NVIDIA Control Panel Quick Start Guide

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User's Guide

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01 INTRODUCTION

This *quick start* is addressed to users of the NVIDIA® Control Panel software. This guide focuses on getting you up and running with your NVIDIA software.

For technical details on the features and benefits of the NVIDIA Control Panel software and details about supported products, drivers, and other software, refer to the NVIDIA web page — www.nvidia.com.

This chapter discusses the following major topics:

- "About the NVIDIA Control Panel" on page 2
- "Getting Support and Information" on page 5

About the NVIDIA Control Panel

Welcome to the NVIDIA Control Panel, designed for Microsoft® Windows® XP, Windows Vista, and Windows 7. You can use NVIDIA Control Panel to control your NVIDIA hardware and access other NVIDIA software installed on your system.

Overview

In addition to setting up basic display configurations such as display resolution, refresh rate, and multiple display use, you can:

- Tune your 3D settings with real-time preview to maximize performance or image quality
- Customize how 3D applications work in your system
- Adjust your screen colors and contrast
- Set custom timings
- Control video image settings
- Change your HDTV format
- Control your notebook system power using PowerMizer
- Control special workstation features such as Frame Synchronization.

Feature Differences from the Classic Control Panel

The following are features that were available in the NVIDIA classic control panel, but which are ***not*** available in the new NVIDIA Control Panel:

- Creating/Importing Color Profiles
- High Resolution Scalable Desktop
- Video Zoom
- Full-screen video mirroring
- Edge Blending
- nView Desktop Manager

  nView Desktop Manager is available through the Windows control panel as a separate applet (Windows XP only).
- MultiView Display Mode (for NVIDIA Quadro NVS graphics cards)

  As of driver Release 173, MultiView is available from the Windows Display Properties->Settings->Advanced tab for Windows XP only.

Changes in Release 275

NVIDIA Control Panel Updates

General Interface

- Added **NVIDIA Update** feature that notifies you when there is a driver available for download from nvidia.com that is newer than what you have installed.

  This is an optional feature that you have the opportunity to install or not install when installing Release 270 or later drivers.

3D Settings

- **Manage Updates** link now applies if the NVIDIA Updates driver component is installed. Clicking the link opens the NVIDIA Updates dialog where you can manage NVIDIA Updates.

Display

- Revised the **Adjust Desktop Size and Position** page to provide improved controls for desktop scaling and resizing.
  - Includes a preview window.
  - Available for all displays (including VGA and HDMI connections).
  - Scaling override option for Windows 7 gaming.

Supported Operating Systems

NVIDIA Release 275 Graphics drivers are available for the following Microsoft® Windows® operating systems:

- Windows XP Media Center Edition 2005 Update Rollup 2
- Windows XP Media Center Edition 2005/2004
- Windows XP Professional
- Windows XP Home Edition
- Windows XP Professional x64 Edition
- Windows Server 2003 x64 Edition
- Windows Vista Home Basic
- Windows Vista Home Premium
- Windows Vista Business
- Windows Vista Enterprise Edition
- Windows Vista Ultimate

- Windows 7 32-bit and 64-bit Editions

Supported NVIDIA Products

Refer to the release notes and NVIDIA driver download site for the list of products supported by the driver version that you have installed on your computer.

Supported Languages

The NVIDIA Graphics Driver supports the following languages in the NVIDIA 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)	

Other NVIDIA Software Applications

If installed, other NVIDIA software that you can access from the NVIDIA Control Panel includes:

- NVIDIA System Tools–Performance group and System Update
- NVIDIA Stereoscopic 3D
- NVIDIA MediaShield™
- NVIDIA Network Access Manager

See the respective user documentation for information about these applications and instructions on how to use them.

Getting Support and Information

Online Help

▶ To open the online help, either :

- Press **F1** on your keyboard, or
- Select **Help** from the NVIDIA Control Panel menu bar and then select **NVIDIA Control Panel Help**.

▶ Help on various topics can be viewed using the Contents, Index, or Search tabs.

Technical Support

To access the NVIDIA Technical Support web page go the following web address:

http://www.nvidia.com/page/support.html

System Information

You can get detailed information about your system and the NVIDIA Control Panel configuration as well as version and copyright information.

▶ To view copyright and version information about the NVIDIA Control Panel:

From the **Help** menu, select **About NVIDIA Control Panel**.

▶ To view detailed system information:

Open the System Information dialog box by either selecting *System Information* from the **Help** menu, or by clicking the **System Information** link at the lower left corner of the NVIDIA Control Panel.

Click any of the tabs in the System Information dialog box.

02 UNDERSTANDING THE NVIDIA CONTROL PANEL

This chapter describes the NVIDIA Control Panel in the following sections:

- "Opening and Closing the New NVIDIA Control Panel" on page 7
- "About the NVIDIA Control Panel Interface" on page 8

Opening and Closing the New NVIDIA Control Panel

▶ You can open the NVIDIA Control Panel in several ways:

- Right-click the Windows desktop, then click **NVIDIA Control Panel** from the context menu, or

For Windows XP

- From the Windows **Start** menu, select **Control Panel**, then in the **Control Panel** window, double-click on the NVIDIA Control Panel icon.

For Windows Vista/Windows 7

- From the *Classic View* of the Windows Control Panel, click the NVIDIA Control Panel icon, or

- From the *Control Panel Home* view of the Windows Control Panel, click **Additional Options** and then click **NVIDIA Control Panel** from the Additional Options page.

▶ To close the NVIDIA Control Panel,

- From the **File** menu, select **Exit**, or
- Click the **Close** box in the upper right corner of the program window.

About the NVIDIA Control Panel Interface

The NVIDIA Control Panel provides an easy-to-use interface for managing your system.

When you start the program for the first time, the NVIDIA Control Panel opens to the first page listed in the navigation tree. On subsequent visits, the control panel reopens to the last page visited. The NVIDIA Control Panel user interface consists of these main areas, as shown in Figure 2.1 and Figure 2.2:

- Main Task Area
- Select a Task (Navigation tree)
- Menu bar
- Toolbar .

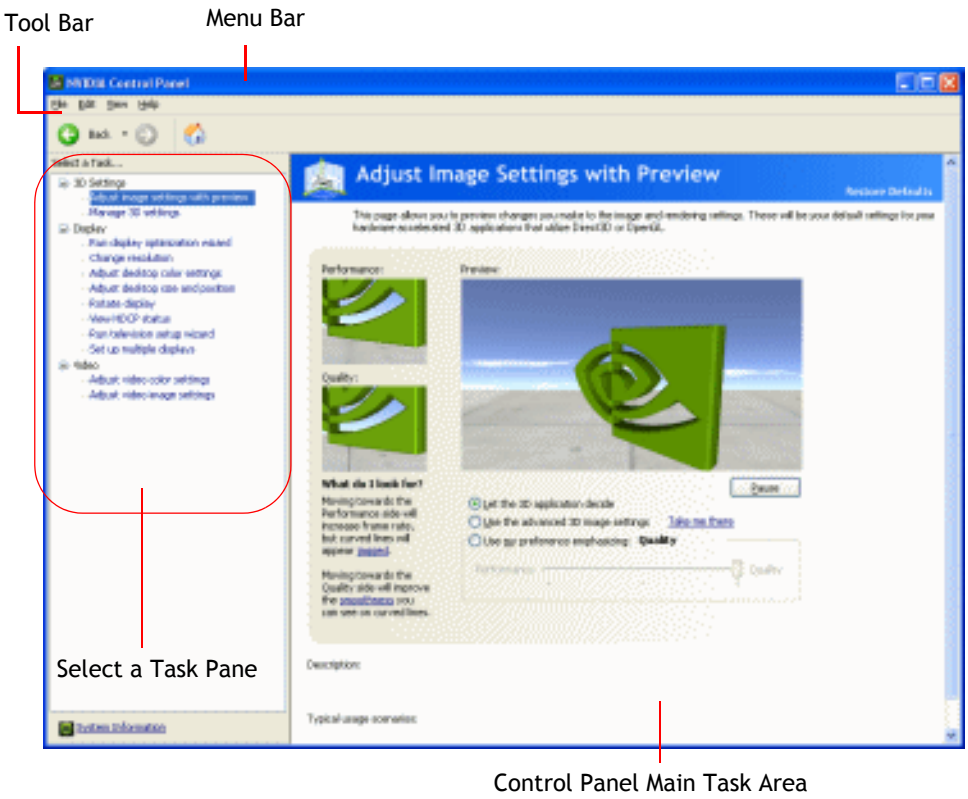

Figure 2.1 NVIDIA Control Panel (Windows XP Example)

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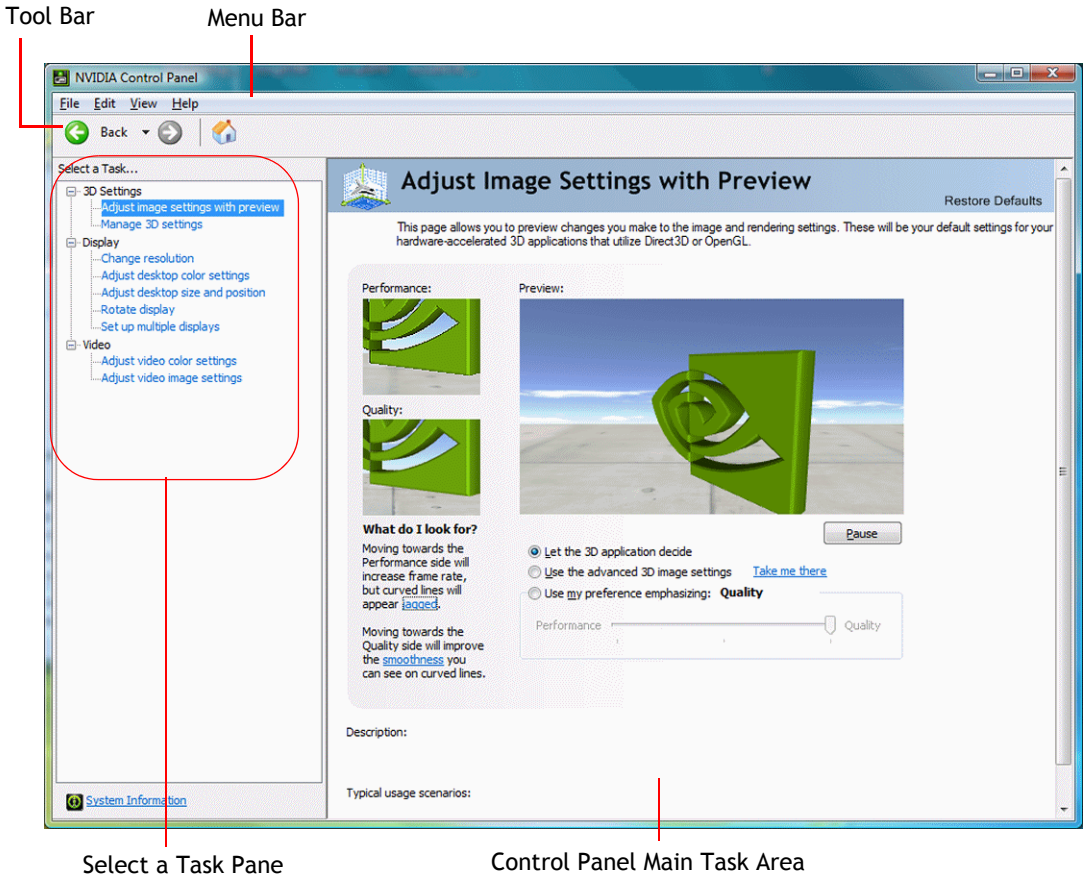


Figure 2.2 NVIDIA Control Panel (Windows Vista Example)

Using the Main Task Area

The main task area, in the right pane, displays the application task pages. This area of the screen is where you will focus most of your attention as you use the NVIDIA Control Panel to accomplish your goals. You can access specific pages using the navigation tree in the *Select a Task* pane.

Depending on your PC manufacturer, there is a Welcome page that appears the first time you open the NVIDIA Control Panel after installing the driver. On subsequent visits, the control panel reopens to the last page visited.

Using the *Select a Task* Pane

The navigation tree in the *Select a Task* pane shows all the primary NVIDIA Control pages that are installed on your system.

The pages are grouped according to the same categories that existed in the previous version of the NVIDIA Control Panel.

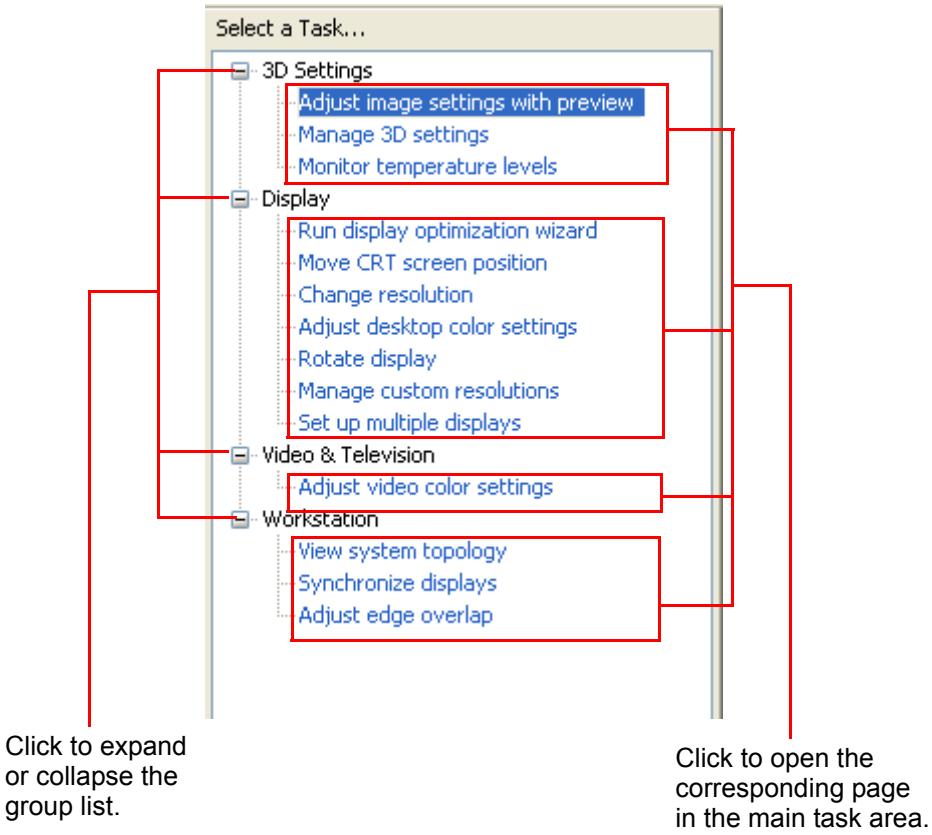


Figure 2.3 NVIDIA Control Panel *Select a Task* pane

Using the Tool Bar

The *Toolbar* provides quick back and forth navigation between pages. The back and forward buttons let you navigate sequentially among pages that you have visited.

You can also navigate directly to a previously visited page by clicking the list arrow next to the back button. The drop-down menu lists all the previously visited pages in the queue. Click the page that you want.

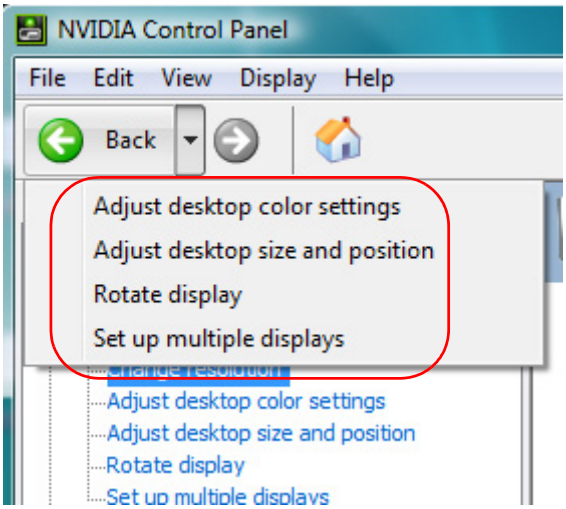


Figure 2.4 Navigation History Menu

Using the Menu Bar

The *Menu bar* contains standard Windows menus and menus specific to the NVIDIA Control Panel, such as the View and Profiles menus.

Menus that are available on the menu bar may vary, depending on the NVIDIA Control Panel group (such as, Display, Mobile, 3D Settings, or other group) you are using.

File Menu

Commands related to printing, applying changes, and exiting the program are available on the **File** menu.

Table 2.5 File Menu Commands

File Menu Command	Description
Page Setup ...	Set up the current task page for printing. *This control may not be available.*
Print...	Print the current task page. *This control may not be available.*

Table 2.5 File Menu Commands

File Menu Command	Description
Print Preview....	Preview the page before sending it to the printer. *This control may not be available*.
Exit	Close the NVIDIA Control Panel program.

Edit Menu

Commands related to cutting, copying, pasting, and selecting items are available on the **Edit** menu.

Table 2.6 Edit Menu Commands

Edit Menu Command	Description
Cut	Cut the selected text and place in the clipboard. *This control may not be available*.
Copy	Copy the selected text and place in the clipboard. *This control may not be available*.
Paste	Paste the text currently in the clipboard to the location of the Windows cursor. *This control may not be available*.
Select All	Select all items on the current page. *This control may not be available*.

Desktop Menu

Commands related to viewing the various pages in the NVIDIA Control Panel application modules are available on the **Desktop** menu.

Table 2.7 Desktop Menu Commands

View Menu Command	Description
Add Desktop Context Menu	This is selected by default, and adds the NVIDIA Control Panel menu item to the desktop context menu.
Enable Video Editing Mode	Select this option to improve the video playback experience for some video editing applications.

Table 2.7 Desktop Menu Commands

View Menu Command	Description
Add "Run with graphics processor" Option	Select this option to add "Run with graphics processor" to the program context menu. When this option is selected, you can choose which graphics processor to use when starting a program as follows: 1. Right-click the program icon. 2. Click **Run with graphics processor** and then click the graphics processor to use. The selection applies only at the time the program is launched. **NOTE:** This menu option appears only with systems using NVIDIA © Optimus™ technology.
Display GPU Activity Icon in Notification Area	Select this option so that the GPU Activity icon appears in the Windows notification area of the taskbar. You can then click the icon to see which programs and displays are using the NVIDIA GPU. **NOTE**: This menu option appears only with systems using NVIDIA® Optimus™ technology.
Show Notification Tray Icon	Select to show the NVIDIA Control Panel notification tray icon in the Windows taskbar notification area. Clicking the NVIDIA Control Panel notification icon offers a quick way to configure key NVIDIA Control Panel settings.

Help Menu

Commands related to accessing help, system information, and copyright and version information are available on the **Help** menu.

Table 2.8 Help Menu Commands

Help Menu Command	Description
NVIDIA Control Panel Help	Access the NVIDIA Control Panel online help.
System Information	View detailed information about your system and the NVIDIA Control Panel configuration.
About NVIDIA Control Panel	View NVIDIA Control Panel version and copyright information.

Group-Specific Menus

These menus appear only when pages from a specific group are open.

Display Menu

This menu item appears only when a Display group page is open.

Table 2.9 Display Menu Commands

Display Menu Command	Description
Identify Displays	Select to identify the displays configured with your system.

3D Settings Menu

This menu item appears only when a 3D Settings group page is open on an SLI system.

Table 2.10 3D Settings Menu Commands

3D Settings Menu Command	Description
Show SLI Visual Indicator	Select to verify that SLI rendering or SLI antialiasing is enabled and working.
Show Multi-GPU Visual Indicator	Select to verify that multi-GPU rendering or multi-GPU antialiasing is enabled and working.
Show PhysX Visual Indicator	Select to verify the type of PhysX acceleration the game is using - CPU or GPU - or if PhysX acceleration is being used at all.

Workstation Menu

This menu item appears only when a Workstation group page is open.

Table 2.11 Workstation Menu Commands

Workstation Menu Command	Description
Refresh View	Select to refresh the graphical representation of the displays and graphics cards installed on your system.

03 ACCOMPLISHING NVIDIA CONTROL PANEL TASKS

This chapter provides instructions on how to use the NVIDIA Control Panel to accomplish common tasks. It contains the following sections:

- Starting the NVIDIA Control Panel
- Accomplishing NVIDIA Control Panel Tasks

Note: For Windows Vista/Windows 7 - Several features are currently under development and are not yet supported in the NVIDIA Control Panel. Consult the release notes for the latest list of unsupported features.

Starting the NVIDIA Control Panel

1 Launch the NVIDIA Control Panel:

Under Windows XP:

- Right-click the Windows desktop, then click **NVIDIA Control Panel** from the context menu, or
- From the Windows **Start** menu, select **Control Panel**, then in the **Control Panel** window, double-click the NVIDIA Control Panel icon.

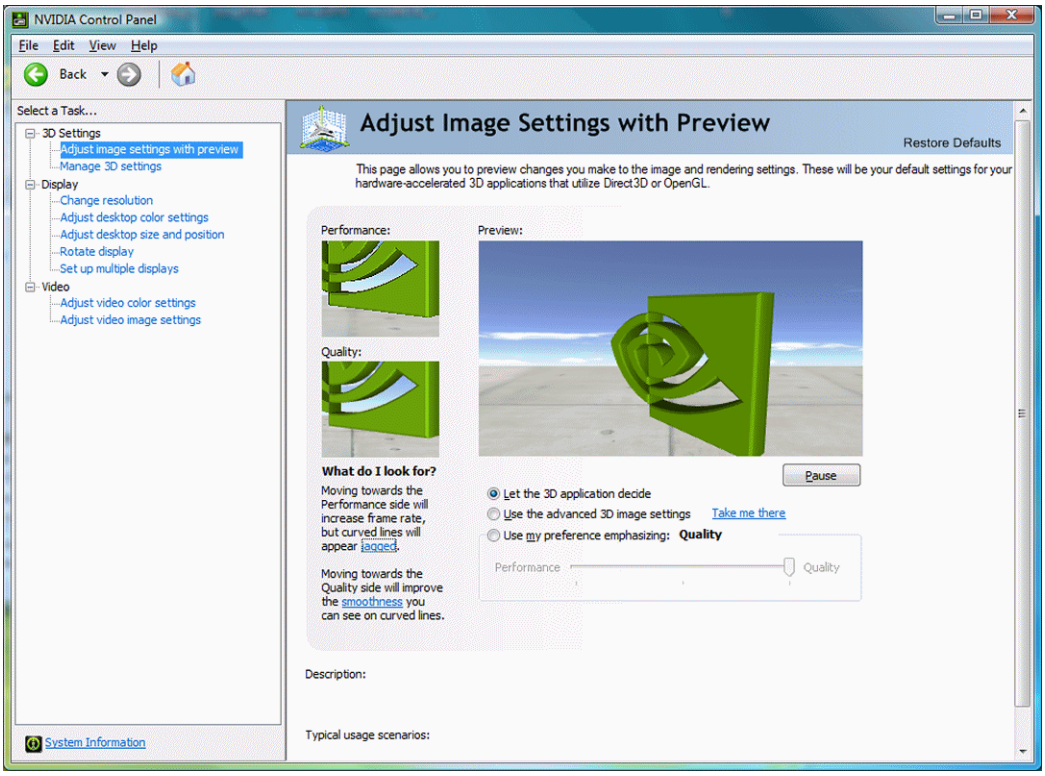
Under Windows Vista/Windows 7:

- Right-click the Windows desktop, then click **NVIDIA Control Panel** from the context menu, or

a Click the Start icon, then from the Start menu click **Control Panel**.

b From the *Classic View* of the Windows Vista Control Panel, click the NVIDIA Control Panel icon, or

From the *Control Panel Home* view of the Windows Vista Control Panel, click **Additional Options** and then click **NVIDIA Control Panel** from the Additional Options page.



The groups that appear in the ***Select a Task*** pane depend on the NVIDIA hardware software is installed on your system. For example, the Mobile group is not available on desktop systems.

2. From the navigation tree in the *Select a Task* pane, click one of the links to open a specific task page.

   Each group in the navigation tree lists different tasks that you can accomplish, and each task page provides instructions on how to accomplish what you want. Move the cursor over listed options to see a description and typical usage scenario for that option.

   Detailed instructions for each task are also available through the online help.

Accomplishing NVIDIA Control Panel Tasks

The NVIDIA Control Panel provides an intuitive layout for locating graphics driver controls, including most of the controls that were available with the Classic NVIDIA Control Panel.

- "NVIDIA Control Panel Feature List" on page 18 lists the current features available in the NVIDIA Control Panel.
- "Correlating to the NVIDIA Classic Control Panel" on page 23 shows where a Classic Control Panel feature is found in the new NVIDIA Control Panel.
- "NVIDIA Control Panel Groups" on page 25 provides an overview of the NVIDIA Control Panel pages by group.

NVIDIA Control Panel Feature List

Table 3.1 NVIDIA Control Panel Features

Feature	Values (Default in bold)[a]	Notes
Display/TV Controls		
Mode control Resolution	Non-HD display - the native resolution or the highest safe resolution from the monitor EDID is the default. HD display - the highest progressive resolution is the default.	
Refresh rate		
Color depth/quality		
Custom timings/resolutions		
TV Signal Format Selection	**M/NTSC**, PAL, M/PAL, N/PAL, Select by country	
Connector Selection	Auto-select, DVI - PC display, VGA - PC display, S-Video - SDTV, Component, Composite - SDTV, Composite - HDTV, HDMI - HDTV (audio enabled (Vista and later)), HDMI-HDTV (audio disabled (Vista and later)), DisplayPort - HDTV, DisplayPort - PC display, LVDS - laptop display	Available values depend on the actual connection. For DVI, VGA, or Component connectors, the values are static and cannot be changed.
Color Control		
Brightness	0 - 100%, (**50%**)	
Contrast	0 - 100%, (**50%**)	
Gamma	0.50 - 1.50, (**1.00**)	
Digital Vibrance	0 - 100%, (**0%**)	
Image sharpening	0 - 100%, (**0%**)	Not available with GeForce 8 series and later GPUs.

Table 3.1 NVIDIA Control Panel Features

Feature	Values (Default in bold)[a]	Notes
Hue	0 - 359 degrees (**30**)	For GeForce 8 series and later GPUs
Flicker Filter	0 - 100%, (**50%**)	For analog TVs
Gray border option	**Disabled**	For analog TVs; presents unused black TV borders as gray
Digital color format selection	**RGB**, YCbCr	For HDMI and DisplayPort connections
Content type (ITC) reported to the display	**Auto select**, Desktop programs, Full-screen videos, Photos, Movie, Games	Window Vista and later; Some HDMI displays only - available values dependent on display support
Rotation	**0**, 90, 180, 270 degrees	
Desktop Size and Position - Windows XP		
Move CRT screen position		For VGA displays
Flat panel scaling	NVIDIA scaling NVIDIA scaling with fixed-aspect ratio Display's built-in scaling No scaling	For non-HD display modes on DVI/HDMI/ DisplayPort connection
Adjust screen size and position		For analog TVs
Resize HDTV desktop		For HD display modes (over DVI/HDMI/ DisplayPort/Component connections) that support underscan or desktop resizing.
Pan HD desktop when not resized		For HD display modes (over DVI/HDMI/ DisplayPort/Component connections) that support underscan or desktop resizing.
Desktop Size and Position - Windows Vista and later		
Move CRT screen position		For VGA displays

Table 3.1 NVIDIA Control Panel Features

Feature	Values (Default in bold)[a]	Notes
Scaling mode	Aspect ratio Full-screen No scaling	TV, VGA (with EDID), Digital displays, LVDS
Scaling performed on	GPU Auto (Display/GPU combination)	
Application Scaling override	**Off**, On	
Resize		TV, Digital displays
Position		TV, VGA
Multi-display Options		
Single-display mode		
Dualview (extended mode)		
nView Clone Mode		
nView Spanning Mode		Windows XP only
Video Controls	"Use video player settings" is the default. If "Use NVIDIA settings" is selected, the following values apply.	
Color Settings		
Brightness	0 - 100%, (**50%**)	
Contrast	0 - 100%, (**50%**)	
Hue	0 - 100%, (**0%**)	
Saturation	0 - 100%, (**50%**)	
Gamma (including separate RGB)	0.3 - 3.00, (**1.00**)	
Advanced Color Settings		
Dynamic Range	Full (0—255) **Limited (16—235)**	
Dynamic Contrast Enhancement	**Disabled**	GeForce 9 series and later GPUS
Color Enhancement	**Disabled**	GeForce 9 series and later GPUs
Image Settings		
Edge Enhancement	0 - 100%, (**0%**)	
Noise Reduction	0 - 100%, (**0%**)	
Inverse Telecine option	**Disabled**	
Internet Video Enhancement option	**Disabled**	Select GeForce 8 series and later GPUs
Digital Audio		

Table 3.1 NVIDIA Control Panel Features

Feature	Values (Default in bold)[a]	Notes
Portal to the Windows Sound Settings panel		For GPUs that support digital audio when an HDMI or DisplayPort connection is made.
HDCP		
Capability verification page		For GPUs that support HDCP.
3D Application Controls		
Ambient Occlusion	**Off**, Performance, Quality	Windows Vista and later; GeForce 8 series and later GPUs
Anisotropic filtering	**Application-controlled**, Off, card-specific settings	
Antialiasing - Mode	**Application-controlled**, Off, Enhance the application setting, Override any application setting	
Antialiasing - Setting	**Application-controlled**, card-specific settings	
Antialiasing line gamma	**Off**, On	
Antialiasing - gamma correction	**Off**, On	
Antialiasing - transparency	**Off**, Multisampling, supersampling	
Buffer-flipping mode	**Auto-select**, Block transfer	NVIDIA Quadro cards
CUDA - GPUs	**[All CUDA-capable GPUs]**	GeForce 8 series and later GPUs
Deep color for 3D applications	**Allow**, disable	
Enable Overlay	**Off**, On	NVIDIA Quadro cards Windows XP only
Exported pixel types	**8-bpp** and/or RGB555 format, None	NVIDIA Quadro cards
Maximum pre-rendered frames	0, 1, 2, **3**, 4, 5, 6, 7, 8	Limits frame pre-rendering
Multi-display/mixed-GPU acceleration	Single, Compatible, or **Multiple display** performance modes	

Table 3.1 NVIDIA Control Panel Features

Feature	Values (Default in bold)[a]	Notes
Multi-GPU performance mode	single-GPU, alternate frame rendering 1 & 2, split frame rendering, or multi-GPU antialiasing	
OpenGL Rendering GPU	**Auto-select**,	NVIDIA Quadro FX or NVS cards
Power management mode	**Adaptive**, Prefer maximum performance	GeForce 9 series and later GPUs; Windows Vista and later
Preferred Refresh Rate	**Application-controlled**, Highest available	Windows Vista and later
SLI performance modes	single-GPU, alternate frame rendering 1 & 2, split frame rendering, or SLI antialiasing	
Stereo - Display mode	Select to match stereo viewing hardware	NVIDIA Quadro cards
Stereo - Enable	**Off**, On	NVIDIA Quadro cards
Stereo - Force shuttering	**Off**, On	NVIDIA Quadro cards
Stereo - Swap eyes	**Off**, On	NVIDIA Quadro cards
Texture filtering - anisotropic mip filter optimization	**Off**, On	
Texture filtering - anisotropic sample filter optimization	**Off**, On	
Texture filtering - Negative LOD bias	**Allow**, Clamp	
Texture filtering - Quality	High quality, **Quality**, Performance, High performance	Balance between quality and performance
Texture filtering - Trilinear optimization	**Off**, On	
Threaded optimization	**Off**, On	For systems with multiple CPUs
Triple buffering	**Off**, On	
Unified back/depth buffer	**Off**, On	NVIDIA Quadro cards Windows XP only
Vertical sync	**Use the 3D application setting**, Force off, Force on	

Table 3.1 NVIDIA Control Panel Features

Feature	Values (Default in bold)[a]	Notes
Surround Configuration		For systems with SLI ready GPUs.
PhysX Configuration		For systems with PhysX-capable GPUs, a minimum of 256MB dedicated graphics memory, and a minimum of 32 processor cores
SLI/Multi-GPU Configuration		For systems with SLI or multi-GPU ready GPUs.
3-way SLI Mode		
Quad SLI Mode		

a. Defaults for the 3D application controls are for the Global Settings tab. Under the Program Settings tab, **Use global setting** is typically the default setting.

Correlating to the NVIDIA Classic Control Panel

Table 3.2 lists the features as presented in the Classic Control Panel and identifies the page in the NVIDIA Control Panel where you can find the corresponding controls.

Table 3.2 Graphics Driver Tasks in the NVIDIA Control Panel

Feature	NVIDIA Control Panel Group - Page	Notes
Advanced Timings	Display - Change Resolution	
Antialiasing	3D Settings - Manage 3D Settings	
Application Profiles	3D Settings - Manage 3D Settings	
Color Depth	Display - Change Resolution	
Custom Timings	Display - Change Resolution	
Desktop Color Settings	Display - Adjust Desktop Color Settings	
Driver Settings	3D Settings - Manage 3D Settings	
Desktop Overlap	Workstation - Adjust Edge Overlap	Available only with NVIDIA Quadro FX cards.

Table 3.2 Graphics Driver Tasks in the NVIDIA Control Panel

Feature	NVIDIA Control Panel Group - Page	Notes
Frame Synchronization	Workstation - Synchronize Displays	Available with NVIDIA Quadro G-Sync cards.
HDTV Setup	Display - Change Resolution	
Multi-display configuration	Display - Set Up Multiple Dislays	
nView Clone Mode	Display - Set Up Multiple Displays	
nView Span Modes	Display - Set Up Multiple Displays	Available only with Windows XP.
NVRotate	Display - Rotate Display	
Performance and Quality Settings	3D Settings - Adjust Image Settings with Preview	
PowerMizer	Mobile - Change PowerMizer Settings	Available only with notebook computers. Available only with Windows XP.
Refresh Rate Settings	Display - Change Resolution	
Resolution Settings	Display - Change Resolution	
Screen Position on CRT	Display - Adjust Desktop Size and Position	
Screen Position on TV	Display - Adjust Desktop Size and Position	
SDI (Graphics to SDI Output)	Workstation - Send Graphics to SDI Output	Available only with NVIDIA Quadro FX SDI cards.
SLI Configuration	3D Settings - Set SLI Configuration	
Temperature Settings	Performance	Requires NVIDIA System Tools software
TV Setup	Display - Change Resolution	
Video Color Settings	Video - Adjust Video Color Settings	

Table 3.2 Graphics Driver Tasks in the NVIDIA Control Panel

Feature	NVIDIA Control Panel Group - Page	Notes
Overclocking	Performance	Requires NVIDIA System Tools software

NVIDIA Control Panel Groups

This section provides an overview of the NVIDIA Control Panel groups.

- "Using the Display Pages" on page 25
- "Using the Video Pages" on page 26
- "Using the 3D Settings Pages" on page 26
- "Using the Stereoscopic 3D Pages" on page 26
- "Using the Mobile Pages" on page 27
- "Using the Workstation Pages" on page 27
- "Using the Networking Pages" on page 27
- "Using the Storage Pages" on page 28
- "Using the Performance Pages" on page 28
- "Using the System Update Pages" on page 28

Note: For Windows Versions - Support for some features under Windows Vista or Windows 7 is in development and may not be available with your GeForce graphics driver version. Consult the release notes for the latest list of unsupported features.

Using the Display Pages

The actual tasks available on your system depend on your system hardware, such as the number and type of displays connected. Use the Display group pages to:

- Run the wizard to optimize your display configuration.
- Change the display resolution.
- Change the scaling on your flat panel display.
- Adjust desktop color settings.
- Rotate the display.
- Adjust custom timings.
- Configure multiple displays, including Spanning or Clone modes.

  Spanning modes are available only with Windows XP.
- Adjust your television picture quality and video color settings for the best possible viewing in its environment.
- Change the position and size of the desktop/video to best fit your television or HDTV (high definition television) screen.
- Change the signal format to use for your standard television or HDTV as well as change country-specific signal or the HDTV format.

- Verify the HDCP capability of your system.
- Access digital audio controls.

Using the Video Pages

The actual tasks available on your system depend on your system hardware, such as whether or not you have a TV connected and enabled. Use the Video page to:

- Adjust video and image color settings.

Using the 3D Settings Pages

The actual tasks available on your system depend on your system hardware, such as whether or not you have an SLI-ready system. Use the 3D Settings page to:

- Change the image and rendering settings of your 3D applications and games that utilize Direct3D and OpenGL technology.
- Assign specific 3D settings to a game so that these settings automatically load when a game is launched (available under Advanced view).
- Set up your SLI or multi-GPU configuration as well as PhysX configuration.

GPU temperature monitoring and GPU overclocking features are not included in the 3D Settings page. To use this functionality you must install NVIDIA nTune software.

Using the Stereoscopic 3D Pages

The Stereoscopic 3D pages are part of the NVIDIA 3D Vision software for viewing 3D programs and games in stereoscopic 3D. Use the Stereoscopic 3D pages to:

- Control stereoscopic 3D settings.

  Enable stereoscopic 3D, adjust 3D depth, select a 3D laser sight, view and set the keyboard shortcuts, and run the setup wizard and various tests.

- View game compatibility.

  See a stereoscopic 3D compatibility rating for a number of games, along with possible issues and recommendations for each game.

- Control 3D Vision Pro settings.

  NVIDIA® 3D Vision™ Pro is the professional version of the 3D Vision™ stereo glasses and emitter. While the 3D Vision kit uses infrared (IR) communication from the emitter to the stereo glasses, the 3D Vision Pro kit uses radio frequency (RF) bi-directional communication between the stereo glasses and 3D Vision Pro hub. This allows multiple 3D Vision Pro hubs to be used in range of each other without conflicts.

Using the Mobile Pages

The Mobile group is available if the NVIDIA software is installed on a notebook computer under Windows XP.

Use the Mobile page to extend your notebook computer's battery life using NVIDIA PowerMizer technology

Using the Workstation Pages

The Workstation group is available if you have an NVIDIA Quadro FX graphics card installed.

The actual tasks available depend on which NVIDIA Quadro FX product you have installed. Use the Workstation page to:

- Synchronize your displays using frame sync or genlock technology.
- View a graphical representation of the displays and graphics cards installed on your system.
- Manage serial digital interface (SDI) output (requires NVIDIA Quadro FX SDI solution.)
- Configure SLI Mosaic mode (requires Quadro Plex unit) to combine multiple displays into a larger virtual canvass.
- Overlap the edges of adjacent displays.

  Display edge *blending* is no longer available.

Using the Networking Pages

The Networking group pages are part of the nForce drivers Networking software for NVIDIA nForce-based PCs.

Use the Networking pages to optimize your network performance and increase your network bandwidth with the following technologies:

- **NVIDIA FirstPacket** offers a new way to manage the traffic on your personal computer, allowing you to more effectively manage and improve the performance of networked games and other applications that are sensitive to network delay (latency), such as Voice-over-IP (VoIP).
- **NVIDIA TCP/IP Acceleration** technology is a networking solution that moves the processing of TCP/IP network traffic from your computer's CPU to its nForce hardware resulting in greatly improved system performance.
- **NVIDIA Teaming** technology combines all the NVIDIA Ethernet interfaces on your system to form a team, resulting in increased bandwidth and network redundancy.
- **Alert Standard Format (ASF)** controls lets you set up alerts and remote system management in an OS-present or OS-absent environment.

Using the Storage Pages

The Storage group pages are part of the nForce drivers MediaShield Storage software for NVIDIA nForce-based PCs.

Use the Storage pages to

- Create and manage RAID 0, RAID 1, RAID 0+1, RAID 5, and spanning arrays.
- Run SMART tests on your RAID array disk drives.

Using the Performance Pages

The Performance group pages are part of the nForce drivers System Tools software for NVIDIA nForce-based PCs.

Use the Performance pages to:

- Manage system tuning and profiles for nForce MCP clocks, voltages, timings, and fans.
- Manage Enthusiast System Architecture (ESA) components.
- View detailed system information for your nForce-based PC.
- Overclock your GeForce GPU.

Using the System Update Pages

The System Update pages are part of the nForce drivers System Tools software for NVIDIA nForce-based PCs.

Use the system update pages to:

- Automatically check for nForce and GeForce driver updates.
- Update your system BIOS.
- Update firmware for the Enthusiast System Architecture (ESA) components.

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