Release 182 Graphics Drivers
Release Notes

Version 182.50

For Windows Vista 32-bit
and Windows Vista 64-bit

NVIDIA Corporation
April 2, 2009

◆ Table of Contents ◆

List of Tables

1

INTRODUCTION TO *RELEASE NOTES*

This edition of *Release Notes* describes the Release 182 Graphics Drivers for Microsoft®
Windows® Vista. 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 182 Driver Changes" on page 3 gives a summary of changes, and fixed and
  open issues in this version.

- "The Release 182 Driver" on page 31 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 37 lists the default resolutions supported by
  the driver.

Changes in this Edition

This edition of the *Release Notes* for Windows Vista includes information about
NVIDIA graphics driver version 182.50, and lists changes made to the driver since
version 178.24. These changes are discussed beginning with the chapter "Release 182
Driver Changes" on page 3.

C H A P T E R

2

RELEASE 182 DRIVER CHANGES

This chapter describes open issues for version 182.50, and resolved issues and driver enhancements for versions of the Release 182 driver up to version 182.50. The chapter contains these sections:

Version 182.50 Highlights

This section provides highlights of version 182.50 of the NVIDIA Release 182 Driver for Windows Vista.

- What's New in Release 182

- What's New in Version 182.50

- Limitations in This Release

What's New in Release 182

- Added support for NVIDIA SLI technology on SLI-certified Intel X58-based motherboards with all SLI-enabled GPUs.

- Added support for GeForce GTS 250, GeForce GTX 295, and GeForce GTX 285.

- Added NVIDIA SLI Multi-monitor support, giving you the ability to use two monitors with your GeForce graphics cards in SLI mode.

- Added full support for OpenGL 3.0 on GeForce 8-series, 9-series, and 200-series GPUs.

What's New in Version 182.50

- This driver version includes support for NVIDIA PhysX acceleration on all GeForce 8-series, 9-series and 200-series GPUs with a minimum of 256MB dedicated graphics memory (this driver package installs NVIDIA PhysX System Software v9.09.0203).

- See for a list of resolved issues.

Limitations in This Release

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

- **NVIDIA SLI Antialiasing**

- **NVIDIA Control Panel Display Category**

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

Changes in Version 182.50

The following sections list the changes made and issues resolved since driver version 182.08.

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

Fixed Issues—Windows Vista 32-bit

Single GPU Resolved Issues

- GeForce 9500 GS: While entering standby or hibernate power saving mode, the GPU fan runs at full speed for several seconds. [522157]

- GeForce 7 series AGP, GeForce 6 Series AGP: NVIDIA graphics driver cannot be installed.

Multi-GPU Resolved Issues

- [Quad SLI], GeForce GTX 295: Fear2: Project Origin– when launching the game with Quad SLI enabled, there is brief flash of residual corruption from a previously launched application. [524855]

- [SLI]: Football Manager 09–the game fails to run properly with SLI mode enabled. [490661]

Windows Vista 64-bit Issues

Multi-GPU Issues

- [3-way SLI], nForce 780a SLI, GeForce 9800 GTX: The user cannot switch from Additional display mode to Boost performance mode when the display is connected to the GeForce 9800 GTX GPU. [509741]

Changes in Version 182.08

The following sections list the changes made and issues resolved since driver version 182.06.

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

Fixed Issues—Windows Vista 32-bit

Multi-GPU Resolved Issues

• [SLI], GeForce 8600 GT: Fluid Demo (using PhysX)–the application cannot be run using hardware acceleration when SLI is enabled. [508835]

Windows Vista 64-bit Issues

Single GPU Issues

• NVIDIA Control Panel: The user cannot create custom resolutions. [496045]

• GeForce 200 Series: Need for Speed Undercover and Dead Space–the applications cannot be run using a Gateway XHD3000H 30" HD monitor at 2560x1600 resolution. [504637]

• GeForce 200 Series: Photoshop CS4–OpenGL settings are grayed out and cannot be set for the application.

Changes in Version 182.06

The following sections list the changes made and issues resolved since driver version 182.05.

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

Fixed Issues—Windows Vista 32-bit

Single GPU Resolved Issues

- GeForce 9800 GTX/GX2/GT/GTX+, GeForce 8800 GTS/GT/GS: The system hangs when switching between performance states. [516808]

Changes in Version 182.05

The following sections list the changes made and issues resolved since driver version 181.22.

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

Fixed Issues—Windows Vista 32-bit

Single GPU Issues

GeForce 200 Series
- GeForce GTX 280/260: Lord of the Rings Online–there is corruption in the shadow areas. [490186]

Fixed Issues—Windows Vista 64-bit

Single-GPU Issues

GeForce 200 Series
- GeForce GTX 280/260: Lord of the Rings Online–there is corruption in the shadow areas. [490186]

- GeForce GTX 295/260: Fallout 3–the game crashes at the first level. [504638]

Multi-GPU Issues

- [SLI], GeForce 200 Series: Crysis–the built-in benchmark has flickering trees at 1920x1200 resolution, 4xAA High Setting. [504694]

Changes in Version 181.22

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

-

-

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

Fixed Issues–Windows Vista 32-bit

Multi-GPU Issues

- [SLI]: Fallout3–the game crashes in some game maps when played at high resolutions (1440x900 or higher) and high settings. [500665]

- [SLI], S.T.A.L.K.E.R.: Clear Sky Benchmark–added an SLI profile for the application.[506981]

- GeForce GTX 295: Occasionally, only one GPU is recognized as supporting CUDA and PhysX after the system is rebooted. [506018]

Fixed Issues–Windows Vista 64-bit

Multi-GPU Issues

- [SLI]: Fallout3–the game crashes in some game maps when played at high resolutions (1440x900 or higher) and high settings. [500665]

- [SLI], S.T.A.L.K.E.R.: Clear Sky Benchmark–added an SLI profile for the application.[506981]

Changes in Version 181.20

The following sections list the changes made and issues resolved since driver version 180.84.

-

-

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

Fixed Issues—Windows Vista 32-bit

Single-GPU Issues

- GeForce GTX 280/260: Age of Empires/Company of Heroes–images are blank. [492053]

- GeForce GTX 260/280: Changed the power management behavior to maintain the maximum 3D clocks for all DirectX and OpenGL applications.

- 2xGeForce 6600: With HDTV as the primary Dualview display, the primary desktop switches to the other display when resizing the HDTV desktop. [414516]

Multi-GPU Issues

- [Quad-SLI], GeForce 7950 GX2: Crysis: Warhead–frequent pauses occur in the intro video with Quad SLI enabled. [480240

Fixed Issues—Windows Vista 64-bit

Single-GPU Issues

- [3-way SLI], GeForce GTX 280/260: 3DMark06–the TV screen (component or S-Video) goes blank after launching the benchmark with SLI mode enabled. [491193]

Changes in Version 180.84

The following sections list the changes made and issues resolved since driver version 180.48.

-

-

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

Fixed Issues—Windows Vista 32-bit

Single-GPU Issues

- GeForce 9800 GTX: World of Warcraft: Wrath of Lich King– initial start up performance is low, but pressing ALT-TAB increases performance. [481076]

- GeForce GTX 280/260, GeForce 9800 GTX: Prince of Persia 4–antialiasing doesn't work even if forced from the NVIDIA Control Panel. [483855]

- GeForce 8600: Serious Sam 2–performance drop at 1280x1024 with HDR and antialiasing enabled. [340691]

- GeForce 7600 GS, GeForce 6600: S.T.A.L.K.E.R: Shadow of Chernobyl - there is grey texture corruption when any antialiasing value is enabled from the NVIDIA Control Panel. [453842]

Multi-GPU Issues

- [SLI]: "SLI Focus Display" cannot be switched to a second monitor and then back to the first monitor without disabling and then re-enabling SLI mode. [476395]

- [3-way SLI], GeForce GTX 280/260: The display turns blank when enabling SLI after adjusting the screen using the "Move CRT Screen Position" page. [479764]

- [SLI], GeForce 9800 GX2: The NVIDIA Control Panel "Set PhysX GPU acceleration" option switches to "Disabled" after enabling SLI [486093]

- [SLI], GeForce 9600 GT: Grand Theft Auto IV–various objects flicker during the intro video and when playing the game. [486145]

Fixed Issues—Windows Vista 64-bit

Single-GPU Issues

- GeForce 8600: Serious Sam 2–performance drop at 1280x1024 with HDR and antialiasing enabled. [340691]

- GeForce 7600 GS, GeForce 6600: S.T.A.L.K.E.R: Shadow of Chernobyl - there is grey texture corruption when any antialiasing value is enabled from the NVIDIA Control Panel. [453842]

Multi-GPU Issues

- [3-way SLI], GeForce GTX 280/260: The display turns blank when enabling SLI after adjusting the screen using the "Move CRT Screen Position" page. [479764]

- [SLI], GeForce 9600 GT: Grand Theft Auto IV–various objects flicker during the intro video and when playing the game. [486145]

- [SLI], GeForce 9800 GTX: World of Warcraft–shadows pop in and out of view when moving around within the game. [481077]

- [SLI], GeForce 9800 GX2: The NVIDIA Control Panel "Set PhysX GPU acceleration" option switches to "Disabled" after enabling SLI [486093]

Changes in Version 180.48

The following sections list the changes made and issues resolved since driver version 178.24.

- "Fixed Issues–Windows Vista 64-bit" on page 14

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

Fixed Issues—Windows Vista 64-bit

Multi-GPU Issues

- [SLI], GeForce 9800 GTX: World of Warcraft 3.0.2—shadows are flickering with SLI enabled.

Open Issues in Version 182.50

As with every released driver, version 182.50 of the Release 182 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 Vista 32-bit Issues

Single GPU Issues

All GPUs

- Far Cry 2 –Override Antialiasing from the NVIDIA Control Panel is not getting applied to the game. [486104]

- Half Life 2: Episode 2–the in-game brightness is greatly reduced if Enhanced or Override AA is enabled from the NVIDIA Control Panel. [429254]

GeForce 9 Series

- GeForce 9 Series: Changes to the NVIDIA Control Panel "Change flat panel scaling" option are not applied with DVI+HDTV connected in Clone mode. [439308]

- GeForce 9800 GTX: Flight Simulator Acceleration (DirectX 10) - there is no antialiasing preview window. [436156]

GeForce 8 Series GPUs

- GeForce 8800: Default custom resolutions cannot be created when using the DVI connection. [446476]

- GeForce 8800 GT/GTX: Gears of War–there is tearing in the application, even when V-Sync is turned on from the in-game menu. [438689]

- GeForce 8800 GT/GTX: Crysis (DirectX 10) - game performance drops after switching to a higher resolution and then switching back to the lower resolution. [368740]

- GeForce 8600: HD resolutions higher than 720p are not available.[308627]

GeForce 7 Series GPUs

- GeForce 7600GS: There is no audio thru the SPDIF. [406176]

- GeForce 7600 GS: The display colors are corrupted when connected via S-Video. [386507]

- GeForce 7300 GS: The NVIDIA Control Panel presents TV as an option even if a TV is not connected. [355144]

GeForce 6 Series GPUs

- The TV format is not set properly from the NVIDIA Control Panel->Change signal or HD format page. [373501]

- GeForce 6600: The Elder Scrolls 4:Oblivion – the display turns blank when the game is played at 1920x1200 resolution.[289525]

- GeForce 6600: Stars Wars Battlefront2–blue-screen crash occurs when High settings are used.[302213]

- GeForce 6200: Call of Juarez–there is corruption at all resolutions. [356711]

- GeForce 6100/6150: Flat panel settings cannot be changed with Clone mode enabled. [485979]

Multi-GPU Issues

GeForce 200 Series GPUs

- [SLI], GeForce GTX 280/260: Mass Effect–antialiasing levels fall back whenever the in-game resolution is switched to a lower resolution.[477335]

- [3-way SLI], GeForce GTX 280/260: 3DMark06–the TV screen (component or S-Video) goes blank after launching the benchmark with SLI mode enabled. [491193]

- [SLI], GeForce GTX 280/260: At 2560x1600 resolution, the GPU clock speeds do not change when switching from single-display to Dualview display mode.

GeForce 9 Series GPUs

- [3-way SLI], GeForce 9800 GTX/nForce 750/780a SLI: Portal –there are white lines at the borders of the textures when the game is launched with default settings. [441377]

- [SLI], GeForce 9800 GTX: Mass Effect–there is a band of corruption on the edge of the screen when switching from a high resolution to a lower resolution. [433929]

- [Quad SLI], GeForce 9800 GX2: Test Driver Unlimited–there is pausing/hitching during the cut scene transitions. [395207]

GeForce 8 Series GPUs

- nForce 760i SLI, GeForce 8400 GS: PhysX gets disabled after performing an INF install over a previous driver version. [510754]

- [3xSLI], GeForce 8800 GTX/Ultra: Installing the driver on a 3-way SLI system takes a minimum of 3–4 minutes, and possibly longer if drivers have been previously installed on the system. [354847]

  The installation does complete in time–NVIDIA recommends that you do not interrupt the installation process, but wait for it to complete.

- [SLI], GeForce 8800 GTX: Test Drive Unlimited–the intro cut scene pauses during transitions when SLI mode is enabled. [301655]

Windows Vista 64-bit Issues

Single GPU Issues

- NVIDIA Control Panel: Adding a custom profile with an open bracket in the name results in an error. [437056]

- Half Life 2: Episode 2–the in-game brightness is greatly reduced if Enhanced or Override AA is enabled from the NVIDIA Control Panel. [429254]

GeForce 200 Series

- GeForce 200 Series: When entering custom resolution values from the Manage Custom Resolutions page, the values are not validated. [524691]

- GeForce GTX 295: Settings on the "Adjust desktop color settings" page are at 0% for the secondary Clone or Dualview mode display. [514218]

GeForce 9 Series

- 3xGeForce 9800 GTX: Saved profile does not load properly. [477263]

- GeForce 9800 GTX: Flight Simulator Acceleration (DirectX 10) - the sky box does not render correctly when zoomed all the way out. [436158]

- GeForce 9800 GTX: Flight Simulator Acceleration (DirectX 10) - there is no antialiasing preview window. [436156]

- GeForce 9600 GT: There is green/blue corruption when playing an H.264 formatted Blu-ray disk using Power DVD 8. [524145]

GeForce 8 Series

- GeForce 8800 GT/GTX: Default custom resolutions cannot be created when using the DVI connection. [446476]

- GeForce 8800 GTX, NVIDIA Control Panel: The user is unable to select Resize my Desktop while playing an HD DVD. [357674]

- GeForce 8800 GT/GTX: Crysis (DirectX 10) - game performance drops after switching to a higher resolution and then switching back to the lower resolution. [368740]

- nForce 780a SLI: Star Wars Battlefront–the application crashes to the desktop after clicking"Training" from the game control panel with default settings. [439883]

GeForce 8 Series

- nForce 760i SLI, GeForce 8400 GS: PhysX gets disabled after performing an INF install over a previous driver version. [510754]

GeForce 7 Series

- GeForce 7600GS: There is no audio thru the SPDIF. [406176]

GeForce 6 Series

- GeForce 6100/6150: Flat panel settings cannot be changed with Clone mode enabled. [485979]

Multi-GPU Issues

- [3-way SLI]: The driver fails to install correctly when installing the driver over a previous version. [459180]

  You must first uninstall the previous NVIDIA graphics driver from the Windows control panel under Programs (uninstall a program).

GeForce 200 Series

- [Hybrid SLI], GeForce GTX 260/280+nForce 760/780a SLI: Fraps does not run if set to run at Windows launch in Hybrid SLI performance or save power modes. [443794]

GeForce 9 Series

- [3-way SLI], GeForce 9800 GTX: Crysis (64-bit) (DirectX 9)– there is a lengthy pause or the system freezes when firing a weapon.

  This issue does not occur with the DirectX 10 version of the game, which is recommended.

- [Quad SLI], GeForce 9800 GX2: Test Driver Unlimited–there is pausing/hitching during the cut scene transitions. [395207]

GeForce 8 Series

- [3xSLI], GeForce 8800 GTX/Ultra: Frame drops occur during HD-DVD video playback in the PIP window using PowerDVD. [356445]

GeForce 7 Series

- [SLI], GeForce 7 Series: There is no confirmation popup when some changes are made in the NVIDIA Control Panel. [511417]

GeForce 6 Series

- [SLI], GeForce 6600: The SLI visual indicator does not display with OpenGL applications, such as Chronicles of Riddick, Enemy Territory: QUAKE Wars, and Quake 4. [457633]

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.

Windows Vista Limitations

These are behaviors that may be different from Windows XP and are related directly to the Windows Vista operating system.

- **NVIDIA TurboCache**

  Windows Vista now controls the allocation of system memory to the GPU for TurboCache functions. The Windows Vista Display Properties pages show the shared system memory (SSM), or how much memory is allocated for NVIDIA GPUs to use for TurboCache.

  For more information on graphics memory reporting under Windows Vista, visit **http://www.microsoft.com/whdc/device/display/graphicsmemory.mspx.**

Unsupported Features

The following are features and functionality that were available in driver releases supporting Windows XP, but are not–and will not be–available in driver releases for Windows Vista:

- **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 System Tools 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 System Tools software, which you can download from NVIDIA.com.

- **AGP Settings Adjustment**

- **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.

- **Edge Blending**

- **Run display optimization wizard**

- **Run multiple display wizard**

- **Run television setup wizard**

- **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.

- **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)

- **Windowed quad-buffered stereo**

  This is an operating system limitation.

- **NVIDIA nView Desktop Manager**

  The nView Desktop Manager will not be included in drivers for GeForce products.

OpenGL Application Issues

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

  - OneSpace Designer Modeling

- 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.

Application Issues

- 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, but the problem does not occur if you change the resolution or bit-depth from the game's main menu and not while in a game.

- Star Wars: Knights Of The Old Republic 2–the game fails to launch, and an "application has stopped working" error message appears. [420115]

  This occurs because the application is not able to interpret the driver version correctly.

- Tiger Woods PGA Tour 2007–Fly-by shot before each hole blacks-out textures. [274697]

  NVIDIA is working with the developer to resolve this issue.

- City of Heroes–The mouse cursor does not display. [259256]

  This is an application issue that can be worked around in full-screen mode by adding "compatiblecursors 1" to the City of Heroes desktop shortcut.

  NVIDIA is pursuing a fix with the application developer.

- 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.

- Warhammer 40k Dawn of War (all versions) does not run with Release 100 drivers. [273154]

  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.

- Need for Speed Carbon–After upgrading with patch 1.3, the game crashes when launched. [290506]

  This is an issue with the application patch under Windows Vista.

- Nascar Simracing–the game crashes when launched. [270792]

  This is an issue with the application under Windows Vista.

- Call of Duty 2–Only solid colors render during game play when 4xAA is enabled. [257454]

  The application is not applying antialiasing properly. Please try selecting 2x AA, disabling antialiasing, or using NVIDIA Enhanced application or Override antialiasing modes.

  NVIDIA is pursuing a fix with the application developer

- Age of Empires III–the game has rendering artifacts, such as textured squares for smoke. [258036]

- Flight Simulator X–pressing Alt+Tab to switch to the desktop does not work. [293729]

- Everquest 2– with NVIDIA driver versions 100.xx, the following error message appears: [273346]

  "You currently have a (7.15.11.120) video card installed. We recommend that you download version 7772 drivers before playing Everquest."

  This occurs because the application is not checking the driver version correctly, but this does not affect game play. Please select "Continue Anyway" to launch the game. The problem does not occur with a previous Release 95 driver (xx.xx format).

  NVIDIA is pursuing a fix with the application developer.

- Windows Vista 64-bit, [PhysX]: TheGameCreators PhysX Screen Saver doesn't get installed properly. [491613]

  *This is not an NVIDIA issue, but a bug in Vista 64-bit OS that affects the installation of many screen savers. To work around, locate the corresponding .scr file for the screen saver, then right-click and select **Install**.*

  Note: PhysXscreensaver.scr is located in \windows\SysWOW64.

- GeForce 9800 GTX: Flight Simulator Acceleration (DirectX 10) - the sky box does not render correctly when zoomed all the way out. [436158]

  This is not an NVIDIA bug, but rather an application issue.

- GeForce 9800 GX2: Fury (DirectX 10)–the character names flicker. [384917]

  This is not an NVIDIA bug, but rather an application issue.

- GeForce 9600 GT, GeForce 9800 GX2, GeForce 8800 GTX/Ultra/GTS/GT: Assassin's Creed: Directors Cut - the shadow flickers. [400541]

  This is not an NVIDIA bug, but rather an application issue.

- GeForce 9600 GT: Crysis (DirectX 9) - there is corruption in the game. [399261]

  This is not an NVIDIA bug, but rather an issue with the application issue. To avoid this issue, use the DirectX 10 option of the game.

- GeForce 8800 GTX: Tabula Rasa–there is ghosting on the game character while standing below the drop ship after enabling refraction from the game control panel. [357271]

  This is not an NVIDIA bug, but rather an application issue.

- GeForce 8800 GT: Company of Heroes DirectX10 - the application crashes when MSAA is enabled. [346495]

  This is a Fraps 2.9.2 issue.

- GeForce 8 Series: Quake 4–there are white flashing artifacts. [273476]

- GeForce 8800: City of Heroes–there are corrupted textures in certain missions.[290659]

  This has been fixed with the latest patch for the game.

- GeForce 8800: Ghost Recon - Advanced Warfighter–the gadget side bar bleeds through on the right side of the screen during game play. [281304]

- GeForce 8800 GTX: Star Wars Battle front 2–screen corruption occurs at 2560x1600 resolution. [325457]

- GeForce 8800 GTX, GeForce 7900 GTX: Neverwinter Nights 2–the mini map loses its background when the resolution is changed. [273788]

- GeForce 8800 GTX: Civilization 4–setting in-game 16x antialiasing AA disables all antialiasing.[303283]

- GeForce 8800 GTX: Flight Simulator–the terrain changes to low resolution when switching from Air Traffic-controlled to player-controlled airplane.[304840]

- GeForce 8800 GTX: Scarface–corruption during the game.[290007]

- GeForce 8800 GTX: Neverwinter Nights 2–only overlays render when switching to 2560x1600 using 8xAA. [302061, 314148]

- GeForce 8800 GTX: Command & Conquer:Tiberium Wars–the game crashes at 2560x1600 resolution, with 8x antialiasing enabled, and when in-game settings are set to the highest levels. [308248/316633]

- GeForce 7900: Flight Simulator X – rendering becomes corrupted after pressing the Windows key.   [293727 296232]

- GeForce 7600: Rainbow Six Vegas – antialiasing is not applied when setting antialiasing override mode in the NVIDIA Control Panel. [294215]

  Antialiasing is supported in this application only on GeForce 8 series and higher GPUs.

- GeForce 8500/8400/8300: Corruption occurs while running MicroSoft SDK Basic HLSL sample application. [302209]

- GeForce 8500/8400/8300: Dark Messiah of Might and Magic–an application error occurs when quitting the game. [300980]

  This is an issue with the application.

- GeForce 8500/8400/8300: Elder Scrolls IV: Oblivion–the game crashes after restoring from minimization. [296725]

- GeForce 7900 GTX: CPU usage is extremely high during H.264 playback of Blu-ray disc, resulting in dropped frames. [304480]

- GeForce 7300GS: Rainbow Six Vegas–the display turns black at 1600x1200 resolution.[302319]

- GeForce 7300 GT: Far Cry–geometry is corrupted during rendering of blood.[304348]

- GeForce 7300 GT: Company Of Heroes–the shadows are corrupt at the default game settings with SLI mode enabled. [346746]

   This is an issue with the application.

- 322008 GeForce 8600 GT: Battlefield 2–the game crashes to desktop when set to 1900x1440 resolution 8x antialiasing.

   This problem occurs only when you have FRAPS 2.6.4 installed. It does not occur with FRAPS 2.8.2

- 316403 GeForce 8 Series, GeForce 7 Series: NV SDK 9.5 *Mandelbrot* set fails to render fractal.

   This is an issue with the NV SDK and will be fixed in a newer build.

- GeForce 8 Series: Prince of Persia–half the screen turns black and the other half turns white during resolution changes. [299484]

   This is an issue with the application.

- GeForce 8800 GTX: Company of Heroes (DirectX 10)–the game crashes when the maximum settings are applied at 2560x1600 with 8xAA enabled. [321631]

   This is an issue with the application.

- GeForce 7950 GX2: Flight SimX – water has artifacts. [292168]

- GeForce 6100/6150: Gothic–there is flickering with a white screen when using the default settings.[303552]

- GeForce 6200: Star Wars Empire at War–the game menu buttons are corrupt. [357713]

Application Issues Under SLI Mode

- [SLI]: NVIDIA SLI scaling on some applications under Windows Vista may not be as much as under Windows XP. Some applications include "S.T.A.L.K.E.R., Half-Life 2: Lost Coast, Company of Heroes, Battlefield 2142, Call of Duty 2, Hitman: Blood Money, and Far Cry. [302534 290803]

   This is an application issue which has been resolved with the latest Steam patch.

- [SLI], GeForce 9800 GX2: The Witcher–a blooming light shines through objects with SLI mode enabled. [396736]

   This is not an NVIDIA bug, but rather an application issue.

- [SLI], GeForce 8800 GTX, GeForce 8600, GeForce 6 Series: Company of Heroes–there is corruption in the ground textures. [294118]

   This is an application issue, and has been fixed with the latest patch for the game.

- [SLI], GeForce 8800 GTX: Battlefield 2 and Battlefield 2142–the games crash when exiting back to the menu after being played at 2048x1536 using 8xAA or higher. [301985]

This is an issue with the application.

- [SLI], GeForce 7900 GTX: Chess Titans–with Aero-glass enabled, there is blanking when resizing the game window. [346775]

  This is an issue with the application.

- [SLI], GeForce 8800: While uninstalling driver the driver, the error message "Windows host process (Rundll32) has stopped working" appears. [294219 280920]

- [SLI], GeForce 8800: Splinter Cell Double Agent – the game crashes when minimized and then invoked again. [294205]

- [SLI], GeForce 8800: Battlefield 2142 – 8xAA cannot be set from the game control panel.[294231]

- [SLI], GeForce 7900:Microsoft Flight simulator X – corruption and flickering occur while flying close to land objects. [293882]

Operating System Issues

- World of Warcraft – there is a 60% drop in performance when running the game in windowed mode with SLI or multi-GPU mode enabled. [289427]

  This is due to a limitation of the Windows Vista operating system and affects all multi-GPU systems. NVIDIA is investigating a workaround for this performance problem.

- GeForce 8800 GTS 320MB: The driver reports incorrect video memory (256 MB) in the Windows Vista Display Properties panel. [290811]

  However, the NVIDIA Control Panel properly reports the dedicated video memory as 320 MB.

- GeForce 8800 GTX, GeForce 7900 GTX: Company of Heroes crashes when trying to load the Cherbourg level.[284273]

  This is an issue with the operating system. A QFE (software patch) from Microsoft is being worked on to fix this issue.

- GeForce 7300 GT: Windows Vista desktop gadgets are blank (only outline visible) after changing the primary display while playing an HD DVD or Blu-ray disc.[303482]

  This is an issue with the operating system.

- GeForce 6200: Foxbear–there is corruption on the Dualview secondary display.[302709]

  This is an issue with the operating system.

- [SLI], GeForce 8800 GTX: While installing the graphics driver, the message "Incompatible display adapter has been disabled" appears and the display turns blank. [318173]

  This is an issue with the operating system.

- When S-video and DVI displays are set up in Clone mode and rotated 90 degrees, the screen turns black.[304267, 283546]

  This is an issue with the operating system.

- GeForce 8800 GTX: DreamScene–running the application results in a "Display driver has stopped responding" error message. [295017]

  This is an issue with the OS.

- GeForce 8300 GS: With Aero-glass enabled, the screen flickers after rotating the display 90 degrees with S-Video as the primary display. [317347]

  This is an issue with the OS.

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:

- "GeForce GTX 295 Fan Control and NVIDIA Control Panel Performance Group version 6.03.06.00" on page 29
- "1280x1024 @ 60 Hz not Available on BenQ FP241W Monitors" on page 29
- "Image Sharpening Control not Available with GeForce 8 Series and later GPUs" on page 29
- "Gigabyte GA-6BX Motherboard" on page 29

GeForce GTX 295 Fan Control and NVIDIA Control Panel Performance Group version 6.03.06.00

The GeForce GTX 295 fan control does not function properly when using the NVIDIA Control Panel Performance Group version 6.03.06.00. For proper fan control, use version 6.03.12.00 or later.

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 GeForce 8 Series and later GPUs

With GeForce 8 Series 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 GeForce 8 series and later GPUs.

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.

3

THE RELEASE 182 DRIVER

This chapter covers the following main topics:

-
-

Hardware and Software Support

Supported Operating Systems

The Release 182 driver, version 182.50, has been tested with Microsoft Windows® Vista RTM OS builds version 6000 or higher, and supports both 32-bit and 64-bit versions of Windows Vista Editions:

- Windows Vista Home Basic
- Windows Vista Home Premium
- Windows Vista Business
- Windows Vista Enterprise Edition
- Windows Vista Ultimate

Supported NVIDIA Products

Table 3.1 lists the NVIDIA products supported by the Release 182 driver, version 182.50

Table 3.1   Supported NVIDIA Products

Consumer Products
GeForce GTS 250
GeForce GTX 295
GeForce GTX 285
GeForce GTX 280
GeForce GTX 260
GeForce 9800 GX2
GeForce 9800 GTX+
GeForce 9800 GTX
GeForce 9800 GT
GeForce 9600 GT
GeForce 9600 GSO
GeForce 9500 GT
GeForce 9500 GS
GeForce 9400 GT
GeForce 9300 GS
GeForce 9300 GE
GeForce 9400
GeForce 9300
GeForce 9200
GeForce 8800 Ultra
GeForce 8800 GTX
GeForce 8800 GTS 512
GeForce 8800 GTS
GeForce 8800 GT
GeForce 8800 GS
GeForce 8600 GTS
GeForce 8600 GT
GeForce 8600 GS
GeForce 8500 GT
GeForce 8400 GS
GeForce 8400 SE
GeForce 8400
GeForce 8300 GS
GeForce 8300
GeForce 8200
GeForce 8100 / nForce 720a
nForce 780a SLI
nForce 760i SLI
nForce 750a SLI
nForce 730a
GeForce 7950 GX2

Table 3.1   Supported NVIDIA Products

Consumer Products
GeForce 7950 GT
GeForce 7900 GTX
GeForce 7900 GT/GTO
GeForce 7900 GS
GeForce 7800 SLI
GeForce 7800 GTX
GeForce 7800 GT
GeForce 7800 GS
GeForce 7650 GS
GeForce 7600 GT
GeForce 7600 GS
GeForce 7600 LE
GeForce 7500 LE
GeForce 7350 LE
GeForce 7300 SE
GeForce 7300 LE
GeForce 7300 GT
GeForce 7300 GS
GeForce 7200 GS
GeForce 7100 GS
GeForce 7150 / NVIDIA nForce 630i
GeForce 7100 / NVIDIA nForce 630i
GeForce 7050 / NVIDIA nForce 620i
GeForce 7050 / NVIDIA nForce 610i
GeForce 7100 / NVIDIA nForce 620i
GeForce 7050 PV / NVIDIA nForce 630a
GeForce 7050 PV / NVIDIA nForce 630a
GeForce 7025 / NVIDIA nForce 630a
GeForce 6800 XT
GeForce 6800 XE
GeForce 6800 Ultra
GeForce 6800 Series GPU
GeForce 6800 LE
GeForce 6800 GT
GeForce 6800 GS/XT
GeForce 6800 GS
GeForce 6800
GeForce 6700 XL
GeForce 6610 XL
GeForce 6600 VE
GeForce 6600 LE
GeForce 6600 GT
GeForce 6600
GeForce 6500
GeForce 6250
GeForce 6200SE TurboCache™

Table 3.1   Supported NVIDIA Products

Consumer Products
GeForce 6200 TurboCache™
GeForce 6200 LE
GeForce 6200 A-LE
GeForce 6200
GeForce 6150SE nForce 430
GeForce 6150 LE
GeForce 6150
GeForce 6100 nForce 420
GeForce 6100 nForce 405
GeForce 6100 nForce 400
GeForce 6100

Supported Languages

The Release 182 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

Minimum Hard Disk Space

The hard disk space requirement for 32-bit is minimum 73.1 MB for English-only, and 102 MB for International.

The hard disk space requirement for 64-bit is minimum 90.9 MB for English-only, and 119 MB for International.

Before You Begin

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.

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 Click the driver download link.

3 The license agreement dialog box appears.

4 Click **Accept** if you accept the terms of the agreement, then either open the file or save the file to your PC and open it later.

5 Extract the zip files to a temporary folder on your PC.

6 Open the NVIDIA driver installation .EXE file to launch the NVIDIA InstallShield Wizard.

7 Follow the instructions in the NVIDIA InstallShield Wizard to complete the installation.

Note: After the driver installation, Windows may default to 16-bpp color and disable the Desktop Window Manager (DWM). To work around this issue, set the color to 32-bpp and then reboot the PC.

A

MODE SUPPORT FOR WINDOWS

This chapter details the Windows modes supported by the Release 182 driver for NVIDIA products. It contains these sections:

- "General Mode Support Information" on page 38
- "Default Modes Supported by GPU" on page 39
- "Modes Supported by TV Encoders" on page 56

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 39.

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)	2560x1600 @ 60 Hz
Dell WFP 3007 (Dual Link DVI)	2560x1600 @ 60 Hz
HP LP3065 dual-link DVI flat panel	2560x1600 @ 60Hz.

Table A.2   Non-standard Modes Supported
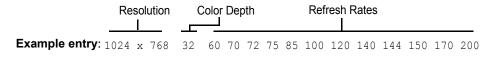
Resolution
1680 x 1050
1366 x 768

Default Modes Supported by GPU

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

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
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.

GeForce 9 Series and GeForce 8 Series GPUs

This sections lists the supported display resolutions, color depths, and refresh rates for the the following products:

- GeForce 9800 GTX+
- GeForce 9800 GTX
- GeForce 9800 GX2
- GeForce 9800 GT
- GeForce 9600 GT
- GeForce 9600 GSO
- GeForce 9500 GT
- GeForce 9400 GT
- GeForce 9300 GS
- GeForce 9300 GE
- GeForce 8800 Ultra
- GeForce 8800 GTX
- GeForce 8800 GTS 512
- GeForce 8800 GTS
- GeForce 8800 GT
- GeForce 8600 GTS
- GeForce 8600 GT
- GeForce 8600 GS
- GeForce 8500 GT
- GeForce 8400 GS
- GeForce 8400 SE
- GeForce 8400
- GeForce 8300 GS

Standard Modes

```
640 x  480   8          60   72 75 85 100
720 x  480   8          60
720 x  576   8       50 60
```

```
 800 x  600   8           60    72 75 85 100
1024 x  768   8           60 70 72 75 85 100
1152 x  864   8           60 70 72 75 85 100 120 140 144 150 170 200
1280 x  720   8           60 70 72 75 85 100
1280 x  768   8           60 70 72 75 85 100
1280 x  800   8           60 70 72 75 85 100
1280 x  960   8           60 70 72 75 85 100
1280 x 1024   8           60 70 72 75 85 100
1360 x  768   8           60 70 72 75 85 100
1440 x  900   8           60
1600 x 1200   8           60 70 72 75 85 100
1680 x 1050   8           60
1920 x 1080   8    30i
1920 x 1200   8           60    72 75 85 100
1920 x 1440   8           60 70 72 75 85 100
2048 x 1536   8           60 70 72 75 85 100
------------------------------------------------------------------
 640 x  480  16           60    72 75 85 100
 720 x  480  16           60
 720 x  576  16        50 60
 800 x  600  16           60    72 75 85 100
1024 x  768  16           60 70 72 75 85 100
1152 x  864  16           60 70 72 75 85 100 120 140 144 150 170 200
1280 x  720  16           60 70 72 75 85 100
1280 x  768  16           60 70 72 75 85 100
1280 x  800  16           60 70 72 75 85 100
1280 x  960  16           60 70 72 75 85 100
1280 x 1024  16           60 70 72 75 85 100
1360 x  768  16           60 70 72 75 85 100
1440 x  900  16           60
1600 x 1200  16           60 70 72 75 85 100
1680 x 1050  16           60
1920 x 1080  16    30i
1920 x 1200  16           60    72 75 85 100
1920 x 1440  16           60 70 72 75 85 100
2048 x 1536  16           60 70 72 75 85 100
------------------------------------------------------------------
 640 x  480  32           60    72 75 85 100
 720 x  480  32           60
```

```
 720 x  576  32        50 60
 800 x  600  32           60    72 75 85 100
1024 x  768  32           60 70 72 75 85 100
1152 x  864  32           60 70 72 75 85 100 120 140 144 150 170 200
1280 x  720  32           60 70 72 75 85 100
1280 x  768  32           60 70 72 75 85 100
1280 x  800  32           60 70 72 75 85 100
1280 x  960  32           60 70 72 75 85 100
1280 x 1024  32           60 70 72 75 85 100
1360 x  768  32           60 70 72 75 85 100
1440 x  900  32           60
1600 x 1200  32           60 70 72 75 85 100
1680 x 1050  32           60
1920 x 1080  32    30i
1920 x 1200  32           60    72 75 85
1920 x 1440  32           60 70    75 85 100
2048 x 1536  32           60 70    75 85 100
-----------------------------------------------------------------
 640 x  480  64           60    72 75 85 100
 720 x  480  64           60
 720 x  576  64        50 60
 800 x  600  64           60    72 75 85 100
1024 x  768  64           60 70 72 75 85 100
1152 x  864  64           60 70 72 75 85 100 120 140 144 150 170 200
1280 x  720  64           60 70 72 75 85 100
1280 x  768  64           60 70 72 75 85 100
1280 x  800  64           60 70 72 75 85 100
1280 x  960  64           60 70 72 75 85 100
1280 x 1024  64           60 70 72 75 85 100
1360 x  768  64           60 70 72 75 85 100
1440 x  900  64           60
1600 x 1200  64           60 70 72 75 85 100
1680 x 1050  64           60
1920 x 1080  64    30i
1920 x 1440  64                         100
2048 x 1536  64                         100
     -----------------------------------------------------------------
```

GeForce 200 Series of GPUs

This sections lists the supported display resolutions, color depths, and refresh rates for the following products:

- NVIDIA GeForce GTS 250
- NVIDIA GeForce GTX 295
- NVIDIA GeForce GTX 285
- NVIDIA GeForce GTX 280
- NVIDIA GeForce GTX 260

Standard Modes

```
 640 x  480   8   60
 800 x  600   8   60 70 75 85 100
 848 x  480   8   60 70 75 85 100
 960 x  600   8   60 70 75 85 100
1024 x  768   8   60 70 75 85 100
1152 x  864   8   60 70 75 85 100
1280 x  768   8   60
1280 x  800   8   60
1280 x  960   8   60 70 75 85 100
1280 x 1024   8   60 70 75 85 100
1360 x  768   8   60
1600 x 1200   8   60 70 75 85 100
1680 x 1050   8   60
1920 x 1200   8   60
1920 x 1440   8   60 70 75 85 100
2048 x 1536   8   60 70 75 85 100
-----------------------------------------------------------------
 640 x  480  16   60
 800 x  600  16   60 70 75 85 100
 848 x  480  16   60 70 75 85 100
 960 x  600  16   60 70 75 85 100
1024 x  768  16   60 70 75 85 100
1152 x  864  16   60 70 75 85 100
1280 x  768  16   60
1280 x  800  16   60
```

```
1280 x  960  16   60 70 75 85 100
1280 x 1024  16   60 70 75 85 100
1360 x  768  16   60
1600 x 1200  16   60 70 75 85 100
1680 x 1050  16   60
1920 x 1200  16   60
1920 x 1440  16   60 70 75 85 100
2048 x 1536  16   60 70 75 85 100
-------------------------------------------------------------------
 640 x  480  32   60
 800 x  600  32   60 70 75 85 100
 848 x  480  32   60 70 75 85 100
 960 x  600  32   60 70 75 85 100
1024 x  768  32   60 70 75 85 100
1152 x  864  32   60 70 75 85 100
1280 x  768  32   60
1280 x  800  32   60
1280 x  960  32   60 70 75 85 100
1280 x 1024  32   60 70 75 85 100
1360 x  768  32   60
1600 x 1200  32   60 70 75 85 100
1680 x 1050  32   60
1920 x 1200  32   60
1920 x 1440  32   60 70 75 85 100
2048 x 1536  32   60 70 75 85 100
-------------------------------------------------------------------
 640 x  480  64   60
 800 x  600  64   60 70 75 85 100
 848 x  480  64   60 70 75 85 100
 960 x  600  64   60 70 75 85 100
1024 x  768  64   60 70 75 85 100
1152 x  864  64   60 70 75 85 100
1280 x  768  64   60
1280 x  800  64   60
1280 x  960  64   60 70 75 85 100
1280 x 1024  64   60 70 75 85 100
1360 x  768  64   60
1600 x 1200  64   60 70 75 85 100
1680 x 1050  64   60
```

```
1920 x 1200  64   60
1920 x 1440  64   60 70 75 85 100
2048 x 1536  64   60 70 75 85 100
```

GeForce 8300/8200/8100 and nForce 7xx

This sections lists the supported display resolutions, color depths, and refresh rates for the following products:

- NVIDIA GeForce 8300
- NVIDIA GeForce 8200
- NVIDIA GeForce 8100 / nForce 720a
- NVIDIA nForce 780a SLI
- NVIDIA nForce 750a SLI
- NVIDIA nForce 730a

Standard Modes

```
 640 x  480    8       60 70 72 75 85 100 120 140 144 150 170 200 240
 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
1152 x  864    8       60 70 72 75 85 100 120 140 144 150 170 200
1280 x  720    8       60 70 72 75 85 100 120 140 144 150 170
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
1440 x  900    8       60
1600 x 1200    8       60 70 72 75 85 100 120
1680 x 1050    8       60
1920 x 1080    8    30i 60 70 72 75 85 100
1920 x 1200    8       60 70 72 75 85 100
1920 x 1440    8       60 70 72 75 85
2048 x 1536    8       60 70 72 75 85
----------------------------------------------------------------
 640 x  480   16       60 70 72 75 85 100 120 140 144 150 170 200 240
 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
1152 x  864  16      60 70 72 75 85 100 120 140 144 150 170 200
1280 x  720  16      60 70 72 75 85 100 120 140 144 150 170
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
1440 x  900  16      60
1600 x 1200  16      60 70 72 75 85 100 120
1680 x 1050  16      60
1920 x 1080  16  30i 60 70 72 75 85 100
1920 x 1200  16      60 70 72 75 85 100
1920 x 1440  16      60 70 72 75 85
2048 x 1536  16      60 70 72 75 85
     ----------------------------------------------------------------
 640 x  480  32      60 70 72 75 85 100 120 140 144 150 170 200 240
 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
1152 x  864  32      60 70 72 75 85 100 120 140 144 150 170 200
1280 x  720  32      60 70 72 75 85 100 120 140 144 150
1280 x  768  32      60 70 72 75 85 100 120 140 144 150
1280 x  800  32      60 70 72 75 85 100 120 140 144 150
1280 x  960  32      60 70 72 75 85 100 120 140 144 150
1280 x 1024  32      60 70 72 75 85 100 120 140 144 150
1360 x  768  32      60 70 72 75 85 100 120 140 144 150
1440 x  900  32      60
1600 x 1200  32      60 70 72 75 85 100
1680 x 1050  32      60
1920 x 1080  32  30i 60 70 72 75 85
1920 x 1200  32      60 70 72 75 85
1920 x 1440  32      60 70 72 75 85
2048 x 1536  32      60 70 72 75 85
     ----------------------------------------------------------------
 640 x  480  64      60 70 72 75 85 100 120 140 144 150 170 200 240
 800 x  600  64      60 70 72 75 85 100 120 140 144 150 170 200 240
 848 x  480  64      60 70 72 75 85 100 120 140 144 150 170 200 240
```

```
 960 x  600  64         60 70 72 75 85 100 120 140 144 150 170 200 240
1024 x  768  64            70
1152 x  864  64         60 70 72 75 85 100 120 140 144 150 170 200
1280 x  720  64            70
1280 x  768  64         60 70 72 75 85 100
1280 x  800  64         60 70 72 75 85 100
1280 x  960  64         60 70 72 75 85 100
1280 x 1024  64         60 70 72 75 85 100
1360 x  768  64         60 70 72 75 85 100
1440 x  900  64         60
1600 x 1200  64         60 70 72 75 85 100
1680 x 1050  64         60
1920 x 1080  64   30i
1920 x 1200  64            70
1920 x 1440  64         60 70 72 75 85
2048 x 1536  64         60 70 72 75 85
```

GeForce 9400/9300/9200 Series

This sections lists the supported display resolutions, color depths, and refresh rates for the following products:

- GeForce 9400

- GeForce 9300

- GeForce 9200

- nForce 760i SLI

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
1152 x  864   8      60 70 72 75 85 100 120 140 144 150 170 200
1280 x  720   8      60 70 72 75 85 100 120 140 144 150 170
1280 x  768   8      60 70 72 75 85 100 120 140 144 150 170 200
1280 x 1024   8         70
1440 x  900   8      60
1600 x 1200   8         70
1680 x 1050   8      60
1920 x 1440   8      60 70 72 75 85 100
2048 x 1536   8      60 70 72 75 85 100
-----------------------------------------------------------------
 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
1152 x  864  16      60 70 72 75 85 100 120 140 144 150 170 200
1280 x  720  16      60 70 72 75 85 100 120 140 144 150 170
1280 x  768  16      60 70 72 75 85 100 120 140 144 150 170 200
```

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

GeForce 7 Series

This sections lists the supported display resolutions, color depths, and refresh rates for the following products:

- GeForce 7950 GX2 / GT
- GeForce 7900 GTX / GT / GTO / GS
- GeForce 7800 SLI
- GeForce 7800 GTX / GT / GS
- GeForce 7650 GS
- GeForce 7600 GT / GS / LE
- GeForce 7500 LE
- GeForce 7350 LE
- GeForce 7300 SE / LE / GT / GS
- GeForce 7200 GS

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
1152 x  864   8      60 70 72 75 85 100 120 140 144 150 170 200
1280 x  720   8      60 70 72 75 85 100 120 140 144 150 170
1280 x  768   8      60 70 72 75 85 100 120 140 144 150 170
1280 x 1024   8         70
1440 x  900   8      60
1600 x 1200   8         70
1680 x 1050   8      60
1920 x 1200   8      60 70 72 75 85 100
1920 x 1440   8      60 70 72 75 85 100
2048 x 1536   8      60 70 72 75 85 100
----------------------------------------------------------------
 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
1152 x  864  16        60 70 72 75 85 100 120 140 144 150 170 200
1280 x  720  16        60 70 72 75 85 100 120 140 144 150 170
1280 x  768  16        60 70 72 75 85 100 120 140 144 150 170
1280 x 1024  16           70
1440 x  900  16        60
1600 x 1200  16           70
1680 x 1050  16        60
1920 x 1200  16        60 70 72 75 85 100
1920 x 1440  16        60 70 72 75 85 100
2048 x 1536  16        60 70 72 75 85 100
------------------------------------------------------------------
 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           70
1152 x  864  32        60 70 72 75 85 100 120 140 144 150 170 200
1280 x  768  32        60 70 72 75 85 100 120 140 144 150 170
1280 x 1024  32           70
1440 x  900  32        60
1600 x 1200  32           70
1680 x 1050  32        60
1920 x 1200  32        60 70 72 75 85 100
1920 x 1440  32        60 70 72 75 85 100
2048 x 1536  32        60 70 72 75 85 100
```

GeForce 6 Series and nForce 6xx

This sections lists the supported display resolutions, color depths, and refresh rates for the following products:

- GeForce 7050 PV / NVIDIA nForce 630a
- GeForce 7050 PV / NVIDIA nForce 630a
- GeForce 7025 / NVIDIA nForce 630a
- GeForce 7150 / NVIDIA nForce 630i
- GeForce 7100 / NVIDIA nForce 630i
- GeForce 7050 / NVIDIA nForce 630i
- GeForce 7050 / NVIDIA nForce 610i
- GeForce 7100 / NVIDIA nForce 620i
- GeForce 6800 XT / XE / Ultra / LE / GT/ GS
- GeForce 6700 XL
- GeForce 6610 XL
- GeForce 6600 VE / LE / GT
- GeForce 6500
- GeForce 6250
- GeForce 6200SE TurboCache™
- GeForce 6200 TurboCache™
- GeForce 6200 LE
- GeForce 6200 A-LE
- GeForce 6200
- GeForce 6150SE nForce 430
- GeForce 6150 LE
- GeForce 6150
- GeForce 6100 nForce 420
- GeForce 6100 nForce 405
- GeForce 6100 nForce 400
- GeForce 6100

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
1152 x   864   8       60 70 72 75 85 100 120 140 144 150 170 200
1280 x   720   8       60 70 72 75 85 100 120 140 144 150 170
1280 x   768   8       60 70 72 75 85 100 120 140 144 150 170 200 240
1280 x 1024   8          70
1440 x   900   8       60
1600 x 1200   8          70
1680 x 1050   8       60
1920 x 1440   8       60 70 72 75 85 100
2048 x 1536   8       60 70 72 75 85 100
--------------------------------------------------------------------
 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
1152 x   864  16       60 70 72 75 85 100 120 140 144 150 170 200
1280 x   720  16       60 70 72 75 85 100 120 140 144 150 170
1280 x   768  16       60 70 72 75 85 100 120 140 144 150 170 200 240
1280 x 1024  16          70
1440 x   900  16       60
1600 x 1200  16          70
1680 x 1050  16       60
1920 x 1440  16       60 70 72 75 85 100
2048 x 1536  16       60 70 72 75 85 100
--------------------------------------------------------------------
 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         70
1152 x  864  32      60 70 72 75 85 100 120 140 144 150 170 200
1280 x  768  32      60 70 72 75 85 100 120 140 144 150 170
1280 x 1024  32         70
1440 x  900  32      60
1600 x 1200  32         70
1680 x 1050  32      60
1920 x 1440  32      60 70 72 75 85 100
2048 x 1536  32      60 70 72 75 85 100
```

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 *ForceWare Graphics Driver User's Guide* for instructions on how to use the overscan correction features in the control panel.