined pages. This condition results in undefined behavior and data corruption, and is explicitly disallowed by the AMD CPU manual.

This problem can affect any device driver in the system that allocates write-combined system memory, but is usually most easily reproduced with graphics drivers since graphics drivers generally make heavy use of write-combined system memory for performance reasons.

► Resolution

Microsoft has a knowledge base article on the issue, the text of which is unfortunately quite outdated. While the article only mentions Windows 2000, AGP, and K7, both the root cause and resolution also apply to Windows 2000 or Windows XP, AGP or PCI-E, and AMD K7 or K8. The article can be found at <http://support.microsoft.com/?id=270715>.

The issue is resolved by applying an operating system registry key as described in the referenced article that instructs the Microsoft operating system to not use the 4M pages, thus avoiding the conflict.

The registry key is automatically applied by installation of the latest NVIDIA nForce platform driver package (including 4.57 SMBUS or later). It is imperative for the package to be installed or for the registry key to be applied before the NVIDIA graphics driver or any other device drivers are installed. The registry key takes effect only after an operating system reboot.

Desktop Manager Does Not Re-center Logon Screen

On Windows XP multi-display systems that are set to nView Span mode, the Windows logon screen is centered on the extended desktop. This usually causes it to be split across two displays, which users may find annoying. Although users can normally use the Desktop Manager to restrict a window's appearance to one display, security restrictions in the operating systems prevent this in the case of the logon screen.

3 THE RELEASE 367 DRIVER FOR WINDOWS XP

This chapter covers the following main topics:

- ▶ [“About the Release 367 Driver” on page 13](#)
- ▶ [“Hardware and Software Support” on page 13](#)
- ▶ [“Driver Installation” on page 17](#)

About the Release 367 Driver

This driver release is from the Release 367 family of drivers (versions 367.xx to 368.xx). This driver package supports GeForce 400, 500, 600, 700, and 900-series desktop GPUs. See [“Supported NVIDIA Desktop Products” on page 14](#) for the list of specific products supported in this release.

Hardware and Software Support

- ▶ [“Supported Operating Systems” on page 14](#)
- ▶ [“Supported Languages” on page 16](#)
- ▶ [“Supported NVIDIA Desktop Products” on page 14](#)
- ▶ [“Supported Languages” on page 16](#)

Supported Operating Systems

This Release 367 driver includes drivers designed for the following Microsoft® operating systems:

- ▶ Microsoft Windows® XP
 - Windows XP Professional
 - Windows XP Home Edition
 - Windows XP Professional x64 Edition
 - Windows Server 2003 x64

Support for OpenCL 1.2

Kepler and Maxwell GPUs are supported.

Supported NVIDIA Desktop Products

The following table lists current NVIDIA desktop products supported for Windows XP by version 368.81 WHQL of the Release 367 driver. For information about desktop products not shown, please see <http://www.geforce.com/hardware/desktop-gpus>.

Table 3.1 Supported NVIDIA Desktop Products

Product	Architecture
GeForce GTX TITAN Black	Kepler
GeForce GTX TITAN	Kepler
GeForce GTX 950	Maxwell
GeForce GTX 780 Ti	Kepler
GeForce GTX 780	Kepler
GeForce GTX 770	Kepler
GeForce GTX 760	Kepler
GeForce GTX 760 Ti (OEM)	Kepler
GeForce GTX 750 Ti	Maxwell
GeForce GTX 750	Maxwell
GeForce GTX 745	Maxwell
GeForce GT 740	Kepler
GeForce GT 730	Fermi/Kepler
GeForce GT 720	Kepler
GeForce GT 710	Kepler
GeForce GT 705	Fermi

Table 3.1 Supported NVIDIA Desktop Products (continued)

Product	Architecture
GeForce GTX 680	Kepler
GeForce GTX 670	Kepler
GeForce GTX 660 Ti	Kepler
GeForce GTX 660	Kepler
GeForce GTX 650 Ti	Kepler
GeForce GTX 650	Kepler
GeForce GT 645	Fermi/Kepler
GeForce GT 640	Fermi/Kepler
GeForce GT 630	Fermi/Kepler
GeForce GT 620	Fermi
GeForce GT 610	Fermi
GeForce G 605	Fermi
GeForce GTX 590	Fermi
GeForce GTX 580	Fermi
GeForce GTX 570	Fermi
GeForce GTX 560 SE	Fermi
GeForce GTX 560	Fermi
GeForce GTX 560 Ti	Fermi
GeForce GTX 555	Fermi
GeForce GTX 550 Ti	Fermi
GeForce GTX 480	Fermi
GeForce GTX 470	Fermi
GeForce GTX 465	Fermi
GeForce GTX 460 SE and 460 SE v2	Fermi
GeForce GTX 460 v2	Fermi
GeForce GTX 460	Fermi
GeForce GTX 450	Fermi
GeForce GT 545	Fermi
GeForce GT 530	Fermi
GeForce GT 520	Fermi
GeForce GT 430	Fermi

Supported Languages

The Release 367 Graphics 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

System Requirements

The hard disk space requirement for 32 bit is minimum 150 MB for English-only, and 230 MB for International.

The hard disk space requirement for 64 bit is minimum 207 MB for English-only, and 300 MB for International.

Before You Begin

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.

nTune

► If NVIDIA nTune is already installed

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 nTune.

Copied Files and Registration

- 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.

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.
- 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.
- 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.

Installing the NVIDIA Graphics Drivers

- 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 From the driver download page, click the download button.
The *Download Confirmation* page appears.
- 3 If you agree to the “License For Customer Use of NVIDIA Software”, click the **Agree & Download** button to begin the download.
The *File Download* dialog appears.
- 4 Either click **Save** to save the file and then run it from your PC, or click **Run**.
An extraction path dialog appears prompting you to specify where on your PC you want the driver files to be installed.
- 5 Click **OK** to use the default location, or click the folder icon and specify an alternate location to install the driver files.
The files are extracted and then the NVIDIA Installer is launched automatically.
- 6 At the *License Agreement* page of the Installer, click **Agree and Continue**.
- 7 Follow the instructions in the NVIDIA Installer to complete the installation.



Note: The driver presents game screenshots while the driver is installing. If you are not connected to the internet during the installation, you may see a “Navigation to the webpage was cancelled” message instead. The message can be ignored and does not affect the installation. The message won’t appear if the browser cache is cleared.



Note: The NVIDIA PhysX System Software will not be included in the installation if the same version or a later version is already installed.



Note: Under Windows XP, the NVIDIA driver is installed in “Dualview mode” display. However, note that the second display is not activated by default, but must be enabled.

See [“Known Product Limitations” on page 5](#) for other installation/uninstallation considerations.

APPENDIX A MODE SUPPORT FOR WINDOWS

This chapter details the Windows modes supported by the Release 367 driver for NVIDIA products. It contains these sections:

- ▶ “General Mode Support Information” on page 22
- ▶ “Default Modes Supported by GPU” on page 23

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”](#) on page 23.

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
Apple 30" Cinema HD Display (Dual link DVI)	2560 × 1600 @ 60 Hz
Dell WFP 3007 (Dual Link DVI)	2560 × 1600 @ 60 Hz
HP LP3065 dual-link DVI flat panel	2560 × 1600 @ 60 Hz

Table A.2 Non-standard Modes Supported

Resolution		
1680 × 1050		
1366 × 768		

Default Modes Supported by GPU

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

- ▶ “GeForce 900, 700, 600, 500, and 400 Series GPUs” on page 24

Understanding the Mode Format

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

Mode entry	1600 x 1024	8,16,32,64	60 70 72 75 85 100 120
Meaning	Resolution:	1600 × 1024	
	Color depths:	8, 16, 32, 64 bpp	
	Refresh rates:	60, 70, 72, 75, 85, 100, 120 Hz	

Figure A.1 Mode Format

Note:

- Horizontal spanning modes of 3840 × 1080 and above, and vertical spanning modes of 1920 × 2160 and above generally require at least 32 MB of video memory at 32 bpp.

GeForce 900, 700, 600, 500, and 400 Series GPUs

This section lists the supported display resolutions, color depths, and refresh rates for the products listed in [“Supported NVIDIA Desktop Products”](#) on page 14.

Standard Modes

640 x 480	8,16,32,64	60 70 72 75 85 100 120 140 144 150 170 200 240
720 x 480	8,16,32,64	60
720 x 576	8,16,32,64	50 60
800 x 600	8,16,32,64	60 70 72 75 85 100 120 140 144 150 170 200 240
1024 x 768	8,16,32,64	60 70 72 75 85 100 120 140 144 150 170 200 240
1152 x 864	8,16,32,64	60 70 72 75 85 100 120 140 144 150 170 200
1280 x 720	8,16,32,64	60
1280 x 768	8,16,32,64	60 70 72 75 85 100 120 140 144 150 170
1280 x 800	8,16,32,64	60 70 72 75 85 100 120 140 144 150 170
1280 x 960	8,16,32,64	60 70 72 75 85 100 120 140 144 150 170
1280 x 1024	8,16,32,64	60 70 72 75 85 100 120 140 144 150 170
1360 x 768	8,16,32,64	60 70 72 75 85 100 120 140 144 150 170
1600 x 900	8,16,32,64	60 70 72 75 85 100 120 140 144 150
1600 x 1024	8,16,32,64	60 70 72 75 85 100 120
1600 x 1200	8,16,32,64	60 70 72 75 85 100 120
1680 x 1050	8,16,32,64	60
1920 x 1080	8,16,32,64	60
1920 x 1200	8,16,32,64	60 70 72 75 85 100
1920 x 1440	8,16,32,64	60 70 72 75 85
2048 x 1536	8,16,32,64	60

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