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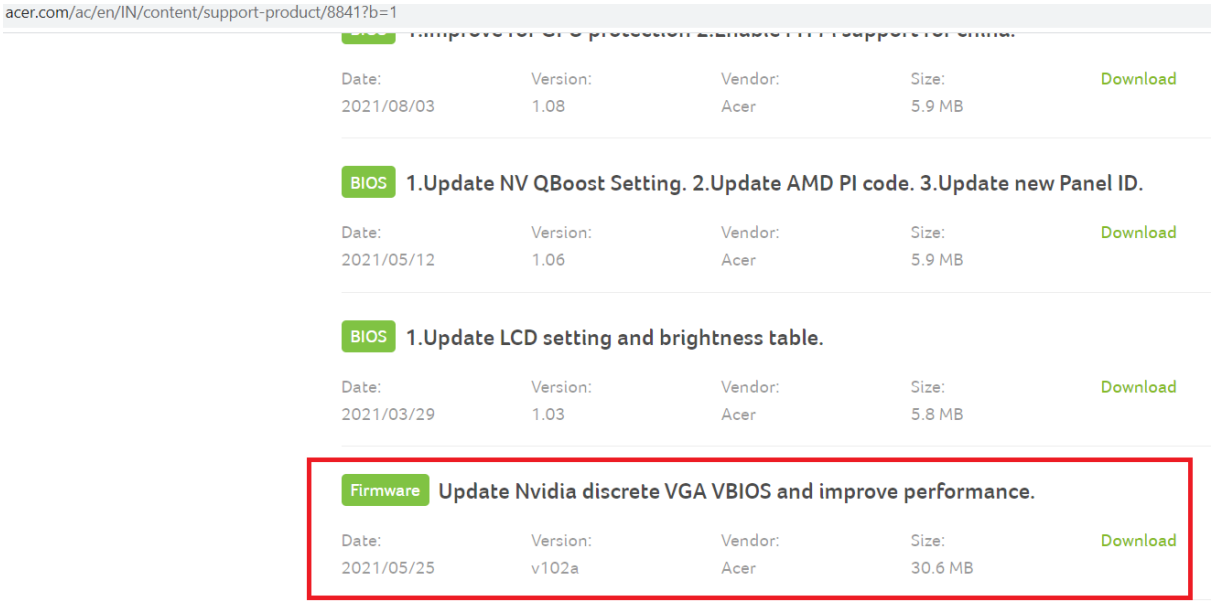
The Perfect NVIDIA Control Panel Settings

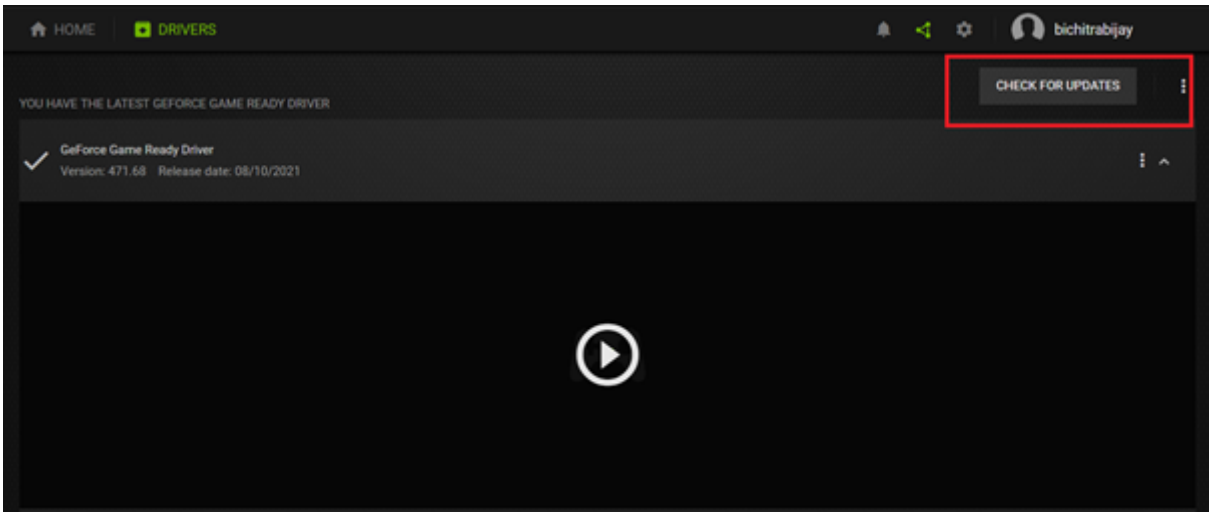
Update Nvidia GPU firmware:

Check in www.acer.com site , if any latest GPU firmware is available , flash the same first. Below is the same from www.acer.com site



Latest Driver:

The easiest way to do it is by downloading the NVIDIA GeForce Experience. Once you've downloaded and installed the NVIDIA GeForce Experience, click on the Download button under the Automatic Driver Updates section. This will download a program that detects your Graphics card model and automatically installs the appropriate driver for you. Restart your computer to apply the changes.



3D Settings

The first option inside 3D settings is the Adjust Image Settings with Preview. Simply select the second option Use the advanced 3D Image Settings and press the Apply button.

Manage 3D Settings

This is the most important setting and we will tweak each sub-setting inside this.

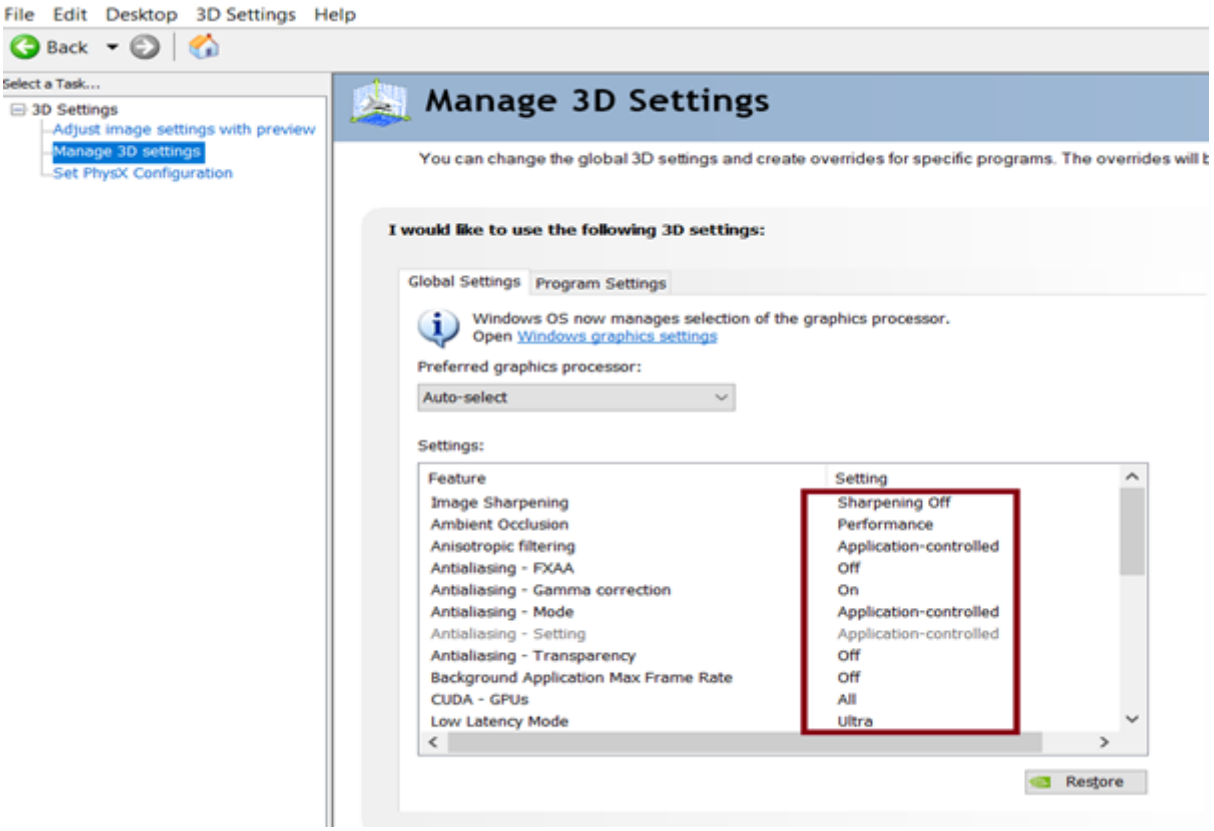


Image Sharpening

This setting increases the overall sharpness of images and enhances the visual quality of the games. This option should be turned ON for the best image quality. Select the Sharpen level to 0.5 and the Ignore film grain to 0.17. Also, enable the GPU Scaling option. Click OK to apply the settings.

Ambient Occlusion

This setting improves the depth perception and adds realism to the in-game scenes. This also provides a soft shadow for images inside the game. This setting should be turned ON and selected to Performance.

Anisotropic Filtering

This setting improves the overall image quality by eliminating all kinds of blurred textures that appear at certain camera angles. The setting for this option should be Application Controlled.

Antialiasing FXAA

This setting improves the in-game visuals and reduces the performance effect on other aliasing settings. This should be turned OFF.

Antialiasing Gamma Correction

This improves the visual quality of 3D images by enabling Gamma correction for antialiasing. This setting should be turned ON.

Antialiasing Mode

This setting allows you to determine how antialiasing is applied in your 3D applications. Select this to Application-controlled.

Antialiasing Transparency

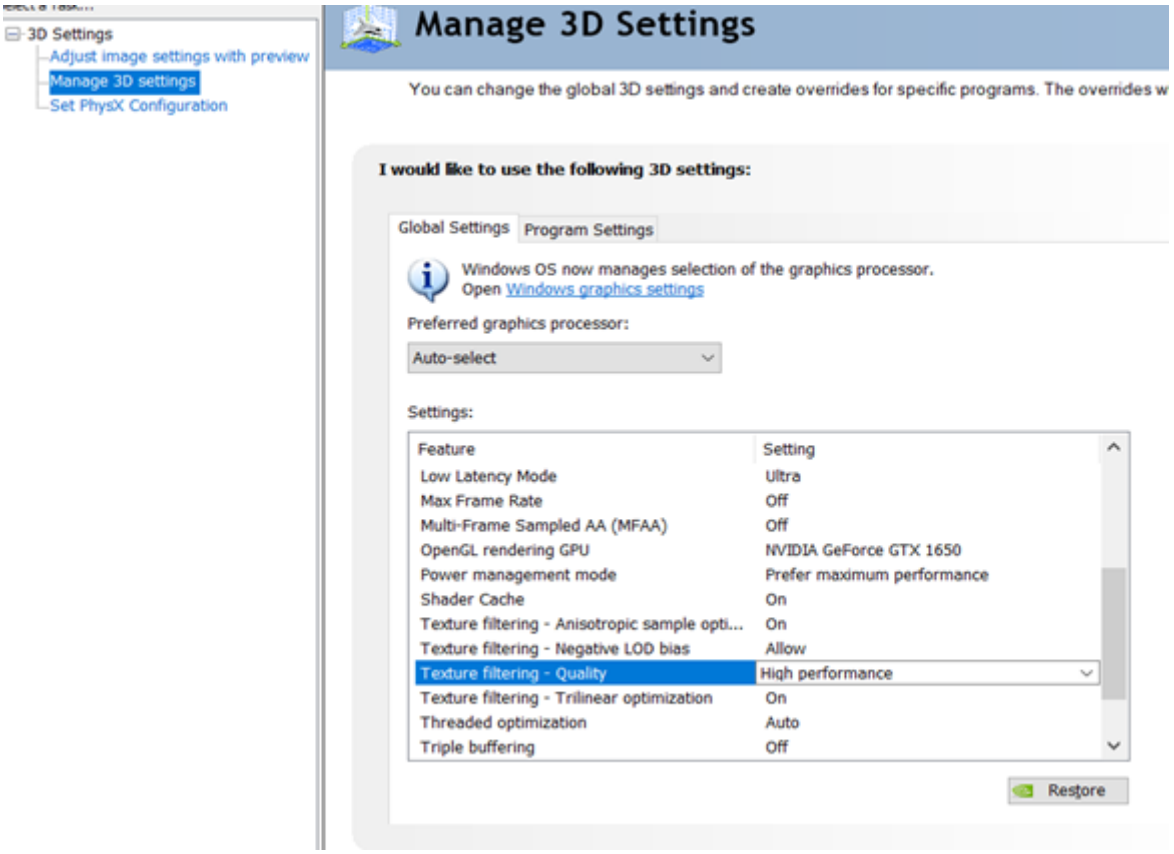
This setting allows you to minimize the visible aliasing on the edges of images with transparent textures. This should be switched OFF.

CUDA GPUs

This allows you to select the applications where CUDA cores are used. This should be selected to all.

Low Latency Mode

This setting reduces latency by limiting the number of frames the CPU can prepare before the frames are processed by the GPU. This should be turned ON for higher FPS and lower Input lag.



Max Frame Rate

This setting limits the FPS of the games to a certain number beyond which the FPS cannot go. This setting should be turned OFF for better performance.

Multi-Frame Sampled AA

This setting makes overall sample patterns irregular by re-programming the coverage sample locations. This setting reduces the FPS of games. You should turn this OFF for better performance.

OpenGL Rendering GPU

This setting allows you to select the GPU for running OpenGL applications. This setting should be selected to your NVIDIA Graphics Card.

Power Management Mode

This feature allows you to select the Graphics Card's performance level when running Games and 3D applications. This should be selected to Prefer Maximum Performance.

Shader Cache

This setting reduces the CPU usage by reducing completed shader to a disk cache. Turn this option ON for best performance.

Texture Filtering – Anisotropic Sample Optimization
This setting limits the number of anisotropic samples used based on texture pixel size. This setting should be turned ON.

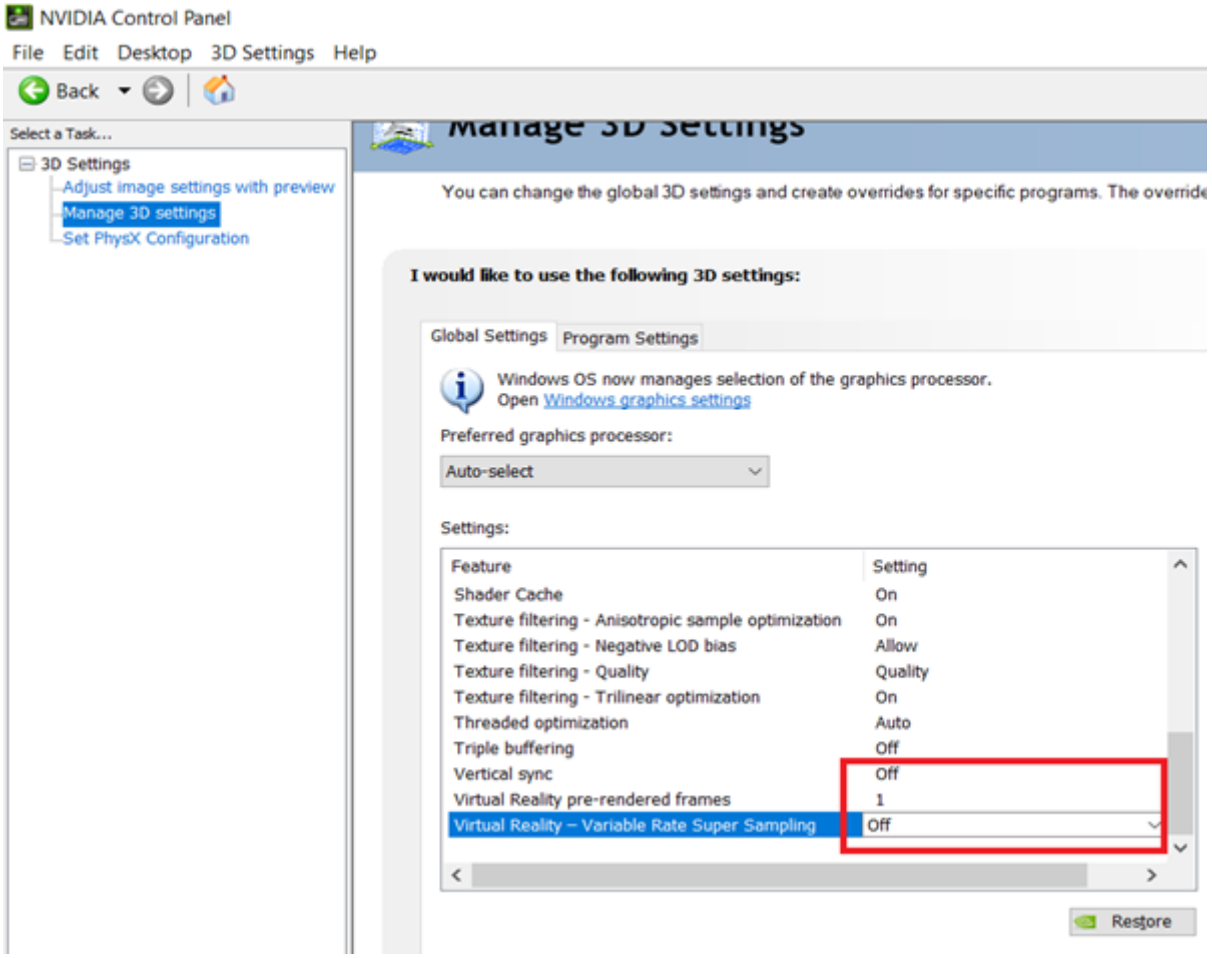
Texture Filtering – Negative LOD Bias
This setting is used to sharpen stationary images and enable texture filtering. This should be set to Allow.

Texture Filtering – Quality
This feature allows you to set the texture filtering to Quality, Performance, or Balanced. You should switch this setting to High Performance.

Texture Filtering – Trilinear Optimization
This setting allows Texture filtering performance by allowing bilinear filtering on textures. Turn this option ON for better performance.

Threaded Optimization
This setting allows you to use multiple CPU cores. You should turn this setting to Auto.

Triple Buffering
This setting allows triple buffering for games and other OpenGL applications. Turn this setting OFF.



Vertical Sync

This setting controls how the GPU render rate interfaces to the refresh rate of a monitor. You should turn this setting OFF.

Virtual Reality Pre – Rendered Frames

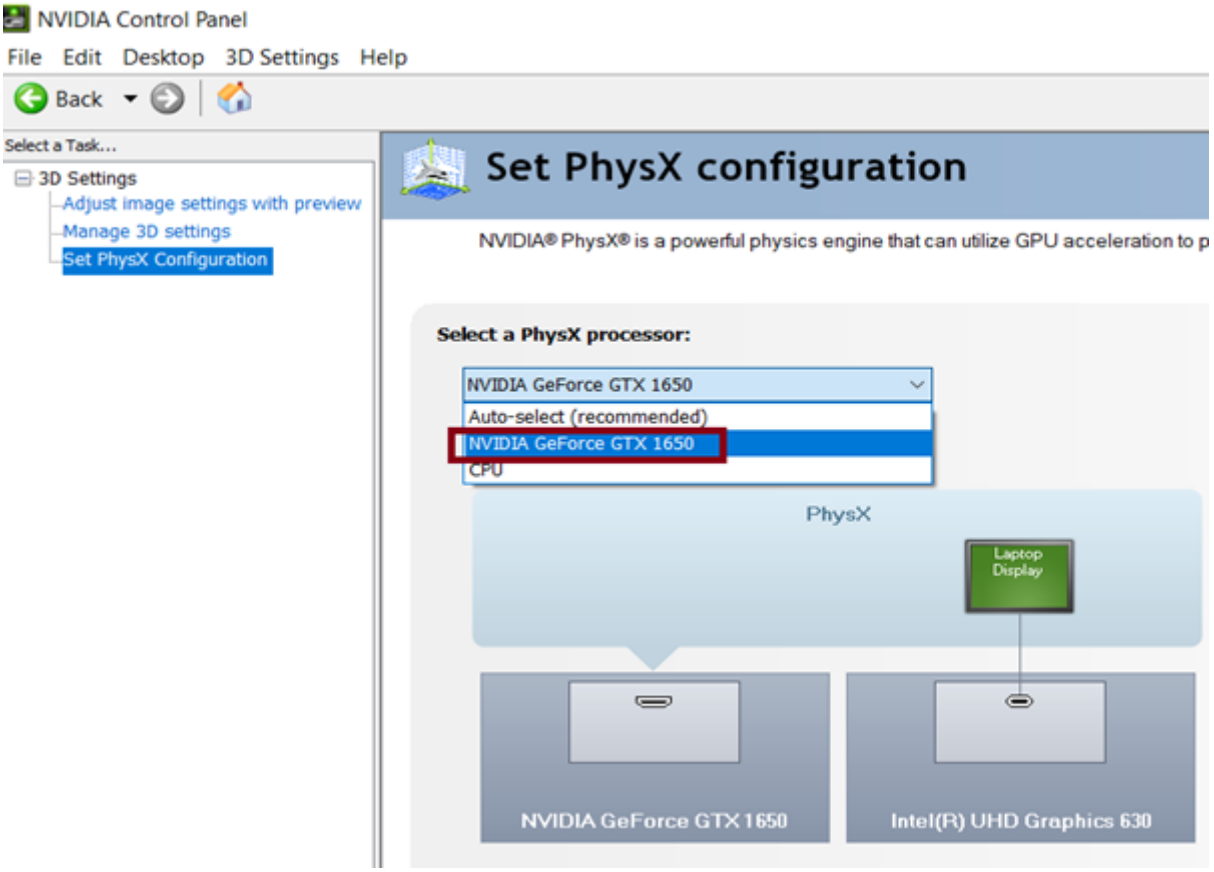
This setting limits the number of frames the CPU can prepare before the frames are processed by the GPU. This setting should be selected to 1. After applying all of the settings click on the Apply Button.

Variable Rate Super sampling (VRSS)

Variable Rate Supersampling (VRSS) is a new technique to improve image quality in VR games. It uses NVIDIA Variable Rate Shading (VRS), a key feature in NVIDIA's Turing architecture. Keep it OFF.

Set PhysX Configuration

Inside PhysX Configuration, click on the drop-down menu and select your NVIDIA Graphics Card. Once done, simply click on the Apply button.



Conclusion

This is a thorough explanation of all the NVIDIA Control Panel settings for best gaming performance.