

# Set up the NVIDIA Quadro GPU and 3D monitor for stereoscopic mapping

February 2021, Version 1.0

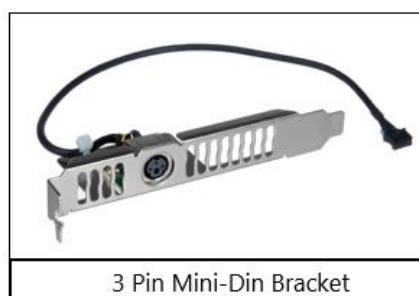
This installation guide details the steps to configure and set up your NVIDIA Quadro GPU graphics card and monitor for active stereoscopic mapping in ArcGIS Pro

The instructions below are based on the Windows 10 operating system.

## Requirements

The following are required for this workflow:

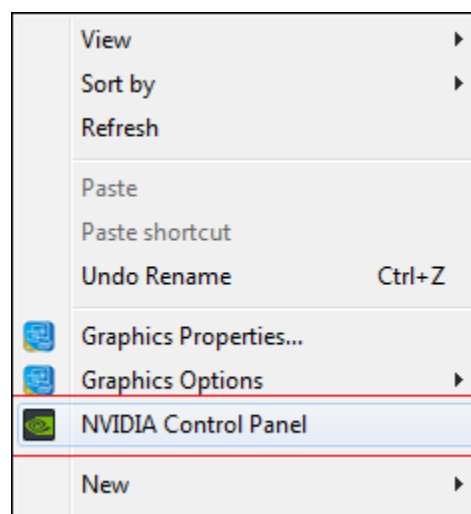
- A 3D stereoscopic monitor that supports a minimum refresh rate of 120Hz connected to the computer system.
- Desktop computer with a Quadro graphics card that supports stereoscopic viewing and has a 3-pin mini-din connection embedded or connected via a bracket.

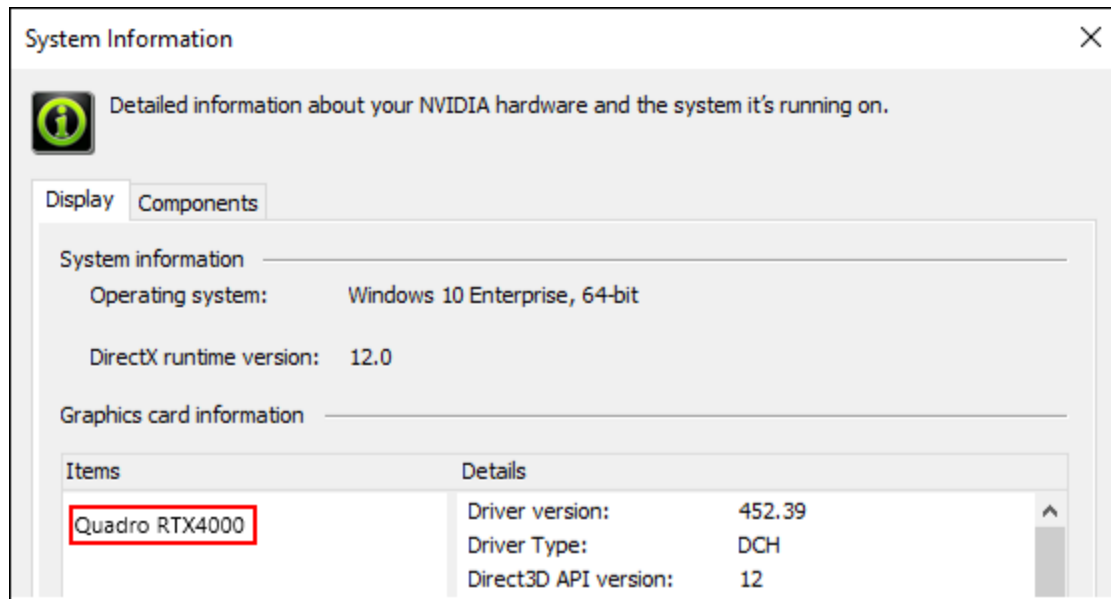


## Determine your graphics card type

To determine your graphics card type, complete the following steps:

1. Right-click your desktop and select **NVIDIA Control Panel**.  
This opens the **NVIDIA Control Panel** dialog box.
2. At the bottom of the dialog box, click **System Information**.  
This opens an information dialog box that displays the graphics card type and version. Make note of this information.





3. Close the **System Information** and **Nvidia Control Panel** dialog boxes.

### Download the latest graphics driver version

To download the latest version of the graphics driver, complete the following steps:

1. Open a web browser, type [Nvidia graphics driver download](#) and click **Enter**.
2. From the **Download Drivers | NVIDIA** results, click **Driver Downloads**.  
This opens the **NVIDIA Driver Downloads** web page.
3. For **Product Type**, click the drop-down menu and select the graphics card identified in the **System Information** dialog box.
4. For **Product Series**, select the appropriate option.
5. For **Product**, select the graphics card used by your computer.  
You may need to recall the information noted in the **System Information** dialog box.
6. For **Operating System**, choose **Windows 10 64-bit**.

### NVIDIA Driver Downloads

Select from the dropdown list below to identify the appropriate driver for your NVIDIA product. [Help](#)

Product Type:

Product Series:

Product:

Operating System:

Download Type:

Language:

SEARCH

7. Click **Search** to execute the process.
8. Download the driver identified from the search and save it to a known location on disk.

Next, you will install the downloaded driver.

### Install the latest graphics driver version

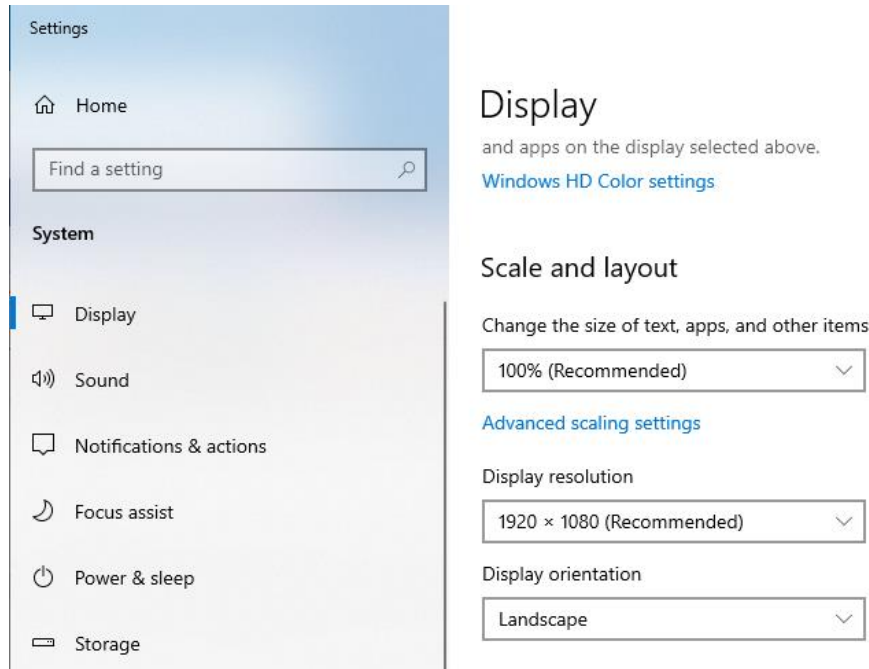
To install the latest version of the graphics driver, complete the following steps:

1. Double-click the downloaded graphics driver to start the install process.
2. Click **Run** if prompted with a question to run or not.
3. Click **OK** to accept the folder where the installable will be extracted and saved.
4. Once the extraction is complete, a system compatibility check is conducted automatically. If the graphics driver fails the compatibility tests, you must download and install a different driver.
5. If the graphics driver passes the compatibility test, click **Agree and Continue** to proceed with the installation.
6. For **Installation Options**, click the **Custom (Advanced)** option button and click **Next**.
7. Click **Finish** once the installation process is complete.

### Configure the monitor (single and double)

To configure the monitor, complete the following steps:

1. Right-click your desktop and select **Display settings**.  
This opens the **Display** settings window.
2. In the **Scale and layout** section, for **Display resolution**, select **1920 x 1080 (Recommended)** from the drop-down list.  
Your settings should look similar to the ones below.

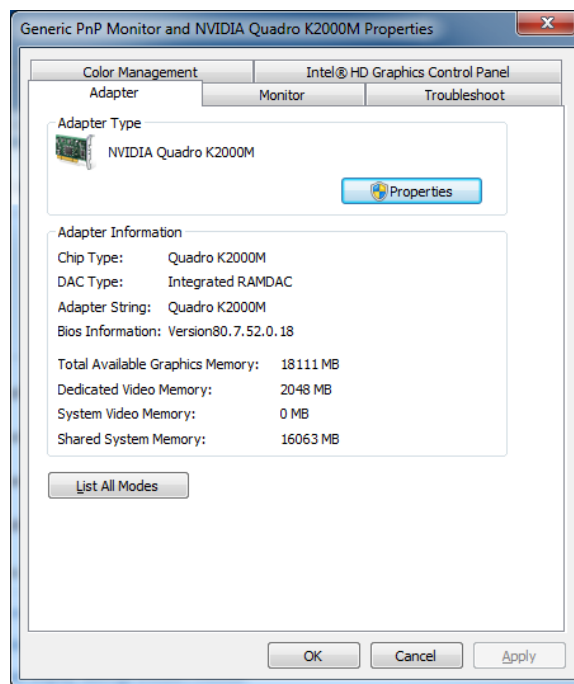


3. In the **Multiple displays** section, ensure **Extend these displays** is selected from the drop-down menu.

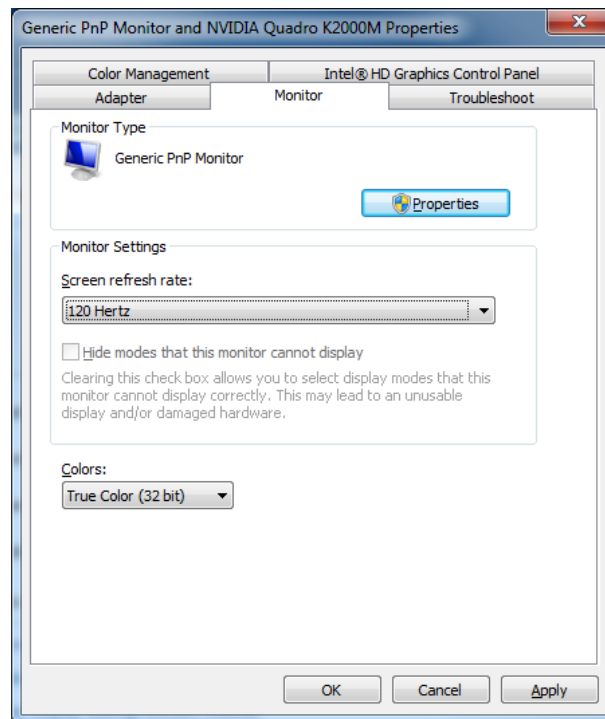
**Note:**


If working with a single monitor configuration, skip to step 6.

4. In the **Select and rearrange displays** section, click **Identify** to determine the ID of the 3D monitor.
5. In the **Multiple displays** section, select the 3D monitor and click the **Make this my main display** check box.
6. Click **Advanced display settings**.  
This opens the **Advance display settings** window.
7. Ensure the 3D monitor is selected from the drop-down menu in the **Choose display** section.
8. In the **Display information** section, click **Display adapter properties for Display 1** or **2** (whichever corresponds to the 3D display ID number).  
This opens a display properties window similar to the one below.



9. Click the **Monitor** tab.
10. Under the **Monitor Settings** section, for **Screen refresh rate**, select **120 Hertz** from the drop-down menu and click **OK** to save the settings.



11. Click **OK** to close the display properties window.
12. In the **Advanced display settings** window, click the **Back** arrow  in the corner of the window to return to the **Display** settings window.
13. In the **Multiple displays** section, ensure **3D display mode** is checked on.

## Multiple displays

3D display mode

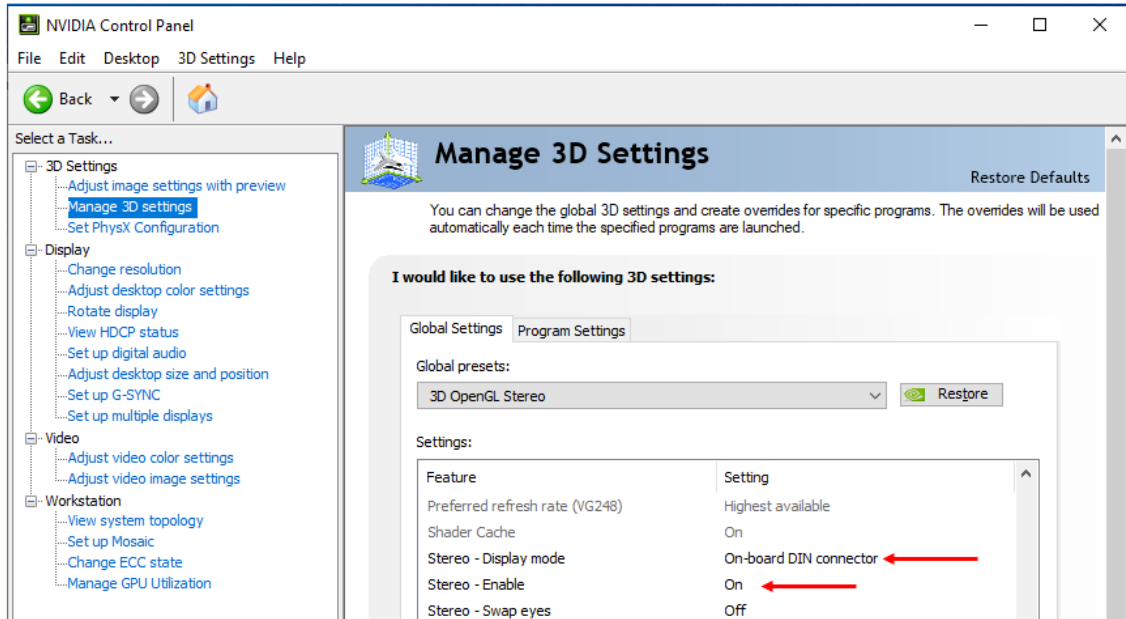


14. Close the **Display** settings window.

## Configure the stereoscopic view

To configure the stereoscopic view, complete the following steps:

1. Right-click your desktop and select **NVIDIA Control Panel**.  
This opens the **NVIDIA Control Panel** window.
2. In the **3D Settings** category, select **Manage 3D settings**.  
This opens the **Manage 3D Settings** section of the window.
3. Below **I would like to use the following 3D settings**, click the **Global Settings** tab.
4. For **Global presets**, select **3D OpenGL Stereo** from the drop-down list.
5. Ensure **Stereo - Display mode** is set to **On-board DIN connector** and **Stereo - Enable** is set to **On**, as in the example below.



The computer stereo configuration is now complete.

## Summary

Following these installation instructions, you completed the following tasks:

- Identified, downloaded, and installed the driver for the NVIDIA Quadro GPU
- Configured the 3D monitor
- Set up the 3D monitor for stereoscopic mapping

Next, you will set up your stereographic vision kit of choice. Please refer to the pertinent installation instructions for proper set up.