



ForceWare Graphics Drivers ***Release 173 Notes***

Version 175.97
For Windows Vista

NVIDIA Corporation
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CHAPTER

1

INTRODUCTION TO *RELEASE 173 NOTES*

This edition of *Release 173 Notes* describes the Release 173 ForceWare Graphics Drivers for Microsoft® Windows® Vista. NVIDIA provides these notes to enable add-in-card (AIC) producers and original equipment manufacturers (OEMs) to monitor performance improvements and bug fixes in each documented version of the driver.

Structure of the Document

This document is organized in the following sections:

- “[Changes in the Release 173 Driver for Windows Vista](#)” on page 3 gives a summary of changes, and fixed and open issues in this version.
- “[The Release 173 Driver for Windows Vista](#)” on page 95 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 101 lists the default resolutions supported by the driver.
- “[High Definition Audio Driver for Windows](#)” on page 105 describes the HD audio driver that is provided for supported GPUs.

Changes in this Edition

This edition of the *Release 173 Notes* for Windows Vista includes information about NVIDIA ForceWare graphics driver version 175.97, and lists changes made to the driver since version 173.59. These changes are discussed beginning with the chapter “[Changes in the Release 173 Driver for Windows Vista](#)” on page 3.

CHAPTER

2

CHANGES IN THE RELEASE 173 DRIVER FOR WINDOWS VISTA

This chapter describes open issues for version 175.97, and resolved issues and driver enhancements for versions of the Release 173 driver up to version 175.97. The chapter contains these sections:

- “Version 175.97 Highlights” on page 6
- “Changes in Version 175.97” on page 9
- “Changes in Version 175.95” on page 11
- “Changes in Version 175.91” on page 12
- “Changes in Version 175.90” on page 13
- “Changes in Version 175.87” on page 15
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- “Changes in Version 173.62” on page 84
- “Not NVIDIA Issues” on page 86
- “Known Product Limitations” on page 92

Version 175.97 Highlights

This section provides highlights of version 175.97 of the NVIDIA Release 173 Driver.

- [What's New in This Release](#)
- [What's New in Version 175.97](#)
- [Limitations in This Release for Windows Vista](#)

What's New in This Release

- Added support for NVIDIA Hybrid SLI technology.
- Added support for the following NVIDIA products:
 - GeForce 9800 GX2, including Quad SLI Technology
 - GeForce 9800 GTX
 - GeForce 9600 GT
 - GeForce 8300
 - GeForce 8200
 - GeForce 8100/NVIDIA nForce 720a
 - NVIDIA nForce 730a
- Added support for NVIDIA Quad SLI technology
- Added support for **NVIDIA GeForce 3D Stereo Technology** for GeForce 6, 7, 8, or 9 Series GPUs with a minimum of 128MB graphics memory (Windows Vista 32-bit only).
- Added the following pages to the NVIDIA Control Panel:
 - Manage Custom Resolutions
 - Adjust Television Color Settings
 - Adjust Screen Size and Position
 - Move CRT Position
 - Adjust Video Image Settings
- NVIDIA Control Panel *Adjust Video Color Settings* page: Moved the Edge Enhancement, Noise Reduction, and Inverse Telecine controls to the new *Adjust Video Image Settings* page.

- Added the following new Pure Video HD features for the GeForce 9600 GT, GeForce 9800 GX2, and GeForce 9800 GTX:
 - Dynamic Contrast Enhancement
 - Dynamic Blue, Green & Skin Tone Enhancements
 - Per-display controls for the video settings in the NVIDIA Control Panel
 - Dual-Stream Decode Acceleration¹
 - Microsoft Windows Vista Aero display mode compatibility for Blu-ray & HD DVD playback¹

What's New in Version 175.97

Resolved Issues for Windows Vista

See ["Changes in Version 175.97" on page 9](#) for a list of resolved issues under Windows Vista.

1. Users will require updated software from third-party movie players to experience the new Dual-Stream decode acceleration and Aero support for Blu-ray and HD DVD playback features.

Limitations in This Release for *Windows Vista*

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

- **NVIDIA SLI Antialiasing**

This driver does not support NVIDIA SLI antialiasing.

- **INF Support for Restricted Timings**

This driver version does not support the use of Restricted Timing settings (R&T strings) in the INF to control mode validation and/or mode setting for custom mode/adaptor/monitor combinations. This capability is planned for a later driver release.

- **Consumer 3D Stereo for OpenGL**

- **SDI**

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

- **Genlock/Frame Lock**

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

- **NVIDIA nView Desktop Manager**

The nView Desktop Manager is not included in this driver. The following nView Desktop Manager features will be included in a future driver version for NVIDIA Quadro products:

- Grid lines
- Virtual Desktops
- Window/Dialog Repositioning
- nView Profiles

Features Not Yet Available in the NVIDIA Control Panel

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

- **Display Category**

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

- **Workstation Category**

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

Changes in Version 175.97

The following sections list the changes made and issues resolved since driver version 175.95.

- “Fixed Issues–Windows Vista 32-bit” on page 9
- “Fixed Issues–Windows Vista 64-bit” on page 10

The NVIDIA bug number is provided for reference.

Fixed Issues–Windows Vista 32-bit

Single-GPU Issues

- 434144 MCP77: 3DMark06 - there is display corruption or a blank display followed by a system crash when running the benchmark at the default settings.

Fixed a memory addressing offset issue.

- 433538 MCP79: There is intermittent desktop corruption while maximizing application windows with Windows Vista Aero-glass scheme enabled.

Fixed a memory addressing offset issue.

Multi-GPU Issues

- 428930 [Hybrid SLI], [MCP72 + G92]: WHQL - WLK1.2 - System Suite - Common Scenario: blue-screen crash occurs.

Hybrid SLI Save power mode was being set inappropriately.

- 423262 [Hybrid SLI], [MCP77+G96]: WarCraft 3 - corruption appears at the bottom of the screen during the introductory animation.

The surface was being shown on the screen before it was updated completely.

Fixed Issues—Windows Vista 64-bit

Multi-GPU Issues

- 428930 [Hybrid SLI], [MCP72 + G92]: WHQL - WLK1.2 - System Suite - Common Scenario: blue-screen crash occurs.

Hybrid SLI Save power mode was being set inappropriately.

Changes in Version 175.95

The following sections list the changes made and issues resolved since driver version 175.91.

- “Fixed Issues–Windows Vista 32-bit” on page 11
- “Fixed Issues–Windows Vista 64-bit” on page 11

The NVIDIA bug number is provided for reference.

Fixed Issues–Windows Vista 32-bit

Single-GPU Issues

- 430206 NVIDIA Control Panel: The Adjust Television color settings "Restore Defaults" link is not working properly when TV is the secondary Clone mode display.

Added a check to exclude the call to restore brightness and contrast values when TV is enabled as the secondary Clone mode display.

Fixed Issues–Windows Vista 64-bit

Single-GPU Issues

- 431178 [MCP72+G92]: The Dynamic Contrast/Color enhancement options are not available in the NVIDIA Control Panel Adjust video color settings page.

The DCCE feature had been hidden erroneously.

- 426681 G98: Video stuttering occurs during MPEG2 HD and DVR-ms HD playback after enabling Color enhancement.

Fixed by applying only dynamic contrast enhancement for lower end GPUs.

- 409500 G96: WinDVD v11.39 is unable to play HD DVD or Blu-ray disks at 2560x1600 resolution.

The driver was erroneously rejecting video playback at this resolution.

Changes in Version 175.91

The following sections list the changes made and issues resolved since driver version 175.90.

- [“Fixed Issues–Windows Vista 32-bit” on page 12](#)

The NVIDIA bug number is provided for reference.

Fixed Issues–Windows Vista 32-bit

Single-GPU Issues

- 424251 MCP77: Frame-drops occur when playing an interlaced MPEG2 DVD using WinDVD 8 and then enabling DCCE from the NVIDIA ControlPanel.

Fixed by not exposing the DCCE feature for MCP77/MCP78.

Changes in Version 175.90

The following sections list the changes made and issues resolved since driver version 175.87.

- “Fixed Issues–Windows Vista 32-bit” on page 13
- “Fixed Issues–Windows Vista 64-bit” on page 14

The NVIDIA bug number is provided for reference.

Fixed Issues–Windows Vista 32-bit

Single-GPU Issues

- 427232 NB9X: TAITO Memories (3D Game) - blue-screen crash or "Driver not responding" error occurs after five minutes of gameplay.
Implemented a workaround to prevent crashes due to the application not conforming to the DirectX 9 runtime.
- 412283 NVIDIA Control Panel, MCP79M/MCP79/G98M: With DP-HDMI(P) + LVDS (S) connected in Clone mode, the displays cannot be set to an HD format.
Fixed by not exposing HD modes in this configuration.
- 411915 MCP7A: The display is hazy display with S-Video connected to the integrated GPU.
Adjusted the default TV Saturation and Flicker filter controls to more optimum values for both SDTV and HDTV.

Multi-GPU Issues

- 413424 NVIDIA Control Panel, [Hybrid SLI], MCP78+G98: The NVIDIA Control Panel takes a long time to respond.
Improved the operation of the Adjust Desktop/Video Color Settings pages.
- 335858 [SLI], G92/G84: Mad Mode Mike - severe flickering occurs (the rendering model lights only every other frame).
Corrected a typo in the code that prevented data from being sent to the second GPU.

Fixed Issues—Windows Vista 64-bit

Single-GPU Issues

- 405129 NVIDIA Control Panel, G86M: With LVDS +DVI connected in Clone mode, clicking the "Change Resolution" Restore Defaults link sets the resolution to 800x600.

Fixed an error in the mode filtering process when setting the default resolution.

Multi-GPU Issues

- 413424 NVIDIA Control Panel, [Hybrid SLI], MCP78+G98: The NVIDIA Control Panel takes a long time to respond.

Improved the operation of the Adjust Desktop/Video Color Settings pages.

Changes in Version 175.87

The following sections list the changes made and issues resolved since driver version 175.86.

- “Fixed Issues–Windows Vista 32-bit” on page 15
- “Fixed Issues–Windows Vista 64-bit” on page 15

The NVIDIA bug number is provided for reference.

Fixed Issues–Windows Vista 32-bit

Single-GPU Issues

- 425926 G96M/G96M: DisplayPort display is blank when playing a DVD using Cyberlink or WinDVD.
Fixed incorrect DisplayPort addressing.
- 425704 MCP77: Frame drops occur when playing a WMV HD video file with Media Player Classic.
Fixed the video surface address mapping to avoid read/write latencies.
- 419866 Roxio Video Editing - the application experiences degraded performance when using the StretchRect() function.
Improved the driver's efficiency in handling the StretchRect() function.

Fixed Issues–Windows Vista 64-bit

Single-GPU Issues

- 425926 G96M/G96M: DisplayPort display is blank when playing a DVD using Cyberlink or WinDVD.
Fixed incorrect DisplayPort addressing.

Changes in Version 175.86

The following sections list the changes made and issues resolved since driver version 175.85.

- [“Fixed Issues–Windows Vista 64-bit” on page 16](#)

The NVIDIA bug number is provided for reference.

Fixed Issues–Windows Vista 64-bit

Single-GPU Issues

- 427265 MCP78: The screen turns red if the PowerDVD window is dragged in the secondary display and closed during Blu-ray disc play-back.

Fixed by making sure the pitch values do not exceed memory allocation.

Changes in Version 175.85

The following sections list the changes made and issues resolved since driver version 175.81.

- “Fixed Issues–Windows Vista 32-bit” on page 17
- “Fixed Issues–Windows Vista 64-bit” on page 18

The NVIDIA bug number is provided for reference.

Fixed Issues–Windows Vista 32-bit

Single-GPU Issues

- NB9M, NB9P: Blackscreens, system hangs, and blue-screen crashes occur while running S3, S4 and reboot stress tests overnight.

Added time delays to fix driver contention between two different modules for a shared resource.

- 426962 Hue looks incorrect in WinDVD 8.0.11.103.

Fixed the hue range values.

- 426599 G80: Lord of the Rings - the driver crashes when playing the game in windowed mode.

Fixed a 2D processing bug.

- 421739 G94: World in Conflict - color ramp throughout the entire whole game is randomized.

Fixed by populating the gamma ramp with the correct number of entries.

- 377817 MCP78: HDMI - The "Change the signal or HD format" Apply/Cancel buttons are active without making any changes.

Interlaced timings were not getting passed properly when getting the EDID timings, causing the driver to retrieve "different" timings.

Multi-GPU Issues

- 426298 [Hybrid SLI], MCP72+G98: Team Fortress 2 - there is corruption after changing the resolution.

Fixed a viewport boundary issue.

- 418284 [Hybrid SLI, 3-way SLI], MCP72+G92: Speedy 2.0 notebook utility - "Driver not responding" error appears when switching from Save power to Boost performance mode while running the utility.

Apply mode changes to the correct GPU when switching Hybrid SLI states.

Fixed Issues—Windows Vista 64-bit

Single-GPU Issues

- 426962 Hue looks incorrect in WinDVD 8.0.11.103.

Fixed the hue range values.

- 426581 G96M: The screen blanks out before entering the desktop after installing the driver and rebooting.

Fixed a display memory handling issue.

- 425685 MCP78: Q-Gate - blue-screen crash occurs when playing a Blu-ray disc using WinDVD.

The surface size was exceeding memory.

- 377817 MCP78: HDMI - The "Change the signal or HD format" Apply/Cancel buttons are active without making any changes.

Interlaced timings were not getting passed properly when getting the EDID timings, causing the driver to retrieve "different" timings.

Multi-GPU Issues

- 422081 [Hybrid SLI], MCP72: There is flashing corruption when playing a Blu-ray disc using PowerDVD at 1080p in mGPU mode.

Fixed a memory handling bug for paged surfaces under Hybrid SLI.

Changes in Version 175.80

The following sections list the changes made and issues resolved since driver version 175.76.

- “Fixed Issues–Windows Vista 32-bit” on page 19
- “Fixed Issues–Windows Vista 64-bit” on page 20

The NVIDIA bug number is provided for reference.

Fixed Issues–Windows Vista 32-bit

Single-GPU Issues

- 406892 G8x: WHQL: DTM6475: DX10: WGF Create Device (64-bit) test fails with access violation errors and then exits on DirectX 10 parts.

Fixed a problem caused by an uninitialized variable.

- 404982 3D Stereo: Halo 2 - the game cannot be switched into stereo mode.

Fixed by adding a Stereo game configuration for Halo 2.

Multi-GPU Issues

- 410070 [SLI], G84/86, G92: WHQL WLK1.2 G8x/9x D3D - WGF Shared Resources fails

Fixed the method of allocating shared resources.

- 402327 [Hybrid SLI], MCP78 + G96 P728: With Boost performance mode enabled, the Windows Device Manager lists two monitors when only one display is connected.

Fixed by making sure to report displays connected to only one discrete GPU when Boost performance mode is enabled.

Fixed Issues—Windows Vista 64-bit

Single-GPU Issues

- 406892 G8x, (Also WinServer 2008): WHQL: DTM6475: DX10: WGF Create Device (64-bit) test fails with access violation errors and then exits on DirectX 10 parts.

Fixed a problem caused by an uninitialized variable.

Multi-GPU Issues

- 410070 [SLI], (Also WinServer2008) G84/86, G92: WHQL WLK1.2 G8x/9x D3D - WGF Shared Resources test fails.

Fixed the method of allocating shared resources.

Changes in Version 175.76

The following sections list the changes made and issues resolved since driver version 175.75.

- [“Fixed Issues–Windows Vista 32-bit” on page 21](#)

The NVIDIA bug number is provided for reference.

Fixed Issues–Windows Vista 32-bit

Single-GPU Issues

- 414005 MCP78: Video flashes briefly after enabling dynamic contrast enhancement.

Fixed the timing involved with initiating application of contrast after enabling dynamic contrast enhancement.

- 412326 NVIDIA Control Panel: When an HDTV is connected using the DVI connector, the NVIDIA Control Panel scaling options are still available when they shouldn't be.

Added code to allow the driver to recognize the connection as HDTV.

Changes in Version 175.75

The following sections list the changes made and issues resolved since driver version 175.70.

- [“Fixed Issues–Windows Vista 32-bit” on page 22](#)
- [“Fixed Issues–Windows Vista 64-bit” on page 23](#)

The NVIDIA bug number is provided for reference.

Fixed Issues–Windows Vista 32-bit

Single-GPU Issues

- 419496 Non-hybrid SLI system is reported as hybrid capable.
A “valid hybrid mode” flag was not getting set properly on Hybrid SLI systems.
- 407575 G70: Assassin's Creed (DirectX 9) - hitching occurs in the "Present_Room" game level.
Fixed an issue in the shader compiler.
- 406375 G80 (GTX & GTS): 3DMark Vantage RC1 - the application or system crashes.
Fixed a bug in deleting block elements.

Multi-GPU Issues

- 420369 [SLI], G80: Assassin's Creed (DirectX 10) - "Driver is not Responding" error occurs after launching the application at maximum settings and 2560x1600 resolution.
Fixed the method of presenting surfaces in SLI mode.

Fixed Issues—Windows Vista 64-bit

Multi-GPU Issues

- 415857 [Quad SLI], G92 (2xP790): Flight Simulator X - the SLI visual indicator flickers in the preview window.

Fixed a synchronization issue with AFR rendering in Quad SLI mode.

Changes in Version 175.70

The following sections list the changes made and issues resolved since driver version 175.63.

- “Fixed Issues–Windows Vista 32-bit” on page 24
- “Fixed Issues–Windows Vista 64-bit” on page 25

The NVIDIA bug number is provided for reference.

Fixed Issues–Windows Vista 32-bit

Single-GPU Issues

- 414005 MCP78: Video flashes briefly after enabling dynamic contrast enhancement.

Fixed an issue with properly initiating application of contrast after enabling dynamic contrast enhancement.

- 412674 Quadro FX 1700: Clients do not see the server application when using Live Meeting 2005.

Implemented a workaround to accommodate the application accessing a primary surface after unlocking it.

- 408525 NVIDIA Control Panel: After clicking Restore Defaults, the Adjust Video color settings->"Dynamic contrast enhancement" and "color enhancement" changes revert to default settings even though "Cancel" is clicked.

A control panel video structure was not getting initialized for each setting.

- 346903 G73M: HDMI TV connection is no longer detected after resuming from Hibernate.

Fixed a DDC detection time-out issue.

Multi-GPU Issues

- 416367 [Hybrid, 3-way SLI]: Crysis (64-bit version) - textures flicker.

Fixed the method of enumerating the GPUs.

Fixed Issues—Windows Vista 64-bit

Single-GPU Issues

- 408525 NVIDIA Control Panel: After clicking Restore Defaults, the Adjust Video color settings->"Dynamic contrast enhancement" and "color enhancement" changes revert to default settings even though "Cancel" is clicked.

A control panel video structure was not getting initialized for each setting.

- 403218 NVIDIA Control Panel, G92: Adjust Video Image Settings slider is not disabled for the secondary Clone mode display.

Make sure all video color page controls are disabled for the secondary Clone display.

Multi-GPU Issues

- 419493 [SLI], G92: There is no display after resuming from S3.

Fixed a regression caused by a previous S3 optimization.

- 416367 [Hybrid, 3-way SLI]: Crysis (64-bit version) - textures flicker.

Fixed the method of enumerating the GPUs.

Changes in Version 175.63

The following sections list the changes made and issues resolved since driver version 175.62.

- [“Fixed Issues–Windows Vista 64-bit” on page 26](#)

The NVIDIA bug number is provided for reference.

Fixed Issues–Windows Vista 64-bit

Multi-GPU Issues

- 411083 [Hybrid, 3-way SLI], MCP72+ G92: 4: When resuming from hibernate mode, the user desktop appears and then the User-select screen appears.

Make sure to present the correct primary surface.

Changes in Version 175.62

The following sections list the changes made and issues resolved since driver version 175.61.

- [“Fixed Issues–Windows Vista 32-bit” on page 27](#)

The NVIDIA bug number is provided for reference.

Fixed Issues–Windows Vista 32-bit

Multi-GPU Issues

- 395953 [SLI], G92: Company of Heroes- Opposing Fronts - there is corruption while changing resolutions.

Make sure primary surfaces are cleared during resolution changes in SLI mode.

Changes in Version 175.61

The following sections list the changes made and issues resolved since driver version 175.60.

- [“Fixed Issues–Windows Vista 32-bit”](#) on page 28

The NVIDIA bug number is provided for reference.

Fixed Issues–Windows Vista 32-bit

Single-GPU Issues

- 412120 MCP78: WHQL “System-Common Scenario Stress With IO” fails.

Fixed the method of allocating system video memory.

- 411375 MCP77, WHQL DTM 6475(WLK 1.2) Vista32 SP1 Hybrid Graphics R173_00 - bugcheck D1 nvlddmkm.sys while running GFXIntegration Fast User Switching test.

The Hybrid mode was switching inappropriately.

- 395577 G92: Dynamic Contrast Enhancement and Color Enhancement do not work.

Changed the method of determining appropriate surfaces for applying dynamic contrast and color enhancement.

Multi-GPU Issues

- 418226 [Hybrid SLI], MCP72+G98: S.T.A.L.K.E.R.: Shadow of Chernobyl - the display is blank or shows corruption after setting in-game antialiasing.

Fixed by providing more memory to accommodate minimum pitch requirements during surface transfers between GPUs.

- 412813 [Hybrid SLI], MCP72/78, G86/98: WHQL DTM6475 (WLK 1.2) - System Logo "Common Scenario with I/O" and "Sleep Stress with I/O" hard locks.

Create Hybrid SLI resources only when Hybrid SLI is being used.

Fixed Issues—Windows Vista 64-bit

Multi-GPU Issues

- 412813 [Hybrid SLI], MCP72/78, G86/98: WHQL DTM6475 (WLK 1.2)
- System Logo "Common Scenario with I/O" and "Sleep Stress with I/O" hard locks.

Create Hybrid SLI resources only when Hybrid SLI is being used.

Changes in Version 175.60

The following sections list the changes made and issues resolved since driver version 175.57.

- [“Fixed Issues–Windows Vista 32-bit” on page 30](#)

The NVIDIA bug number is provided for reference.

Fixed Issues–Windows Vista 32-bit

Single-GPU Issues

- 412287 NVIDIA Control Panel, [3xSLI], [Hybrid SLI], MCP72 + G92(P392): There is a "NVIDIA Hybrid SLI" submenu item in the Vista Power Options->GPU settings menu.

Be sure to not expose this submenu item for Hybrid SLI desktop systems or if the Hybrid SLI UI is disabled.

- 405628 1176x664 resolutions are incorrect under Clone mode when one display is a wide screen display via DVI-VGA.

Be sure to check whether the timings are supported on both VGA displays in Clone mode.

Multi-GPU Issues

- 409810 [SLI], G84M: Serious Sam 2 - when playing the game using the OpenGL engine, the game hangs and Windows reports a video hardware error.

Incorrect vertex attributes were getting enabled.

Changes in Version 175.57

The following sections list the changes made and issues resolved since driver version 175.56.

- “Fixed Issues–Windows Vista 32-bit” on page 31
- “Fixed Issues–Windows Vista 64-bit” on page 32

The NVIDIA bug number is provided for reference.

Fixed Issues–Windows Vista 32-bit

Single-GPU Issues

- 407876 MCP77: WHQL DTM 6475 Vista SP1 R173_00 - Transient Multimon Functional test fails.
Fixed a mode validation issue in Dualview mode.
- 405449 3D Stereo: UnrealTournament 2004 -after you re-spawn, the character is stereoscopic but the world is monoscopic until the mouse is moved.
Some 3D stereo parameters were not being configured appropriately.

Multi-GPU Issues

- 415895 NVIDIA Control Panel, [3xSLI, Hybrid SLI], MCP72+G92(P392): After setting Hybrid SLI Save power mode, the system intermittently switches from Save power to Boost performance mode after rebooting.
Fixed the method of setting the proper Hybrid SLI mode upon system startup.
- 410702 NVIDIA Control Panel, [Quad SLI], [Hybrid SLI], MCP72 + P790: The desktop becomes dark after rebooting.
Fixed the method of setting the desktop color scheme for Hybrid SLI systems.
- 387871 [Quad SLI], [SLI], G86/G84, G92 (P790): The 'Shut Down Windows" menu appears when enabling or disabling SLI.
Fixed by considering explorer.exe a "non-migratable" application for SLI.

Fixed Issues—Windows Vista 64-bit

Single-GPU Issues

- 407876 MCP77: WHQL DTM 6475 Vista SP1 R173_00 - Transient Multimom Functional test fails.

Fixed a mode validation issue in Dualview mode.

Multi-GPU Issues

- 412438 [SLI], G86: Tearing occurs when V-Sync is enabled for most DirectX 10 applications

Fixed the SLI rendering when no SLI connector is used.

- 410702 NVIDIA Control Panel, [Quad SLI], [Hybrid SLI], MCP72 + P790: The desktop becomes dark after rebooting.

Fixed the method of setting the desktop color scheme for Hybrid SLI systems.

- 387871 [Quad SLI], [SLI], G86/G84, G92 (P790): The 'Shut Down Windows' menu appears when enabling or disabling SLI.

Fixed by considering explorer.exe a "non-migratable" application for SLI.

Changes in Version 175.56

The following sections list the changes made and issues resolved since driver version 175.55.

- [“Fixed Issues–Windows Vista 32-bit” on page 33](#)

The NVIDIA bug number is provided for reference.

Fixed Issues–Windows Vista 32-bit

Single-GPU Issues

- 412848 G98, MCP78: WHQL DTM6475(WLK 1.2) - System Logo [HybridPerfSli] "Disable Enable with I/O" Test hang

The driver reference a hardware resource that didn't exist.

Changes in Version 175.55

The following sections list the changes made and issues resolved since driver version 175.51.

- [“Fixed Issues–Windows Vista 32-bit” on page 34](#)

The NVIDIA bug number is provided for reference.

Fixed Issues–Windows Vista 32-bit

Single-GPU Issues

- 408759 3D Stereo: PowerboatGT - the game crashes when launched with 3D stereo enabled.

Consumer OpenGL 3D stereo is not yet supported for Windows Vista.

Changes in Version 175.51

The following sections list the changes made and issues resolved since driver version 175.50.

- [“Fixed Issues–Windows Vista 32-bit” on page 35](#)

The NVIDIA bug number is provided for reference.

Fixed Issues–Windows Vista 32-bit

Multi-GPU Issues

- 412394 [Hybrid SLI], MCP78, G86: World in conflict- blue-screen crash or driver error occurs while changing the menu options or while exiting the game.

Fixed an issue with properly tracking multi-GPU resources.

Changes in Version 175.50

The following sections list the changes made and issues resolved since driver version 174.92.

- “Fixed Issues–Windows Vista 32-bit” on page 36
- “Fixed Issues–Windows Vista 64-bit” on page 37

The NVIDIA bug number is provided for reference.

Fixed Issues–Windows Vista 32-bit

Single-GPU Issues

- 408096 NVIDIA Control Panel, MCP77: The Resize HDTV Desktop page appears on the LVDS after unplugging the HDMI.

Fixed by closing the page and updating the page state whenever there is a display change.

- 407647 NVIDIA Control Panel, MCP77: The NVIDIA Control Panel response is slow after changing the resolution and then clicking "Apply".

Certain display settings were being re-verified unnecessarily.

- 405300 G92: Devil May Cry 4 (DirectX 9) - while playing the game, black or white flickering appears across the screen

Fixed a bug in the blit code.

- 399597 Notebook, MCP77: WHQL DTM 6475 XP/Vista - red screen underflows on several DTM tests.

Fixed a frame buffer memory handling bug.

- 397348 NVIDIA Control Panel, G84: Color settings are not disabled on the secondary Clone mode display.

Corrected the UI to conform to the policy that color settings are not supported on a per-display basis.

Multi-GPU Issues

- 399868 [SLI], G92M: HD formats cannot be set after the resolution to 1920x1080 at 25 Hz refresh rate.

Fixed the TV format code to handle 1920x1080@25Hz.

Fixed Issues—Windows Vista 64-bit

Single-GPU Issues

- 399597 Notebook, MCP77: WHQL DTM 6475 XP/Vista - red screen underflows on several DTM tests.

Fixed a frame buffer memory handling bug.

Changes in Version 174.92

The following sections list the changes made and issues resolved since driver version 174.91.

- [“Fixed Issues–Windows Vista 32-bit” on page 38](#)

The NVIDIA bug number is provided for reference.

Fixed Issues–Windows Vista 32-bit

Multi-GPU Issues

- 370896 [SLI]: RFE to enable 3-way SLI configurations by default.

3-way SLI configurations are now supported automatically with supported hardware.

Changes in Version 174.91

The following sections list the changes made and issues resolved since driver version 174.90.

- [“Fixed Issues–Windows Vista 32-bit” on page 39](#)

The NVIDIA bug number is provided for reference.

Fixed Issues–Windows Vista 32-bit

Single-GPU Issues

- 408081 NVIDIA Control Panel, Notebook: WHQL DTM 6475 Vista32/64SP1 Fast user switching tests fail.

The Windows logon screen was losing focus as the driver restored persistence during fast user switching.

- 405446 3D Stereo: Microsoft Flight Sim X - runway lights and lights on the plane render only in one eye.

Fixed left/right image processing for passive stereo.

- 399568 MCP72/78: WHQL DTM6475 - System Logo - System Common Scenario Stress Disable/Enable with IO, blue-screen crash occurs x C4

Fixed a memory leak in system memory.

- 287326 WHQL DTM Vista G80 Stability - WDDM Bit Flip - Invalid Parameter test hangs the system.

A pointer was not being updated in the bit-flip code.

Fixed Issues–Windows Vista 64-bit

Single-GPU Issues

- 408081 NVIDIA Control Panel, Notebook: WHQL DTM 6475 Vista32/64SP1 Fast user switching tests fail.

The Windows logon screen was losing focus as the driver restored persistence during fast user switching.

- 399568 MCP72/78: WHQL DTM6475 - System Logo - System Common Scenario Stress Disable/Enable with IO, blue-screen crash occurs x C4

Fixed a memory leak in system memory.

- 287326 WHQL DTM Vista G80 Stability - WDDM Bit Flip - Invalid Parameter test hangs the system.

A pointer was not being updated in the bit-flip code.

Multi-GPU Issues

- 408609 [Quad SLI], 2xP790: Crysis - the system sometimes freezes while idling during the game for an extended period of time.

A quad-SLI GPU state was not being updated as the appropriate time.

Changes in Version 174.90

The following sections list the changes made and issues resolved since driver version 174.84.

- [“Fixed Issues–Windows Vista 32-bit” on page 41](#)

The NVIDIA bug number is provided for reference.

Fixed Issues–Windows Vista 32-bit

Single-GPU Issues

- 409765 Stereo: Far Cry (DirectX 9) - the game loses 3D stereo mode when you get hit by a bullet.

Fixed a stereo setting in the Far Cry game configuration.

- 408621 G98: Application brightness control does not work.

An uninitialized I2C parameter was being used.

- 402046 G84: A thin line appears at the right/bottom edge of full-screen videos.

The video surface size was not getting set properly.

Multi-GPU Issues

- 407035 [SLI], MCP78, G98: 3DMark06 - screen corruption occurs between test sections.

The wrong GPU was getting reset as active.

Fixed Issues–Windows Vista 64-bit

Single-GPU Issues

- 409328 The screen turns black during video playback if Dynamic Contrast Enhancement, Noise Reduction, or Edge Enhancement are enabled from the NVIDIA Control Panel.

Video surface information was not getting transferred properly to the output.

- 395034 NVIDIA Control Panel, G92, G94: With display set up as HDTV over DVI, it switches back to DVI after switching from Clone mode to single-display mode.

Fixed by making sure the connection state is updated properly when switching display modes.

Changes in Version 174.84

The following sections list the changes made and issues resolved since driver version 174.82.

- [“Fixed Issues–Windows Vista 32-bit” on page 43](#)

The NVIDIA bug number is provided for reference.

Fixed Issues–Windows Vista 32-bit

Single-GPU Issues

- 400436 NVIDIA Control Panel, G80, G98: The NVIDIA Control Panel crashes after the user defines a custom view and then clicks Cancel.

Fixed the method of determining whether the connection is HDTV over DVI.

Changes in Version 174.82

The following sections list the changes made and issues resolved since driver version 174.81.

- “Fixed Issues–Windows Vista 32-bit” on page 44
- “Fixed Issues–Windows Vista 64-bit” on page 44

The NVIDIA bug number is provided for reference.

Fixed Issues–Windows Vista 32-bit

Single-GPU Issues

- 408081 NVIDIA Control Panel, Notebook: WHQL DTM 6475 Vista32/64SP1 Fast user switching tests fail.

The Windows logon screen was losing focus as the driver restored persistence during fast user switching.

- 394032 NVIDIA Control Panel, G92M: With external VGA connected in Dualview mode, Digital Vibrance changes to the VGA cannot be restored to defaults after switching to Clone mode.

Color settings were not being applied properly in Clone mode.

- 391359 NVIDIA Control Panel, G96: The Adjust television color settings->Gray Border check box state is not saved across display changes.

The TV border setting was not getting updated during the display switch.

- 382828 G96: OpenGL applications become corrupted upon resume from Hibernate mode.

Texture allocations were getting lost during suspend/resume operations.

Fixed Issues–Windows Vista 64-bit

Single-GPU Issues

- 408081 NVIDIA Control Panel, Notebook: WHQL DTM 6475 Vista32/64SP1 Fast user switching tests fail.

The Windows logon screen was losing focus as the driver restored persistence during fast user switching.

- 391359 NVIDIA Control Panel, G96: The Adjust television color settings->Gray Border check box state is not saved across display changes.

The TV border setting was not getting updated during the display switch.

Changes in Version 175.81

The following sections list the changes made and issues resolved since driver version 175.80.

- [“Fixed Issues–Windows Vista 32-bit” on page 46](#)

The NVIDIA bug number is provided for reference.

Fixed Issues–Windows Vista 32-bit

Single-GPU Issues

- 423438 There is a green line at the bottom of progressive video when using scaling.

Fixed the method of processing the surfaces when using scaling.

- 419511 NVIDIA Control Panel: Display color quality slider changes automatically when reducing the display resolution.

Fixed an issue with properly setting the color depth while changing resolutions.

Multi-GPU Issues

- 424063 [Hybrid SLI], NVIDIA Control Panel, MCP77+G98 - the Desktop color setting resets after switching from Dualview to Clone mode on the dGPU.

Updated the control panel logic to support Dualview mode under Hybrid SLI.

Changes in Version 174.81

The following sections list the changes made and issues resolved since driver version 174.80.

- [“Fixed Issues–Windows Vista 32-bit” on page 47](#)

The NVIDIA bug number is provided for reference.

Fixed Issues–Windows Vista 32-bit

Single-GPU Issues

- 408664 G92 (P392): 3DMark06 - blue screen crash occurs during the stress test.

Changes in Version 174.80

The following sections list the changes made and issues resolved since driver version 174.73.

- “Fixed Issues–Windows Vista 32-bit” on page 48
- “Fixed Issues–Windows Vista 64-bit” on page 49

The NVIDIA bug number is provided for reference.

Fixed Issues–Windows Vista 32-bit

Single-GPU Issues

- 406368 MCP79: WHQL DTM6475 - Non Power 2 Conditional Render Target (32bit) test hangs.

Implemented a change in memory address handling to accommodate an issue with the OS.

- 400109 GeForce 9800 GX2: Bioshock / Company of Heroes - blue-screen crash occurs during the opening credits.

Fixed a writing-to-memory corruption error.

- 384363 NVIDIA Control Panel, G71M: Changes to the screen resolution, color depths, and selected primary display settings are not saved correctly after using “Fast User Switching”.

Fixed by making sure the previously saved user configurations are not overwritten during FUS modesets, and are retrieved properly by the control panel code.

Multi-GPU Issues

- 404537 [SLI, Quad SLI], G92, MCP72: 3DMark 06 Canyon Flight HDR/ SM3.0 graphics test hangs immediately after the loading screen, with 2560x1600, 8x antialiasing, and 16x AF set.

Fixed by modifying a system time-out setting.

Fixed Issues—Windows Vista 64-bit

Multi-GPU Issues

- 404537 [SLI, Quad SLI], G92, MCP72: 3DMark 06 Canyon Flight HDR/SM3.0 graphics test hangs immediately after the loading screen, with 2560x1600, 8x antialiasing, and 16x AF set.

Fixed by modifying a system time-out setting.

Changes in Version 174.73

The following sections list the changes made and issues resolved since driver version 174.71.

- [“Fixed Issues–Windows Vista 64-bit”](#) on page 50

The NVIDIA bug number is provided for reference.

Fixed Issues–Windows Vista 64-bit

Single-GPU Issues

- 373477 G80: HalfLife2-Episode2 - corruption occurs at the top of the screen if the torch near the door is activated using the [F] key.

Surface data was not getting cleared properly.

Changes in Version 174.71

The following sections list the changes made and issues resolved since driver version 174.70.

- “Fixed Issues–Windows Vista 32-bit” on page 51
- “Fixed Issues–Windows Vista 64-bit” on page 51

The NVIDIA bug number is provided for reference.

Fixed Issues–Windows Vista 32-bit

Single-GPU Issues

- 407270 InstallShield screens are not localized.
Fixed copying/linking bugs in the InstallShield code.
- 406240 MCP77M: After resuming from S3 while running applications, CPU usage is high even after closing the applications.
Fixed a bug in the Hybrid SLI code that checks for blocking applications.

Fixed Issues–Windows Vista 64-bit

Single-GPU Issues

- 407270 InstallShield screens are not localized.
Fixed copying/linking bugs in the InstallShield code.
- 406892 G8x: WHQL: DTM6475: DX10: WGF Create Device (64-bit) test fails with access violation errors and then exits on DirectX 10 parts.
Fixed a regression caused by an integration error.

Changes in Version 174.70

The following sections list the changes made and issues resolved since driver version 174.60.

- “Fixed Issues–Windows Vista 32-bit” on page 52
- “Fixed Issues–Windows Vista 64-bit” on page 53

The NVIDIA bug number is provided for reference.

Fixed Issues–Windows Vista 32-bit

Single-GPU Issues

- 403070 G80/G92: Lost Planet Colonies(DirectX 10) - "Driver is not Responding" error occurs when pulling up an overlay during the cut scene.

Fixed an issue with the user clip planes.

- 399566 G94: Dynamic Contrast and Color Enhancement cause frame drops on Blu-ray disc titles.

Fixed the method of handling video macroblocks.

- 396741 G92/G80: Frontlines: Fuel of War - "Display Driver is not Responding" error occurs when playing the first level of the game.

Flags were not getting updated in the pixel shader code.

- 394262 MCP77M: Video playback on HDDVD title is choppy.

Fixed the flip rate limits.

- 393099 MCP78: After resuming from S3, some areas of the desktop are corrupted.

Areas of system memory were not being invalidated properly.

- 287738 G72: Civilization4 - video stutters when antialiasing is enable from the game settings.

Fixed a bandwidth constraint issue.

Multi-GPU Issues

- 400244 [SLI], G96: Crysis - the system crashes at resolution 1280x1024 and with 8x antialiasing enabled.

DirectX devices were not getting invalidated properly.

Fixed Issues—Windows Vista 64-bit

Single-GPU Issues

- 403731 NVIDIA Control Panel, G71: The desktop resizes even after clicking Cancel after making changes in the Resize HDTV desktop page.

Display changes were not getting validated properly.

- 389220 G96M: Audio playback at 44.1khz experiences occasional audio drop outs.

Fixed an issues with the HD audio code.

Changes in Version 174.60

The following sections list the changes made and issues resolved since driver version 174.52.

- “Fixed Issues–Windows Vista 32-bit” on page 54
- “Fixed Issues–Windows Vista 64-bit” on page 55

The NVIDIA bug number is provided for reference.

Fixed Issues–Windows Vista 32-bit

Single-GPU Issues

- 403852 G92 (P790): Multi-GPU is not the default setting after installing the driver.

The driver was not recognizing the hardware IDs correctly.

- 402047 MCP77M: With LVDS+CRT in Clone mode, both displays show red screen underflow after being idle for over a minute.

Wrong power management registers were being used.

Multi-GPU Issues

- 403296 [SLI], NVIDIA Control Panel: There is no SLI option in the NVIDIA Control Panel.

Fixed a regression in the Hybrid SLI code that resulted in the SLI page being hidden.

- 403238 [3xSLI], NVIDIA Control Panel, G92: The system hangs after enabling three-way SLI.

Fixed a regression that caused a 2-way SLI topology to be set erroneously, and the conflict resulted in the system hang.

Fixed Issues—Windows Vista 64-bit

Multi-GPU Issues

- 403296 [SLI], NVIDIA Control Panel: There is no SLI option in the NVIDIA Control Panel.

Fixed a regression in the Hybrid SLI code that resulted in the SLI page being hidden.

Changes in Version 174.52

The following sections list the changes made and issues resolved since driver version 174.51.

- “Fixed Issues–Windows Vista 32-bit” on page 56
- “Fixed Issues–Windows Vista 64-bit” on page 56

The NVIDIA bug number is provided for reference.

Fixed Issues–Windows Vista 32-bit

Single-GPU Issues

- 399234 NVIDIA Control Panel, G96M: Driver error occurs when resuming from S4 in Clone or Dualview mode.w

The driver was not being initialized properly when entering Hibernation mode.

- 393398 G92: The driver crashes when playing various 3D games at high resolutions and with antialiasing enabled.

Fixed an issue with the list of hardware contexts.

Fixed Issues–Windows Vista 64-bit

Single-GPU Issues

- 399234 NVIDIA Control Panel, G96M: Driver error occurs when resuming from S4 in Clone or Dualview mode.w

The driver was not being initialized properly when entering Hibernation mode.

Changes in Version 174.51

The following sections list the changes made and issues resolved since driver version 174.50.

- “Fixed Issues–Windows Vista 32-bit” on page 57
- “Fixed Issues–Windows Vista 64-bit” on page 57

The NVIDIA bug number is provided for reference.

Fixed Issues–Windows Vista 32-bit

Single-GPU Issues

- 395101 G92: The Vista Aero-glass desktop (and other DirectX 9 applications) render black with some yellow rectangles.

Removed redundant calls to Direct3D driver functions.

Fixed Issues–Windows Vista 64-bit

Single-GPU Issues

- 400079 G96M: With HDCP enabled, the display goes to black screen or the system reboots when resuming from S1 or S3.

The display was being synchronized at the wrong time.

- 385452 G80: The image on the "Adjust image settings with preview" page is corrupt when the Windows Vista Basic theme is used.

Fixed a code integration error.

- 372767 G98: While playing an HD title in Dualview mode using PowerDVD, the screen turns red when changing the HDTV resolution from 480p to 1080i.

Fixed a frame buffer utilization issue.

Changes in Version 174.50

The following sections list the changes made and issues resolved since driver version 174.43.

- [“Fixed Issues–Windows Vista 32-bit” on page 58](#)

The NVIDIA bug number is provided for reference.

Fixed Issues–Windows Vista 32-bit

Single-GPU Issues

- 355870 NVIDIA Control Panel, NV43: The display connected via component or /S-video blinks after right-clicking the desktop or opening various NVIDIA Control panel pages.

Fixed by avoiding unnecessary device detections.

Changes in Version 174.43

The following sections list the changes made and issues resolved since driver version 174.42.

- “Fixed Issues–Windows Vista 32-bit” on page 59
- “Fixed Issues–Windows Vista 64-bit” on page 59

The NVIDIA bug number is provided for reference.

Fixed Issues–Windows Vista 32-bit

Single-GPU Issues

- 390798 Workstation: SPECviewperf9 - performance regression.
Fixed an issue in the vertex handling code.

Multi-GPU Issues

- 400371 [SLI], G7xM: After enabling SLI mode, the system cannot successfully boot to Windows.
In SLI mode, a pointer in the display initialization code needed to be initialized.

Fixed Issues–Windows Vista 64-bit

Single-GPU Issues

- 390798 Workstation: SPECviewperf9 - performance regression.
Fixed an issue in the vertex handling code.
- 390796 Workstation: SPECviewperf10 - 3dsmax performance regression.
Fixed an issue in the OpenGL code for 64-bit OS.
- 381488 NVIDIA Control Panel, G86: With two displays connected in Clone mode, the "Adjust desktop color setting"->Digital Vibrance setting reverts back to original value after clicking 'Apply'.
The primary display setting was being overwritten by the default setting on the secondary display by mistake.

Changes in Version 174.42

The following sections list the changes made and issues resolved since driver version 174.41.

- [“Fixed Issues–Windows Vista 32-bit” on page 60](#)

The NVIDIA bug number is provided for reference.

Fixed Issues–Windows Vista 32-bit

Multi-GPU Issues

- 398703 [SLI], G92: Unreal Tournament 3 and other games - hitching occurs during gameplay when panning rapidly or moving into new areas.

Fixed an issue with the block allocation manager for DirectX.

Changes in Version 174.41

The following sections list the changes made and issues resolved since driver version 174.40.

- “Fixed Issues–Windows Vista 32-bit” on page 61
- “Fixed Issues–Windows Vista 64-bit” on page 61

The NVIDIA bug number is provided for reference.

Fixed Issues–Windows Vista 32-bit

Single-GPU Issues

- 398336 OpenGL applications (such as Quake 4, Doom3) - there is a drop in performance.
Fixed a thread-sync time-out issue.
- 396268 G92: Universe at War Empire Assault - flickering occurs after switching from 1024x768 to 800x600 or lower.
Pitch information was getting lost during flips.
- 394025 G96: The Sims 2 - flashing corruption occurs at default game settings.
Fixed a bug in the pixel shader code.

Fixed Issues–Windows Vista 64-bit

Single-GPU Issues

- 396268 G92: Universe at War Empire Assault - flickering occurs after switching from 1024x768 to 800x600 or lower.
Pitch information was getting lost during flips.

Changes in Version 174.40

The following sections list the changes made and issues resolved since driver version 174.32.

- “Fixed Issues–Windows Vista 32-bit” on page 62
- “Fixed Issues–Windows Vista 64-bit” on page 62

The NVIDIA bug number is provided for reference.

Fixed Issues–Windows Vista 32-bit

Single-GPU Issues

- 397682 G92: The display goes black after installing the driver.
Fixed a regression that resulted in the I2C bus not getting reset properly, causing display detection failure.
- 388990 G94: HDCP error occurs when connecting the Westinghouse 42" 1080p HDTV using HDMI on GeForce 9600GT.
The driver was not getting the EDID from both ports of the display.
- 382528 G92: The system hangs with a black screen during S3 resume.
Fixed a problem with the display timing during resume.

Fixed Issues–Windows Vista 64-bit

Single-GPU Issues

- 397682 G92: The display goes black after installing the driver.
Fixed a regression that resulted in the I2C bus not getting reset properly, causing display detection failure.

Multi-GPU Issues

- 356373 [SLI], G80: The system hangs when trying to enable HDCP while the display is underscanned.
Fixed an issue with HDCP under SLI mode.

Changes in Version 174.32

The following sections list the changes made and issues resolved since driver version 174.31.

- “Fixed Issues–Windows Vista 32-bit” on page 63
- “Fixed Issues–Windows Vista 64-bit” on page 63

The NVIDIA bug number is provided for reference.

Fixed Issues–Windows Vista 32-bit

Single-GPU Issues

- 394391 MCP78: Audio channels get swapped when changing resolutions while audio is playing in 8-channel mode.

Fixed by notifying the audio driver when changing display resolutions.

Multi-GPU Issues

- 390336 [SLI], G7xM: The display flickers when resuming from Standby or Hibernate mode.

Fixed by keeping the display blank until the modeset during resume is completed.

Fixed Issues–Windows Vista 64-bit

Single-GPU Issues

- 376232 [3-way SLI], G80, G92: Sid Meier's Railroads / Splinter Cell Double Agent - when windowed mode in the game is enabled, the window flickers.

Fixed AFR mode for windowed 3D applications to work under 3-way SLI.

Changes in Version 174.31

The following sections list the changes made and issues resolved since driver version 174.30.

- [“Fixed Issues–Windows Vista 64-bit” on page 64](#)

The NVIDIA bug number is provided for reference.

Fixed Issues–Windows Vista 64-bit

Single-GPU Issues

- 395783 [SLI], G92: The Set SLI page is not available.

The driver was erroneously considering a non-Hybrid SLI system to be a non-SLI system.

Changes in Version 174.30

The following sections list the changes made and issues resolved since driver version 174.20.

- “Fixed Issues–Windows Vista 32-bit” on page 65
- “Fixed Issues–Windows Vista 64-bit” on page 66

The NVIDIA bug number is provided for reference.

Fixed Issues–Windows Vista 32-bit

Single-GPU Issues

- 394953 NVIDIA Control Panel: Unable to uncheck "Treat as HDTV" on the "Manage custom resolutions" page.
Fixed a regression that resulted in the HD-over-DVI parameter always set as true.
- 394855 MCP77: With an HDTV connected, switching to Dualview mode hangs the system.
An index loop in the display initialization code was not being incremented.
- 394812 Notebook, MCP77: WHQL Vista32/64 DTM Bld 6475 - Plug and Play Driver test bugcheck C4
Fixed a regression in the multi-GPU handling code that resulted in a memory leak.
- 393991 MCP79: Serious Sam/Particle Fury - the display driver crashes while launching the game.
Fixed a regression caused by erroneous integrations.
- 392910 NVIDIA Control Panel, Notebook: WHQL Vista32 3WaySLi 174.10 Failing STABILITY: WDDM WSections Test with Root Node/WriteShare Sections Test
Fixed a memory use issue.
- 386950 G86M: Clone or Dualview mode cannot be enabled when the external display is connected via HDMI.
Fixed the method of verifying whether the monitor EDID has changed.
- 383214 MCP77: When playing a video file with DVD-MovieAlbum, the screen turns black.
Fixed an issue properly allocating buffers for created decoders.

- 355534 G8x: Unreal Tournament 3 - the game stutters during game play.

Implemented a less disruptive method of freeing queued video blocks.

- 310772 Gx, G9x: [WHQL][DX10] DTM 6417/6475 Vista32 DXGI Presentation Rate Testing - Multihead fails

Fix a bug blitting with some surface formats.

Multi-GPU Issues

- 392744 [SLI], G73, NV43: Crysis - the game hangs with a black screen when the game's advanced settings are set to "high".

Fixed a GPU memory-handling issue.

- 391415 [SLI], G92: 3DMark06 - "HDR1-Canyon Flight" test crashes to the desktop with the error "Unable to create Depth stencil surface" at 2560x1600, 8xAA and AA quality set to 2.

Fixed by removing an unnecessary memory restriction.

Fixed Issues—Windows Vista 64-bit

Single-GPU Issues

- 394838 MCP72: Gears of War (DirectX 10) - some polygons are missing in the player character while moving to the dark end of the cell during the intro cinema.

Fixed an issue with the shader compiler.

- 394812 Notebook, MCP77: WHQL Vista32/64 DTM Bld 6475 - Plug and Play Driver test bugcheck C4

Fixed a regression in the multi-GPU handling code that resulted in a memory leak.

- 392910 NVIDIA Control Panel, Notebook: WHQL Vista32 3WaySLi 174.10 Failing STABILITY: WDDM WSections Test with Root Node/WriteShare Sections Test

Fixed a memory use issue.

- 382260 G96M: The screen turns black after hot plugging/unplugging the DisplayPort panel.

PLLs were not getting initialized properly.

- 377637 MCP72: Gears of War (DirectX 9) - some polygons are missing in the player character while moving to the dark end of the cell during the intro cinema.

Fixed an issue with the shader compiler.

- 310772 Gx, G9x: [WHQL][DX10] DTM 6417/6475 Vista32 DXGI Presentation Rate Testing - Multihead fails

Fix a bug blitting with some surface formats.

Changes in Version 174.20

The following sections list the changes made and issues resolved since driver version 174.13.

- “Fixed Issues–Windows Vista 32-bit” on page 68
- “Fixed Issues–Windows Vista 64-bit” on page 68

The NVIDIA bug number is provided for reference.

Fixed Issues–Windows Vista 32-bit

Single-GPU Issues

- 393941 MCP77: Unsupported modes appear in the Windows Display Settings mode list

Fixed a mode validation bug that allowed modes that should have been rejected to still show up in the Microsoft Display Settings panel.

- 387723 NV4x, NV7x: WHQL DTM 6475 + VISTA32 SP1 WDDM-WDDM SetDXMode test fails.

Fixed a bug in the mode tables.

Fixed Issues–Windows Vista 64-bit

Single-GPU Issues

- 383300 NVIDIA Control Panel: The Restore Defaults link on the Change Resolution page for TV/HDTV does not work.

An incorrect type was causing a modeset variable to not get initialized correctly.

Changes in Version 174.13

The following sections list the changes made and issues resolved since driver version 174.11.

- “Fixed Issues–Windows Vista 32-bit” on page 69
- “Fixed Issues–Windows Vista 64-bit” on page 69

The NVIDIA bug number is provided for reference.

Fixed Issues–Windows Vista 32-bit

Single-GPU Issues

- 393037 Shared System Memory reported by the NVIDIA Control Panel differs from the Windows control panel when shared virtual memory (SVM) is enabled.

The driver was not subtracting SVM when calculating the shared system memory.

- 387567 G92: The Adjust Video Color Settings -Dynamic Contrast and Color Enhancement controls do not work with Blu Ray DVD playback using PowerDVD.

The enhancement settings were not being applied across various surfaces properly.

Fixed Issues–Windows Vista 64-bit

Single-GPU Issues

- 393037 Shared System Memory reported by the NVIDIA Control Panel differs from the Windows control panel when shared virtual memory (SVM) is enabled.

The driver was not subtracting SVM when calculating the shared system memory.

- 374184 NVIDIA Control Panel, G96M: White lines of corruption appear on TV whenever selecting multi-display options in the control panel.

Device detection was being performed unnecessarily.

Changes in Version 174.11

The following sections list the changes made and issues resolved since driver version 174.10.

- “Fixed Issues–Windows Vista 32-bit” on page 70
- “Fixed Issues–Windows Vista 64-bit” on page 71

The NVIDIA bug number is provided for reference.

Fixed Issues–Windows Vista 32-bit

Single-GPU Issues

- 392092 3D Stereo: Call of Duty 4 - the laser sight slows down performance.
Fixed a bug in the laser sight implementation.
- 391702 3D Stereo: World of Warcraft - the screen blinks due to dropped frames.
Fixed a bug in the stereo code's use of the z-buffer.
- 391696 G92M: When using the S-video/composite connection, TV color is distorted after changing the TV format.
The flicker filter levels were not being set properly.
- 390174 NVIDIA Control Panel, G96M: Multiple display flashes occur when switching to TV+HDTV Dualview mode.
Removed some unnecessary TV modesets.
- 383957 OpenGL: The NVIDIA Control Panel "High Quality" Texture filtering setting does not work with OpenGL applications.
Quality Enhancement settings for OpenGL were not being implemented.
- 373624 G96: Vertical pixels are doubled when playing an AVI file with noise reduction applied.
Don't halve the source surface for certain block-linear sources.

Fixed Issues—Windows Vista 64-bit

Single-GPU Issues

- 390174 NVIDIA Control Panel, G96M: Multiple display flashes occur when switching to TV+HDTV Dualview mode.

Removed some unnecessary TV modesets.

Changes in Version 174.10

The following sections list the changes made and issues resolved since driver version 174.10.

- “Fixed Issues–Windows Vista 32-bit” on page 72
- “Fixed Issues–Windows Vista 64-bit” on page 73

The NVIDIA bug number is provided for reference.

Fixed Issues–Windows Vista 32-bit

Single-GPU Issues

- 389599 There is corruptions in the video when the overlay window is across the boundary of two displays.
Overlay resources were not being released properly.
- 380840 MCP68: The system crashes/reboots during the DTM "Common Scenario Stress with IO" test.
Fixed a device initialization issue.
- 379336 MCP67: Medal of Honor - Allied Assault: Enabling texture compression results in texture problems with some vehicles.
Fixed a texture handling issue.
- 378514 NVIDIA Control Panel: Refresh rates with decimal points cannot be created using the "Manage custom resolutions" page.
Added code to validate fractional refresh rate entries.
- 368854 NVIDIA Control Panel, GeForce 8800 GTS: It takes nearly five seconds to show contents on the "Manage 3D Settings" page.
Implemented a more efficient method of initializing the profiles in the Manage 3D Settings.

Multi-GPU Issues

- 389625 [SLI], G80/84/86,G92: WHQL DTM6475 R173_00 Vista64SP1 WDDM Coherency and WDDM Unmap Segment to DummyPage Check test fails.
Fixed a NULL pointer issue.

Fixed Issues—Windows Vista 64-bit

Single-GPU Issues

- 389599 There is corruptions in the video when the overlay window is across the boundary of two displays.

Overlay resources were not being released properly.

Multi-GPU Issues

- 389625 [SLI], G80/84/86, G92: WHQL DTM6475 R173_00 Vista64SP1 WDDM Coherency and WDDM Unmap Segment to DummyPage Check test fails.

Fixed a NULL pointer issue.

Changes in Version 174.00

The following sections list the changes made and issues resolved since driver version 173.91.

- “Fixed Issues–Windows Vista 32-bit” on page 74
- “Fixed Issues–Windows Vista 64-bit” on page 74

The NVIDIA bug number is provided for reference.

Fixed Issues–Windows Vista 32-bit

Single-GPU Issues

- 390566 MCP79: Blue-screen crash occurs when running Burn It Pro 5.3.

Fixed a GPU power management issue.

- 385744 MCP79: DirectX VA deinterlace test fails.

The driver was reporting the deinterlace mode order incorrectly.

Fixed Issues–Windows Vista 64-bit

Single-GPU Issues

- 385919 G98M: Display settings switch from Clone mode to Single-display mode at 1400x1050 resolution after 1 minute monitor off.

Fixed an inconsistency in the modes available under Clone mode and the modes available under Single-display mode.

Changes in Version 173.91

The following sections list the changes made and issues resolved since driver version 173.90.

- “Fixed Issues–Windows Vista 32-bit” on page 75
- “Fixed Issues–Windows Vista 64-bit” on page 76

The NVIDIA bug number is provided for reference.

Fixed Issues–Windows Vista 32-bit

Single-GPU Issues

- 388253 C77/MCP78: Random flashes of corruption occur with most DirectX applications on default launch.
Fixed a regression caused by a change in handling DDI calls.
- 386747 G80,G92: Pirates of the Burning Sea - Ocean/bay is corrupted.
Fixed a vertex shader issue.
- 384000 G98M: 1080p changes to 1080i resolution after hot-unplugging and then hot-plugging the HDMI.
The driver was not considering the HD scan type (interlace or progressive) when selecting the refresh rate after hot-plugging the display.
- 375178 NVIDIA Control Panel Interface: There is an area of white around the radio button options in the Arabic "Adjust Video Image settings" page.
Fixed the method of drawing the radio button options.
- 373963 NVIDIA Control Panel: With at least one DVI connected in a multimonitor configuration, the panel becomes corrupted whenever the display configuration changes.
Fixed the coordination of drawing bitmaps and controls in the dialog box.
- 372468 Quadro FX 3700: Blu-ray playback is corrupted.
The interpretation of video performance table entries was inconsistent.

Multi-GPU Issues

- 375136 [SLI], GeForce 6600: S.T.A.L.K.E.R. Shadow of Chernobyl - there is black-colored corruption and flickering on various human characters.

Fixed an issue with the AFR sync code.

Fixed Issues—Windows Vista 64-bit

Single-GPU Issues

- 383130 G84: Picture-in-picture video flickers in PowerDVD with Dual DirectX VA enabled.

Stale video requests were not being invalidated.

Multi-GPU Issues

- 380408 [SLI], G84/80: With SLI mode enabled, a blue-screen crash occurs when playing a DVD with PowerDVD.

Fixed an issue with video under SLI mode.

Changes in Version 173.90

The following sections list the changes made and issues resolved since driver version 173.80.

- “Fixed Issues–Windows Vista 32-bit” on page 77
- “Fixed Issues–Windows Vista 64-bit” on page 78

The NVIDIA bug number is provided for reference.

Fixed Issues–Windows Vista 32-bit

Single-GPU Issues

- 385150 G84/G86/G98/G92/MCP77: WHQL DTM6417 R173_00 Vista32/64 WDDM Sync and WDDM Sync - VolBlit Test fails.

Fixed a memory handling regression.

- 384477 G92: Call of Duty 4 - corruption occurs when antialiasing is set using the NVIDIA Control Panel Override AA control.

Fixed an issue with the control panel antialiasing.

- 383265 NVIDIA Control Panel, G84M: After hot-unplugging the HDMI cable, the NVIDIA Control Panel does not refresh the monitor list on the Manage Custom Resolution page.

Removed an unnecessary flag that prevented the page from getting refreshed.

- 382738 G86M/G92M: Medal of Honor - Allied Assault - cube boundaries are visible.

Textures were not being clamped properly.

- 381505 NVIDIA Control Panel, G73M: With TV connected via S-Video as the secondary Clone mode display, the brightness and contrast options in the Adjust TV Color Settings page are disabled and at 0%.

Implemented method of controlling color parameters on the TV when it is in Clone mode.

- 378876 Notebook: Blank screen appears on the HDMI display after resuming from sleep mode at 1920x1080 resolution.

Fixed by making sure the HDMI display is completely out of sleep mode when resuming.

- 378858 Call of Juarez (DirectX 10) - there is flickering in the intro movie and menu screen.

Fixed an issue in the resource handling code.

- 347886 G8x, WHQL: DTM64xx: DX10: WGF Create Device AVs and exits on DX10 parts.

Fixed the method of handling device creation failures.

- 328650 G8x: WHQL: DTM 6417 DX10: Vista32/64: DXGI Presentation Testing fails several FSPresent variations.

Fixed an issue with the display resolutions exposed by the driver.

- 306641 G71: When running six OpenGL demo applications with FSA on, the applications freeze or become blank.

Fixed a memory consumption issue.

Multi-GPU Issues

- 380485 [SLI], G92: Quake 4 - the application hangs while toggling the Multiple CPU/Core option within the game settings.

Fixed a problem with SLI AFR when switching hardware states.

Fixed Issues—Windows Vista 64-bit

Single-GPU Issues

- 385150 G84/G86/G98/G92/MCP77: WHQL DTM6417 R173_00 Vista32/64 WDDM Sync and WDDM Sync - VolBlit Test fails.

Fixed a memory handling regression.

- 382738 G86M/G92M: Medal of Honor - Allied Assault - cube boundaries are visible.

Textures were not being clamped properly.

- 381386 G92: The NVIDIA Control Panel Adjust Video RGB settings are not working.

Removed a redundant RGB overlay check that was preventing the gamma information from being updated.

- 380531 NVIDIA Control Panel: Switching to a non-Administrator (standard user) account results in a driver error.
Fixed an access violation error involving the application profiles.
- 370508 Google Earth (DirectX mode) - the globe is transparent to the yellow country borders.
Stencil clears were not being performed properly.
- 347886 G8x, WHQL: DTM64xx: DX10: WGF Create Device AVs and exits on DX10 parts.
Fixed the method of handling device creation failures.
- 328650 G8x: WHQL: DTM 6417 DX10: Vista32/64: DXGI Presentation Testing fails several FSPresent variations.
Fixed an issue with the display resolutions exposed by the driver.

Changes in Version 173.80

The following sections list the changes made and issues resolved since driver version 173.65.

- “Fixed Issues–Windows Vista 32-bit” on page 80
- “Fixed Issues–Windows Vista 64-bit” on page 81

The NVIDIA bug number is provided for reference.

Fixed Issues–Windows Vista 32-bit

Single-GPU Issues

- 383405 3D Stereo: Unreal Tournament 2004 - the application interface is corrupted with the 3D Stereo driver installed.

Resources were not getting validated properly.

- 383192 G98M: With HDTV connected via DVI, the NVIDIA Control Panel 'Resize HDTV' link is missing when set to an HD format.

The panel code was not recognizing the DVI connection on notebooks.

- 378886 Video CD doesn't play smoothly in Windows Media Center.

Allocations were not being freed appropriately.

- 375591 NVIDIA Control Panel, G80: The control panel stops responding after the "Manage 3D setting" page is opened.

A call was being made unnecessarily every time a UI context was initialized, which introduced delays.

- 374598 NVIDIA Control Panel: Synopsis: With HDMI connected, the Resize HDTV page hangs with 16-bpp color quality.

Fixed the handling of 16-bpp color quality under Windows Vista.

Multi-GPU Issues

- 381765 [SLI], G92. NVIDIA Control Panel: The Apply button does not appear when checking or clearing the 'Use inverse telecine' check box.

A video-state-change flag was not being set properly.

- 375917 [Quad-SLI], G71: 3DMark05 - with Quad SLI mode enabled, the lower half of the screen at 2560x1600 is darker than the upper half.

Fixed an SFR synchronization issue on Quad SLI mode.

Fixed Issues—Windows Vista 64-bit

Single-GPU Issues

- 383192 G98M: With HDTV connected via DVI, the NVIDIA Control Panel 'Resize HDTV' link is missing when set to an HD format.

The panel code was not recognizing the DVI connection on notebooks.

- 375591 NVIDIA Control Panel, G80: The control panel stops responding after the "Manage 3D setting" page is opened.

A call was being made unnecessarily every time a UI context was initialized, which introduced delays.

Changes in Version 173.65

The following sections list the changes made and issues resolved since driver version 173.62.

- “Fixed Issues–Windows Vista 32-bit” on page 82
- “Fixed Issues–Windows Vista 64-bit” on page 83

The NVIDIA bug number is provided for reference.

Fixed Issues–Windows Vista 32-bit

Single-GPU Issues

- 381090 Textures are polluted in the main video of the Blu-ray disc title 'Nature's Journey' if DirectX VA encryption is used.

Increase the residual target buffer for VC1 pictures.

- 379992 NV43 x2: You cannot resize the desktop for all HD formats.

Implemented support for additional timings in the underscan utility.

- 374449 NV4xM: WHQL DTM 6417 R173_00 BFM Vista32/64 "PipelineWhqltests" fail.

Fixed a bug in the video transfer code.

- 370157 NVIDIA Control Panel: With DVI, TV, and CRT connected, the control panel crashes while hot-unplugging the DVI cable.

Fixed a bug in the control panel shutdown process.

- 294211 G80: Half Life2 - there is corruption when 4xAA is set from the in-game settings.

A scene capture process was not being performed when needed.

Multi-GPU Issues

- 362570 [SLI], G84: Call of Duty 4: Modern Warfare - the screen turns blank and stops responding at 2560x1600 resolution and with 4xAA enabled.

Render targets were being accessed inappropriately.

Fixed Issues—Windows Vista 64-bit

Single-GPU Issues

- 379992 NV43 x2: You cannot resize the desktop for all HD formats.
Implemented support for additional timings in the underscan utility.
- 374449 NV4xM: WHQL DTM 6417 R173_00 BFM Vista32/64 "PipelineWhqltests" fail.
Fixed a bug in the video transfer code.

Multi-GPU Issues

- 362570 [SLI], G84: Call of Duty 4: Modern Warfare - the screen turns blank and stops responding at 2560x1600 resolution and with 4xAA enabled.
Render targets were being accessed inappropriately.

Changes in Version 173.62

The following sections list the changes made and issues resolved since driver version 173.59.

- “Fixed Issues–Windows Vista 32-bit” on page 84
- “Fixed Issues–Windows Vista 64-bit” on page 85

The NVIDIA bug number is provided for reference.

Fixed Issues–Windows Vista 32-bit

Single-GPU Issues

- 379955 G98M: WHQL DTM6417 Vista32/64 WDDM : WDDM Max Context test fails

Fixed by increasing instance memory to allow sufficient contexts to be created.

- 379806 G73M: Blue-screen crash occurs upon connecting DVI, when the VGA and LVDS are already in Clone mode.

Fixed the IRQ handling when reading the EDID of the hot-plugged DVI connection.

- 378114 NVIDIA Control Panel, G80: Checking the "Show only programs found on this computer" check box empties the Feature Setting list.

The call to populate the Feature Setting list was not being made.

- 375591 NVIDIA Control Panel, G80: The control panel stops responding after the "Manage 3D setting" page is opened.

A call was being made unnecessarily every time a UI context was initialized, which introduced delays.

- 372535 NVIDIA Control Panel, G84M: Digital Vibrance in "Adjust Desktop Color Settings" page resets to 0% in single-display mode and 100% in Clone mode after making a change and pressing Apply.

The code was attempting to set the Digital Vibrance using an invalid display ID.

- 372419 G73M 256MB: Display blinks continuously when connected with HDMI.

A code path that did not support HDMI was being followed.

- 372241 G80: Enemy Territory Quake Wars - corruption occurs at 800x600 or 640x480 after doing several mode changes.

Fixed a surface alignment issue.

Fixed Issues—Windows Vista 64-bit

Single-GPU Issues

- 379955 G98M: WHQL DTM6417 Vista32/64 WDDM : WDDM Max Context test fails

Fixed by increasing instance memory to allow sufficient contexts to be created.

- 379039 NVIDIA Control Panel, G73x2: The vertical scroll bar does not work on the "Adjust video color settings" and "Adjust video image settings" pages.

The focus of the mouse pointer was not going to the proper controls.

- 375591 NVIDIA Control Panel, G80: The control panel stops responding after the "Manage 3D setting" page is opened.

A call was being made unnecessarily every time a UI context was initialized, which introduced delays.

- 372535 NVIDIA Control Panel, G84M: Digital Vibrance in "Adjust Desktop Color Settings" page resets to 0% in single-display mode and 100% in Clone mode after making a change and pressing Apply.

The code was attempting to set the Digital Vibrance using an invalid display ID.

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” on page 86
- “Unsupported Features” on page 87
- “OpenGL Application Issues” on page 89
- “Brightness Level Persistence” on page 90
- “Application Issues” on page 90
- “Operating System Issues” on page 91

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.msp>.

Unsupported Features

The following are features and functionality that were available in driver releases supporting Windows XP, but are not 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**
- **NVIDIA nView Desktop Manager for GeForce products**
- **OpenGL Video Overlays**

This is an operating system limitation.

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

- **Overclocking**

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

- **GPU Temperature Monitoring**

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

- **AGP Settings Adjustment**

- **Full-screen Video Mirror**

- **Video Zoom**

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

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

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

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

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

- **Edge Blending/Desktop Overlap**

- **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.

- **Run display optimization wizard**
- **Run multiple display wizard**
- **Run television setup wizard**
- **Display/Connection Wizard** (such as was provided with Windows Media Center Edition)
- **DVD/MPEG Extensions** (such as was provided with Windows Media Center Edition)
- **Audio Extensions** (such as was provided with Windows Media Center Edition)
- **Windowed quad-buffered stereo**

This is an operating system limitation.

OpenGL Application Issues

The following are known compatibility issues under Windows Vista for OpenGL applications that were 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.

Brightness Level Persistence

Changes to the brightness level—using either hot-keys or through the Windows Mobility Center brightness slider—are *not* preserved across

- System reboots or power off/on cycles
- Standby/resume or hibernate/resume cycles.
- Display power off/on cycles

This is the result of the Windows Vista power policy.

When any of the previously listed events occurs, the Windows Vista operating system resets the brightness level based on the power plan set in the Control Panel Power Options. This overrides the changes made by the hot-keys or through the Windows Mobility Center.

For more information, see the Microsoft article [Brightness Control in WDDM](#), with special attention to the section *Automatic Brightness Change through System Power Policy*.

Application Issues

• General Antialiasing Problem with Top Games

We have found that some games running under Windows Vista enable 16x coverage sampling antialiasing (CSAA) when 4xAA is selected in the game menu, resulting in deflated performance on GeForce 8800 cards.

The problem occurs with NVIDIA Vista drivers 100.54 and later.

The same effect will occur in future "Release 100" Windows XP drivers.

Affected applications found to date include:

- Battlefield 2
- Battlefield 2142
- Sin Episodes
- Half-Life 2
- Half-Life 2 Lost Coast

To set standard 4xAA in these applications, please set 4xAA in the game, and also enable "Enhance the application" antialiasing mode with a 4x antialiasing setting in the NVIDIA graphics driver control panel.

We are working with developers to implement better in-game CSAA support. You can see CSAA menu selections in Half-Life 2: Episode One and Supreme Commander.

- Tiger Woods PGA Tour 2007—Fly-by shot before each hole blacks-out textures.

NVIDIA is working with the developer to resolve this issue.

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

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.

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.

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.

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

- Nascar Simracing–the game crashes when launched.

This is an issue with the application under Windows Vista.

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.

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.

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

This is an issue with the operating system, and is addressed in the Microsoft KB article 936484

Note: The NVIDIA Control Panel properly reports the dedicated video memory as 320 MB.

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 6 and 7 Series Cards Cannot Output Interlaced Signals in SLI Mode” on page 92
- “Image Sharpening Control not Available with GeForce 8 Series and later GPUs” on page 92
- “Display Output Selection not Available on “Bridgeless” SLI” on page 93
- “SLI Connector Requirement on NVIDIA Quadro SLI Cards” on page 93
- “Applying Workstation Application Profiles” on page 93

GeForce 6 and 7 Series Cards Cannot Output Interlaced Signals in SLI Mode

- **Problem**

Rendering problems and instability occur when outputting interlaced modes (480i, 576i and 1080i) over the Y Pr Pb component and DVI outputs.

- **Explanation**

This is a hardware limitation in SLI mode only and cannot be fixed via a driver update.

- **Resolution**

Due to this issue, starting in driver version 162.22 in Windows Vista, the driver will automatically disable SLI mode when using the 480i, 576i and 1080i modes over all connectors on the GeForce 6 and 7 series GPUs.

To re-enable SLI mode, you must choose a non-interlaced output mode and reboot your computer.

- GeForce 8 series GPUs do not have this hardware limitation and you can output all HDTV interlaced and progressive scan outputs in SLI mode.
- The 480p, 576p, 720p, and 1080p progressive scan modes do not have this issue in SLI mode and are not affected by this change.

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.

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.

SLI Connector Requirement on NVIDIA Quadro SLI Cards

The SLI connector that links two SLI cards is needed for proper SLI operation. However, the connector can be removed if you do not intend to enable SLI mode. If you remove the connector, then you must make sure that SLI mode is disabled from the NVIDIA control panel. Enabling SLI mode without the SLI connector installed will result in video corruption.

Applying Workstation Application Profiles

- **Application Profiles Should be Used**

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

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

- **Applying Application Profiles**

If you make a configuration change while the application is open, you must exit and then re-open the application for the change to take effect.

When an application is running it does not receive notification of configuration changes.

CHAPTER

3

THE RELEASE 173 DRIVER FOR WINDOWS VISTA

This chapter covers the following main topics:

- “Hardware and Software Support” on page 95
- “Driver Installation” on page 98
- “NVIDIA Driver History” on page 99

Hardware and Software Support

Supported Operating Systems

The Release 173 driver, version 175.97, 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

The following are the NVIDIA GPUs supported by this Release 173 driver.

Table 3.1 Supported NVIDIA Products

Consumer Products	Workstation Products
GeForce 9800 GX2	NVIDIA Quadro FX 5600
GeForce 9800 GTX	NVIDIA Quadro FX 5500
GeForce 9600 GT	NVIDIA Quadro FX 5500 SDI
GeForce 8800 GTX	NVIDIA Quadro FX 4600
GeForce 8800 GTS	NVIDIA Quadro FX 4500 X2
GeForce 8800 GT	NVIDIA Quadro FX 4500
GeForce 8600 GTS	NVIDIA Quadro FX 4500 SDI
GeForce 8600 GT	NVIDIA Quadro FX 4400
GeForce 8500 GT	NVIDIA Quadro FX 4400G
GeForce 8400 GS	NVIDIA Quadro FX 4000 SDI
GeForce 8300 GS	NVIDIA Quadro FX 3700
GeForce 8300	NVIDIA Quadro FX 3500
GeForce 8200	NVIDIA Quadro FX 3450
GeForce 8100 / nForce 720a	NVIDIA Quadro FX 3400
NVIDIA nForce 730a	NVIDIA Quadro FX 1500
GeForce 7950 GX2	NVIDIA Quadro FX 1400
GeForce 7950 GT	NVIDIA Quadro FX 570
GeForce 7900 GTX	NVIDIA Quadro FX 560
GeForce 7900 GT	NVIDIA Quadro FX 550
GeForce 7900 GS	NVIDIA Quadro FX 540
GeForce 7800 GTX 512	NVIDIA Quadro FX 370
GeForce 7800 GTX	NVIDIA Quadro FX 350
GeForce 7800 GT	NVIDIA Quadro NVS 290
GeForce 7800 GS	NVIDIA Quadro NVS 285
GeForce 7600 GT	NVIDIA Quadro NVS 440
GeForce 7600 LE	NVIDIA Quadro NVS 210S
GeForce 7600 GS	
GeForce 7500 LE	
GeForce 7350 LE	
GeForce 7300 LE	
GeForce 7300 GS	
GeForce 7300 GT	
GeForce 7300 SE	
GeForce 7100 GS	
GeForce 6800 XT	
GeForce 6800 XE	
GeForce 6800 Ultra	
GeForce 6800 LE	
GeForce 6800 GT	

Table 3.1 Supported NVIDIA Products (continued)

Consumer Products	Workstation Products
GeForce 6800 LE	
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 6200SE with TurboCache	
GeForce 6200 with TurboCache	
GeForce 6200 A-LE	
GeForce 6200 LE	
GeForce 6200	
GeForce 6150SE	
GeForce 6150 LE	
GeForce 6150	
GeForce 6100	
GeForce 6100 nForce 400	
GeForce 6100 nForce 405	
GeForce 6100 nForce 420	

Supported Languages

The Release 173 ForceWare 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 is minimum 37.1 MB for English-only, and 64.9 MB for International.

Installation Instructions

- 1 Open Setup.exe to launch the NVIDIA InstallShield Wizard.
- 2 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.

NVIDIA Driver History

Release 173 is the latest NVIDIA driver available. [Table 3.1](#) contains a summary of some previous driver releases and the versions associated with them. Some versions listed may not have been released outside of NVIDIA.

Table 3.1 NVIDIA Drivers for Windows Vista

Windows Vista Build	NVIDIA ForceWare Driver
RTM OS Builds 6000 or higher	Release 173: Version 173.55, 173.56, 173.58, 173.59, 173.62, 173.65, 173.80, 173.90, 173.91, 174.00–175.97 Release 169: Version 169.00–169.05, 169.07–169.09, 169.11, 169.14, 169.15, 169.18, 169.19, 169.21, 169.23, 169.24, 169.26 Release 167: Version 167.00–167.04, 167.10, 167.20, 167.21, 167.25, 167.26, 167.30–167.32, 167.35–167.38, 167.40–167.44 Release 163: Release 100: Version 101.41, 101.50–100.51, 101.60–100.62, 101.70, 158.32–160.06 Release 95: Version 97.46
RC2 OS Builds 5744 or higher	Release 95: Version 96.85
RC1 OS Builds 5520.RC1_16384.060812-2235 or higher	Release 95: Version 96.33
Build 5472.WinMain_idx01_5.060713-1900 or higher	Release 95: Versions 95.60–96.00
Windows Vista Beta2	NVIDIA Driver version 88.61
February 06 CTP build 5308.FebCTP_Final.060217-2200 or higher	NVIDIA Drivers 87.15, 87.45
July 05 Vista Beta1	NVIDIA Driver included 'in the box'.
December 05 CTP build 5270.Winmain.051214-1910	NVIDIA Driver included 'in the box'.

APPENDIX



MODE SUPPORT FOR WINDOWS

This chapter details the Windows modes supported by the Release 173 driver for NVIDIA products. It contains these sections:

- “General Mode Support Information” on page 102
- “Modes Supported by TV Encoders” on page 104

General Mode Support Information

Default Display Modes

The NVIDIA graphics driver includes a standard list of display modes that are supported by default. These modes are listed in the file `modes.txt` which is included in the OEM driver package.

Figure A.1 gives an example of how to read the mode information in the file.

	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:

- An “i” next to the refresh rate indicates an interlaced refresh rate.

Additional Display Modes

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

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

Table A.1 Modes Supported for High Resolution Displays

Display	Maximum Resolution	Hardware Requirements
Apple 30" Cinema HD Display (Dual link DVI)	2560x1600 @ 60 Hz	All high-end NVIDIA Quadro FX graphic solutions.
Dell WFP 3007 (Dual Link DVI)	2560x1600 @ 60 Hz	- All GeForce 7 series GPUs and later - GeForce 6800 Ultra 512
HP LP3065 dual-link DVI flat panel	2560x1600 @ 60Hz.	GeForce 6800 with 512 MB

Table A.2 Non-standard Modes Supported

Resolution
1680 x 1050
1366 x 768

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.

APPENDIX

B

HIGH DEFINITION AUDIO DRIVER FOR WINDOWS

The NVIDIA HD Audio driver complies with the Intel® High Definition Audio (“Azalia”) Specification. The HD Audio driver supports the audio portion of HDMI outputs on select NVIDIA GPUs.

Hardware and Operating System Support

Hardware Requirements

The NVIDIA HD Audio driver requires a system with an NVIDIA HD Audio codec and an HD Audio controller.

- **NVIDIA HD Audio Codec**

The following NVIDIA GPUs and chipsets contain the NVIDIA HD Audio codec.

- G96
- G94
- G98
- MCP7x

- **HD Audio Controller**

The following hardware contains an HD Audio controller.

- NVIDIA chipset (MCP7x)

- Compatible motherboard that includes an HD Audio controller and HD Audio header (for use with discrete NVIDIA GPUs)

Supported Operating Systems

- Windows Vista 32-bit
- Windows Vista 64-bit
- Windows XP x86 (requires prior installation of the Microsoft Hotfix described in KB article [888111](#))
- Windows XP x64 (requires prior installation of the Microsoft Hotfix described in KB article [888111](#))

Installation

The HD Audio driver installs automatically when you install the graphics driver as long as it detects the presence of the HD Audio link, either from a system with a supporting NVIDIA chipset, or from the HD Audio cable connection between the graphics card and the motherboard.

Once installed, the driver appears as an Audio Controller in the Windows Device Manager.

Releases

Version 1.00.00.28

Included beginning with graphics driver version 175.95.

Changes and Fixed Issues

- The NVIDIA HDMI Output icon shows “Not plugged in” after hot-plugging the HDMI display.

Fixed by allowing time after an unplug event before checking for the HDMI connection.

- There is no image on the HDMI or DVI output.

Fixed the HDA reinitialize.

Version 1.00.00.27

Included beginning with graphics driver version 175.86.

Changes and Fixed Issues

- MCP78/MCP72: There is no display when HDCP is used.
Fixed an issue with the AudioInfoFrame initialization, and audio protection.

Version 1.00.00.26

Changes and Fixed Issues

- MCP79/MCP77/G94/G94M: Various HD video problems occur when HDA is enabled, such as slow playback or display flashing.
Fixed HDCP handling. Also enabled 6 channel support.
- Blue-screen crash occurs when running DTM test (WLK1.1)
Fixed by adjusting the location of HDA bus calls.

Version 1.00.00.25

Changes and Fixed Issues

- G96M: HDA Multi-channels 7.1 no longer work after resuming from S3.
Fixed an out-of-sync condition when resuming from S3.

Version 1.00.00.23

Changes and Fixed Issues

- Fixed DTM RTM failures.
- Windows Vista 64-bit: DTM Enable/disable with IO test pauses.
- MCP77/78/79/7A: When playing Blu-ray disk or HD Media, HDMI HD audio switches to SPDIF sporadically.
Fixed issues in the content-protection code

- MCP79/MCP77 - Playing Audio with HDCP enabled results in unsolicited responses sent from the codec to the audio driver. .

Version 1.00.00.20

Initial release of the NVIDIA HD Audio driver