

SP8836

SPARKLE COMPUTER CO., LTD.



3D GRAPHIC ACCELERATOR MANUAL

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NVIDIA CineFX 2.0 engine

- Support for DX 9 pixel shader 2.0+
- Support for DX 9 vertex shader 2.0+
- Very long pixel programs up to 1024 instructions
- Very long vertex programs with up to 256 static instructions and up to 65536 instructions executed before termination
- Looping and subroutines with up to 256 loops per vertex program
- Subroutines in shader programs
- Dynamic flow control
- Conditional write masking
- Conditional execution
- Procedural shading
- Full instruction set for vertex and pixel programs
- Z-correct bump-mapping
- Hardware-accelerated shadow effects with shadow buffers
- Two-sided stencil
- Programmable matrix palette skinning
- Keyframe animation
- Custom lens effects: fish eye, wide angle, fresnel effects, water refraction

High-performance, high-precision 3D rendering engine

- 4-pixels per clock rendering engine
- 128-bit, studio-quality floating point precision through the entire graphics pipeline
- Native support for 128-bit floating point, 64-bit floating point and 32-bit integer rendering modes
- Up to 16 textures per pass
- Support for sRGB texture format for gamma textures
- DirectX and S3TC texture compression

High-performance 2D rendering engine

- Optimized for 32-, 24-, 16-, 15- and 8-bpp modes
- True-color, 64x64 hardware cursor with alpha
- Multi-buffering (double, triple or quad) for smooth animation and video playback

-need for pairing with built-in Macrovision copy protection

- DVD and HDTV-ready MPEG-2 decoding up to 1920x1080i resolutions
- Dual, integrated 400MHz RAMDACs for display resolutions up to and including [2048x1536@85Hz](#)
- DVI Support for compatibility with next-generation flat panel displays with resolutions up to and including 1600x1200
- NVIDIA NVRotate™ application for advanced viewing flexibility
- NVIDIA NVKeystone™ application for advanced display correction

[NVIDIA Digital Vibrance Control™ \(DVC\) 3.0](#)

- DVC image sharpening controls
- DVC color controls

[Rocket science for a system-level solution](#)

- 0.13u process technology for higher levels of integration and higher operating clock speeds
- Copper vias and wiring
- Advanced thermal monitoring and thermal management
- AGP 8X including Fast Writes and sideband addressing

[Broad operating system support](#)

- Windows® XP
- Windows 2000
- Windows Me
- Windows 9X

[API support](#)

- Comprehensive Microsoft DirectX 9.0 (and lower) support
- OpenGL 1.5 (and lower) support

[Compatibility](#)

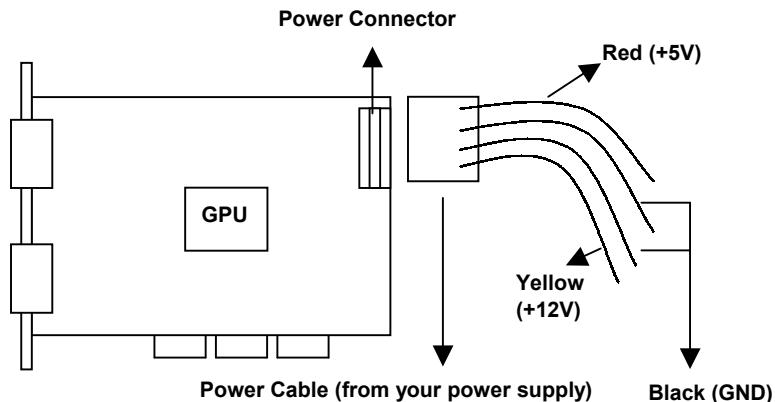
- NVIDIA Unified Driver Architecture (UDA)
- Fully compliant professional OpenGL 1.5 API with NVIDIA extensions, on all Windows operating systems
- WHQL-certified for Windows XP, Windows Me, Windows 2000

pull straight out of the motherboard slot. If the card is stuck, rock from side to side to dislodge it. Remember to keep the screw.

4. Locate the empty slot in the motherboard and then install the card in the AGP bus slots
5. Replug the cable into the computer and replace the cover.

2.3 Installing notice (5700 Ultra only)

1. In order to make your system more stable, we recommend the minimum requirement for the power supply is 300 Watts.
2. To ensure optimal performance, verify that the Molex hard drive power connector is properly connected to the white port on the edge of the graphics card. Failure to do so will result in running in a lower operating frequency and therefore result in decreased performance.
3. If you experience any problems upon boot up, please verify that the motherboard is of the AGP 2.0/3.0 specification. Please check with the motherboard manual or consult with your motherboard manufacturer.
4. How to use the power connector port:



1024*768	16	60/70/72/75/85/100/120/140/144/150/170/200/240
	32	60/70/72/75/85/100/120/140/144/150/170/200
	8	60/70/72/75/85/100/120/140/144/150/170/200
1152*864	16	60/70/72/75/85/100/120/140/144/150/170/200
	32	60/70/72/75/85/100/120/140/150/170
	8	60/70/72/75/85/100/120/140/144/150/170
1280*960	16	60/70/72/75/85/100/120/140/144/150/170
	32	60/70/72/75/85/100/120/140/150
	8	60/70/72/75/85/100/120/140/144/150/170
1280*1024	16	60/70/72/75/85/100/120/140/144/150/170
	32	60/70/72/75/85/100/120/140/150
	8	60/70/72/75/85/100/120/140/144/150
1600*900	16	60/70/72/75/85/100/120/140/144/150
	32	60/70/72/75/85/100/120
	8	60/70/72/75/85/100/120
1600*1200	16	60/70/72/75/85/100/120
	32	60/70/72/75/85/100
	8	60/70/72/75/85/100

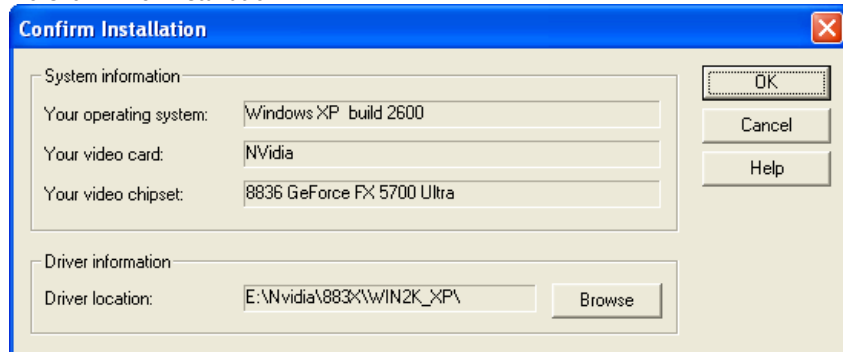
Different driver version or different windows platform may have different support table.

4. Smart Installation

Supports Windows XP, Windows 2000, Windows 98 and Windows ME System.



4.3 Click **Driver installation**



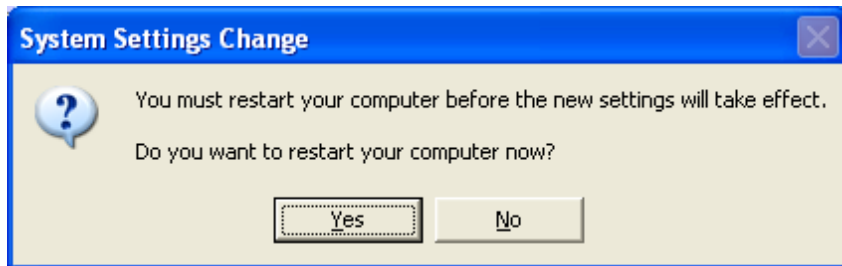
4.4 The screen will show the **Confirm Installation** window. Select **OK**

4.5 The **Driver Confirmation** window appears, select **Install**.

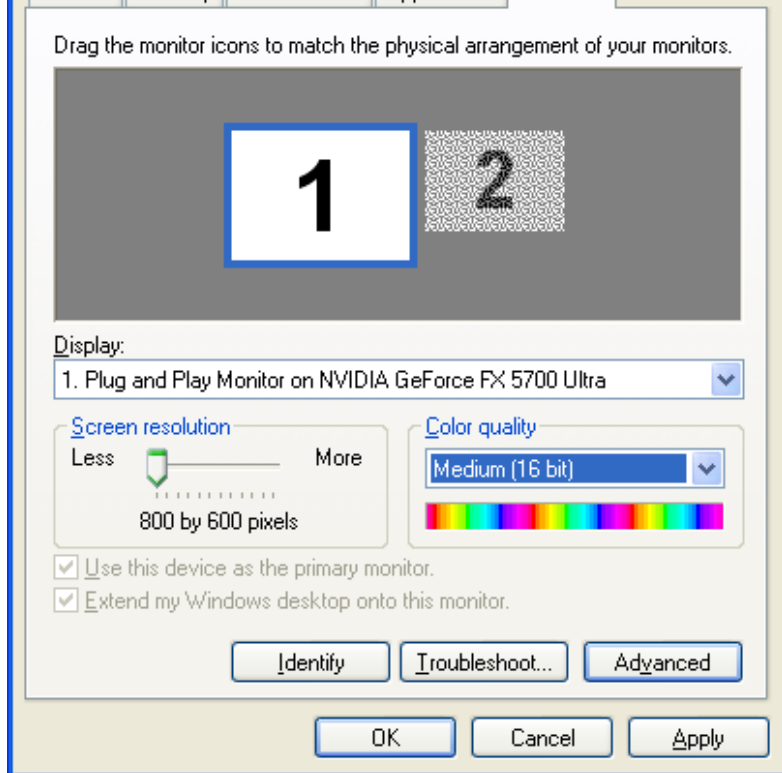
Click "Install" to accept or "Cancel" to quit the installation.

If the drivers are very new, you may get the following system prompt. Please click "Continue Anyway" and the software will continue to install.

4.6 Then click "**Yes**" to restart your computer.

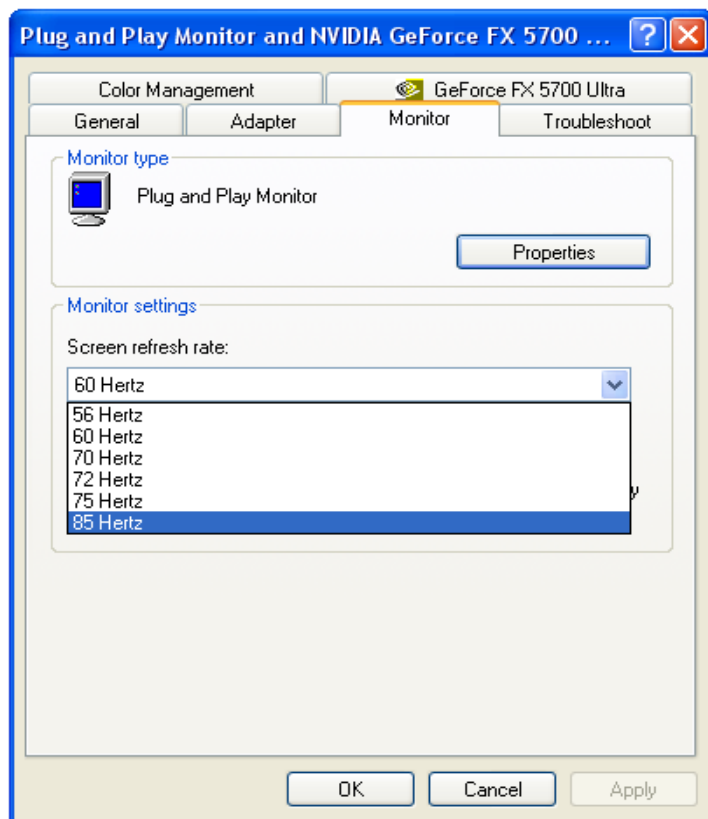


4. Double-click on the **Display** icon in the **Control Panel** folder. You can also click the right mouse button anywhere on the desktop and select the Properties option from the pop-out menu.
5. Click **Settings**, and then **Advanced**
6. Now at the **[Plug And Play Monitor and NVIDIA...]** window
Select **Adapter**
7. **Standard PCI Graphics...(or NVIDIA GeForce...)** appears,
Select **Properties**
8. From **Adapter Properties ...**
Select **Driver** and click **Update driver...**
9. Next the **Hardware Update Wizard** will appear,
Select **Install from a list or specific location (Advanced)** – recommended for saving installation time
Then select **Next**.
10. Default setting will select **Search for the best driver in these locations**
Please check **Include this location in the search** – recommended for saving installation time
Select **Browse**
11. Next, **Browse for Folder** appears,
Select E:\NVIDIA\883X\win2K_XP\
Note: “E:”-> CD Drive, “NVIDIA”-> VGA chip brand name, “883X”-> VGA model name
Then select OK and click Next
12. If there are no problems, the system will start to install the driver
13. Next the **Completing the Hardware Update Wizard** appears
Select **Finish**
14. Close the **Adapter Properties** window
15. Next at **System Settings Change**
Select **OK**, the system will restart automatically.



Click on the pull-down arrow from the Color palette area to select color depth or adjust the sliding bar to either **Less** or **More** from the Desktop area
Select **OK** to restart System and new color depth or new resolution will take effect.

your monitor. Otherwise you can't select the refresh rate you want.





nVIDIA.

Processor: GeForce FX 5700 Ultra

IRQ: 16 BIOS: 4.36.20.18.01

TV Encoder Type: NVIDIA integrated

Adapter information

Bus: AGP 8X

Memory: 128 MB

System information

System processor: Intel Pentium(r) 4 with SSE2

DirectX version: DirectX 9.0 or better

Driver version information

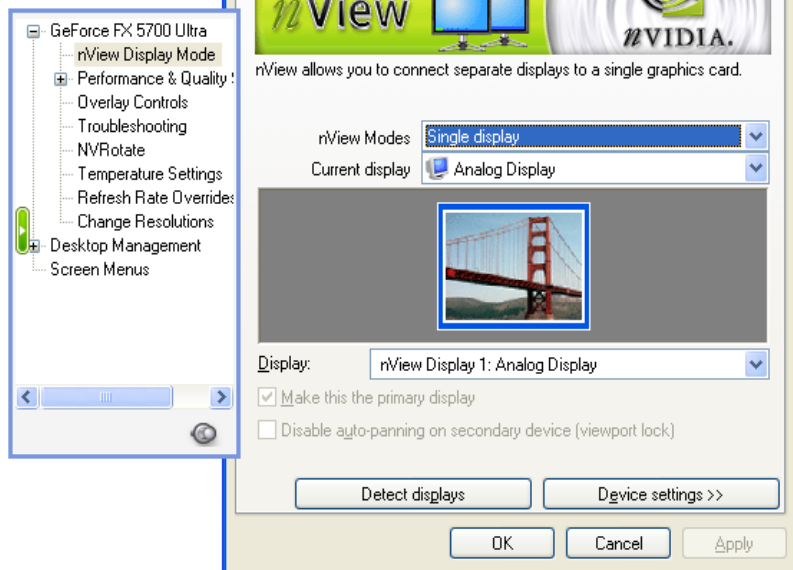
Filename	Description	Version
nv4_disp.dll	Display driver	6.14.10.5216
nv4_mini.sys	Display driver miniport	6.14.10.5216
nvoglnt.dll	OpenGL installable client driver	6.14.10.5216
nvcpl.dll	Display Properties extension	6.14.10.5216

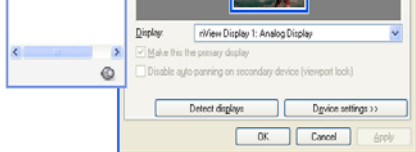
[Additional properties...](#)[NVIDIA on the Internet >>](#)

OK

Cancel

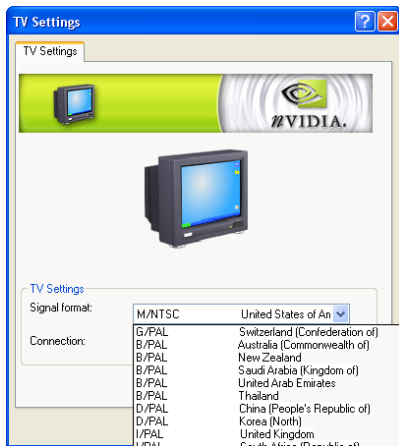
Apply





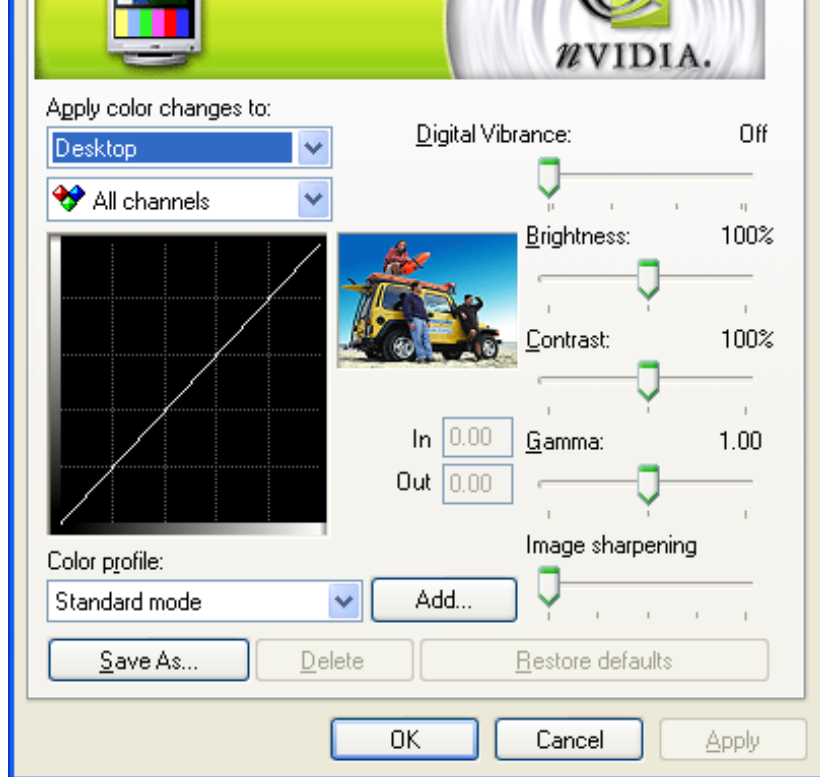
choose the right out put device, Do not use Auto select.

Click **Signal Format** to select your country and TV system – NTSC or PAL, no SECAM.



Note:

If you can't switch from PAL back to NTSC, please set resolution to 640x480 and try again



Screen Adjustment

Brightness



Contrast



☐ Overdrive



Flicker



Screen positioning



Restore defaults

Presets

Custom (default)



Save As...

Delete

OK

Cancel

Apply

Timing modes

Select the proper timing mode for your display:

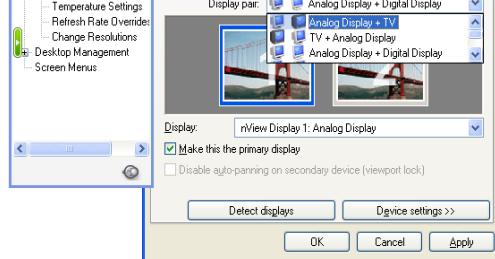
- ☒ Auto-detect (Windows determines the proper mode.)
 - ☐ General Timing Formula (GTF)
 - ☐ Discrete Monitor Timings (DMT)
 - ☐ Coordinated Video Timings (CVT) Standard
 - ☐ Fixed aspect ratio timing
- ☐ Enable doublescan for lower resolution modes

Restore defaults

OK

Cancel

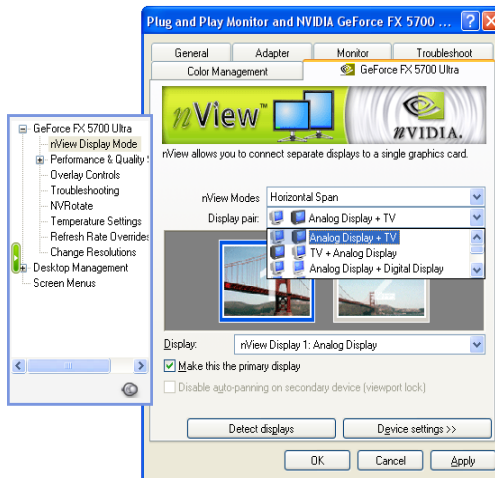
Apply

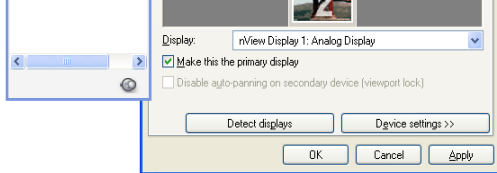


Horizontal span mode:

Picture spans horizontally on 2 monitors.

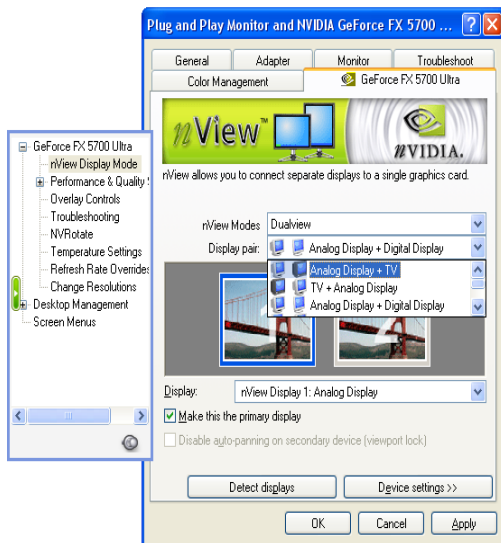
Select **Horizontal span**, Click **Apply** to activate.



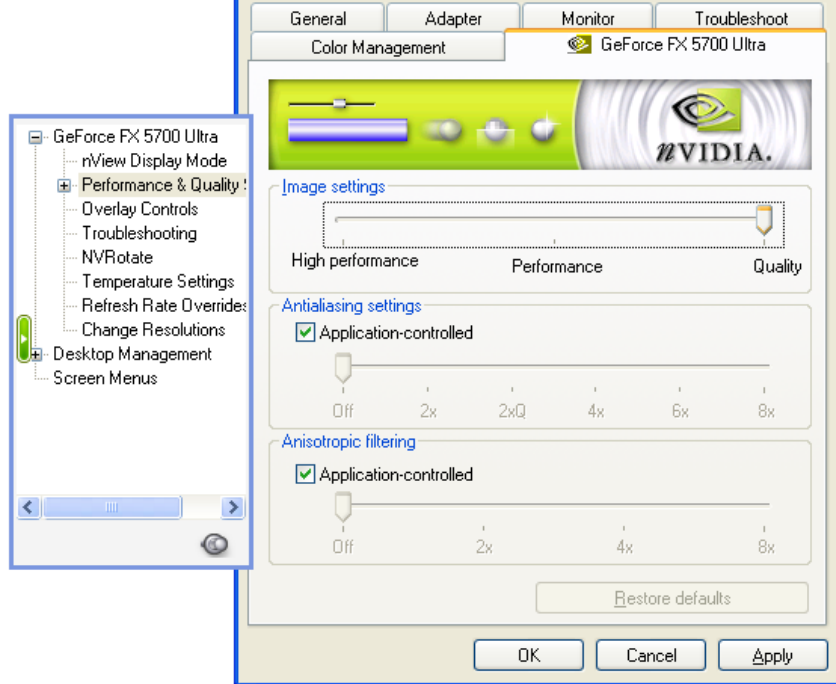


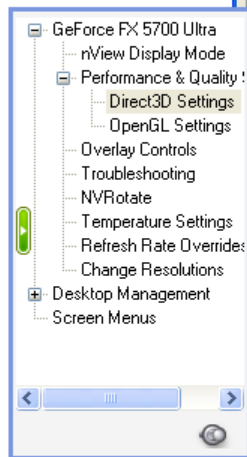
Dualview:

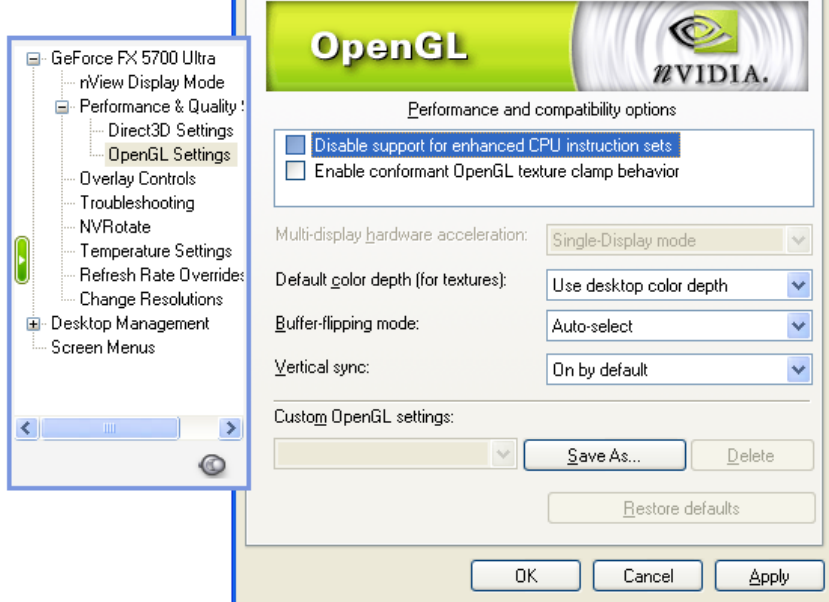
Picture spans horizontally on 2 monitors. Select **Dualview** and Click **Apply** to activate.

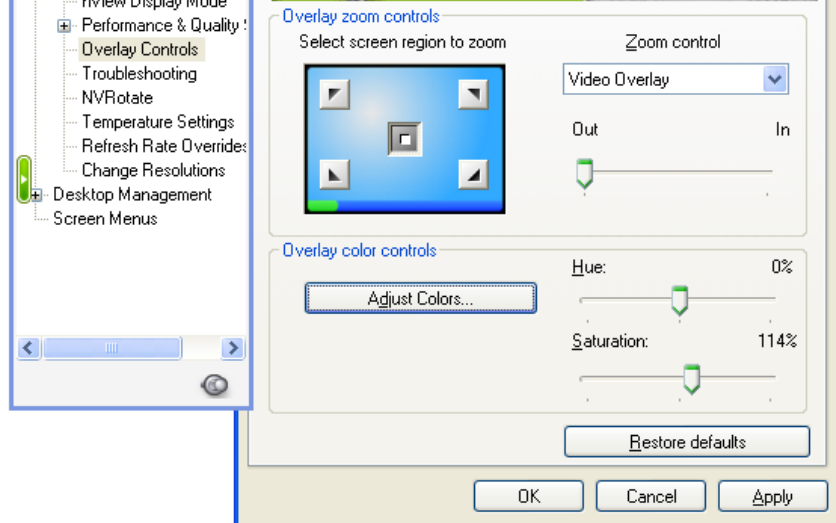


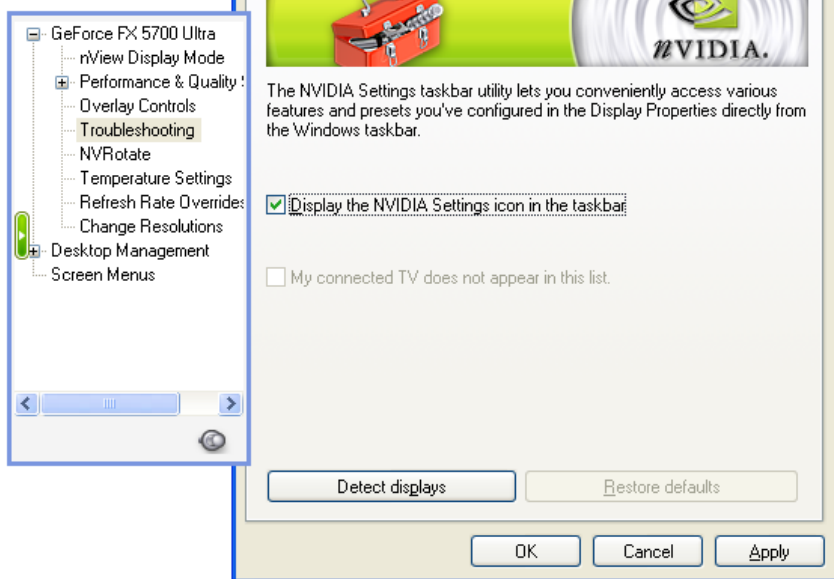
Monitor with blue frame is active. Right click on it and the configuration menu will appear.
Or you can click **Device Settings>>** to set all the functions to "Standard mode".

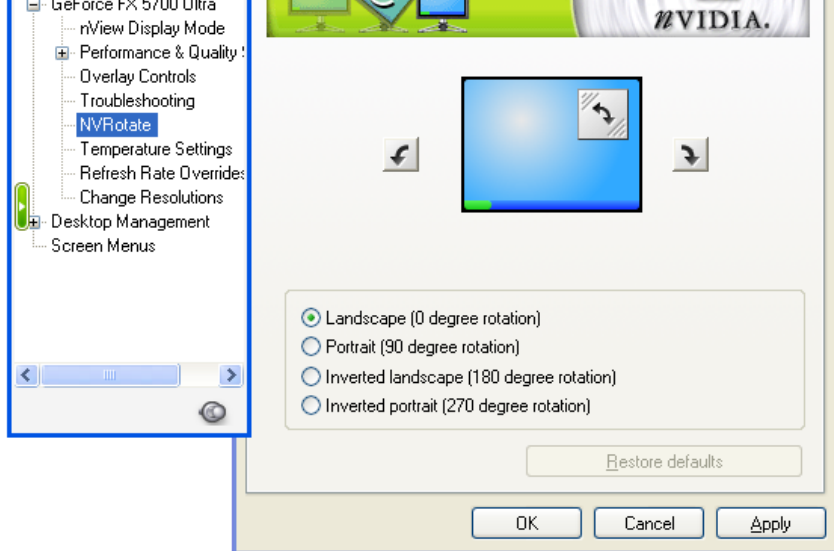


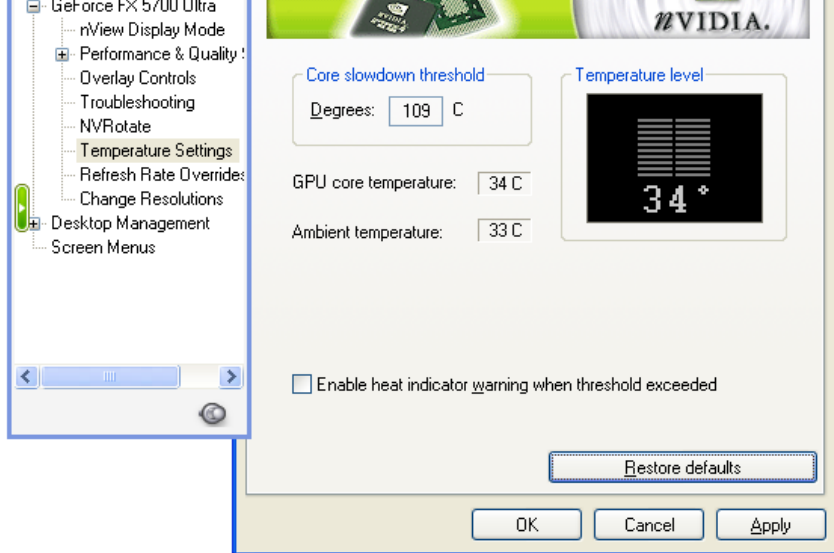


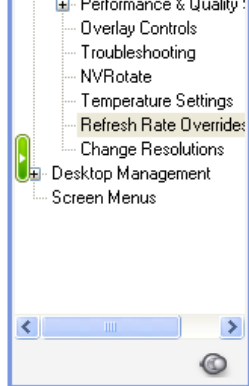












Click 'Override refresh rates' to select refresh rate overrides to be used in applications.

☒ Applications control refresh rate

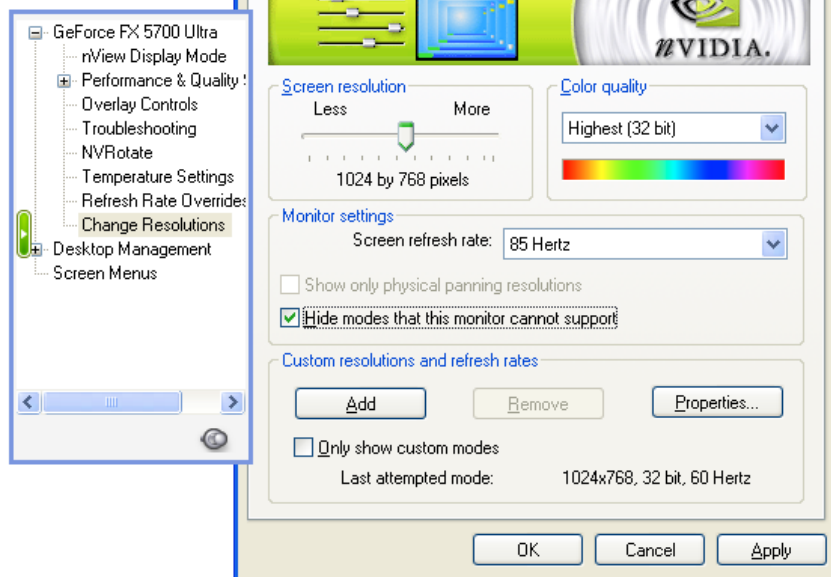
☐ Override refresh rates

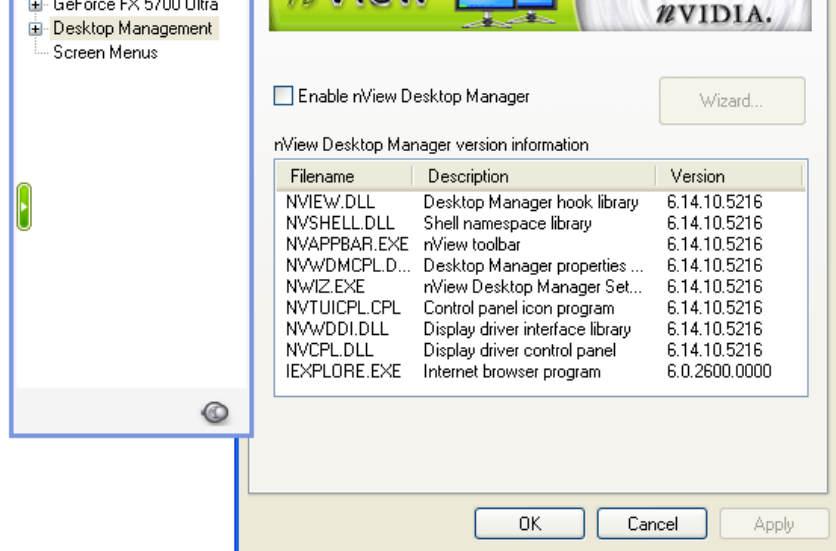
8 Bit	16 Bit	32 Bit	Resolution	Refresh Rate
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	320 x 200	Default
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	320 x 240	Default
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	400 x 300	Default
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	480 x 360	Default
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	512 x 384	Default
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	640 x 400	Default
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	640 x 480	Default
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	720 x 480	Default
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	720 x 576	Default
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	800 x 600	Default
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	848 x 480	Default
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1024 x 768	Default

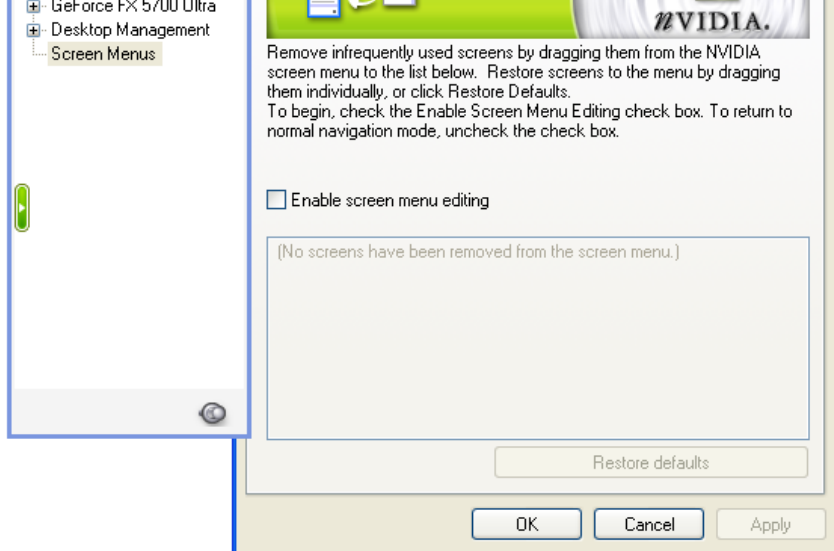
OK

Cancel

Apply







4. Double-click on the **Display** icon in the Setting -> **Control Panel** folder. You can also click the right mouse button anywhere on the desktop and select the Properties option from the pop-out menu.
5. Click the **Settings** tab.
6. Next at, **[Unknown Device.] Properties** tab
Select **Adapter**
7. From **Standard PCI Graphics...** tab
Select **Change**
8. From **Update Device ...** tab
Select **Next**
9. From **Update Device ...** tab
Select **Search for a better...**
Then select **Next**.
10. From **Update Device ...** tab
If the **Specify a location** is wrong
Please select **Brows**
11. From **Browse for Folder** tab
Select E:\NVIDIA\883X\Win9X_ME
Note: "E:"-> CD Drive, "NVIDIA"-> VGA chip brand name, "883X"-> VGA model name
Select **OK**
12. From the **Update Device Driver Wizard** tab
Select **CD-ROM driver**
Click the **Specify a locator**, if right
Select **Next**
13. From **Update Device Driver Wizard** tab
Select **Next**
14. From **Update Device Driver Wizard** tab
Select **Finish**
15. From **System Settings Change** tab
Select **OK**

folder and choose **Settings**, click the **Advance Settings** choose **Adapter**

3. Click on the **Refresh Rate** sub window to change refresh rate
4. Select **OK** and new refresh rate takes effect
5. Refresh Rate default is Optimal.
6. If you change Refresh Rate from Optimal to another, you may need to restart Windows System for functional.

Note: If your monitor is not Branded or Plug&Play, you will only see Adapter default and optimal. Please contact your monitor supplier to get right or compatible drivers for your monitor. Otherwise you can't select the refresh rate you want.

7.2 The following steps describe how to update Windows2000 display drivers

Note: If you already have old NVIDIA drivers in your system, please remove before install new drivers.

To remove old Drivers: (only if you have old NVIDIA drivers)

From "Start", "Setting", select "Control Panel", double click "Add or remove drivers". Then from the list, select. Find "NVIDIA WINDOWS ...", and click "install or remove" to remove it. Reboot your system and go on to the next step.

1. Place the Disc (CD Title) into CDROM Drive. If the SmartInstall window now shows, please click **EXIT** button to quit
2. Right click mouse button on Desktop Area, a sub menu window will appear. Please select **Properties**.
3. From **Display Properties** window, please select **Settings**.
4. Select **Advanced**
5. Select **Adapter**.
6. Select **Change**
7. Now the update drivers wizard window will appear. Please follow the on screen instruction.
8. Please specify the drivers location at your CDROM letter:
\\NVIDIA\\883X\\win2K_XP
9. Select **Install** and click "**YES**" when the Installing Driver dialog box appears.

A message appears stating that drivers were successfully installed. Click **OK**. Another message will appear stating that the driver could not be restarted dynamically. Restart Windows2000 to run the new driver. Click **OK**.

in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Notice:

(1) An Unshielded-type power cord is required in order to meet FCC emission limits and also to prevent interference to the nearby radio and television reception. It is essential that only the supplied power cord be used.

(2) Use only shielded cables to connect I/O devices to this equipment.³

(3) Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Trademark Acknowledgments

All brand names and trademarks are the property of their owners.