
User's Guide

Is my graphics card suitable?

Document version 1.0.0



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CHAPTER 1

Is my graphics card suitable?

Any Starfish product requiring display of video and/or subtitles needs to have a suitable graphics card installed in the system.

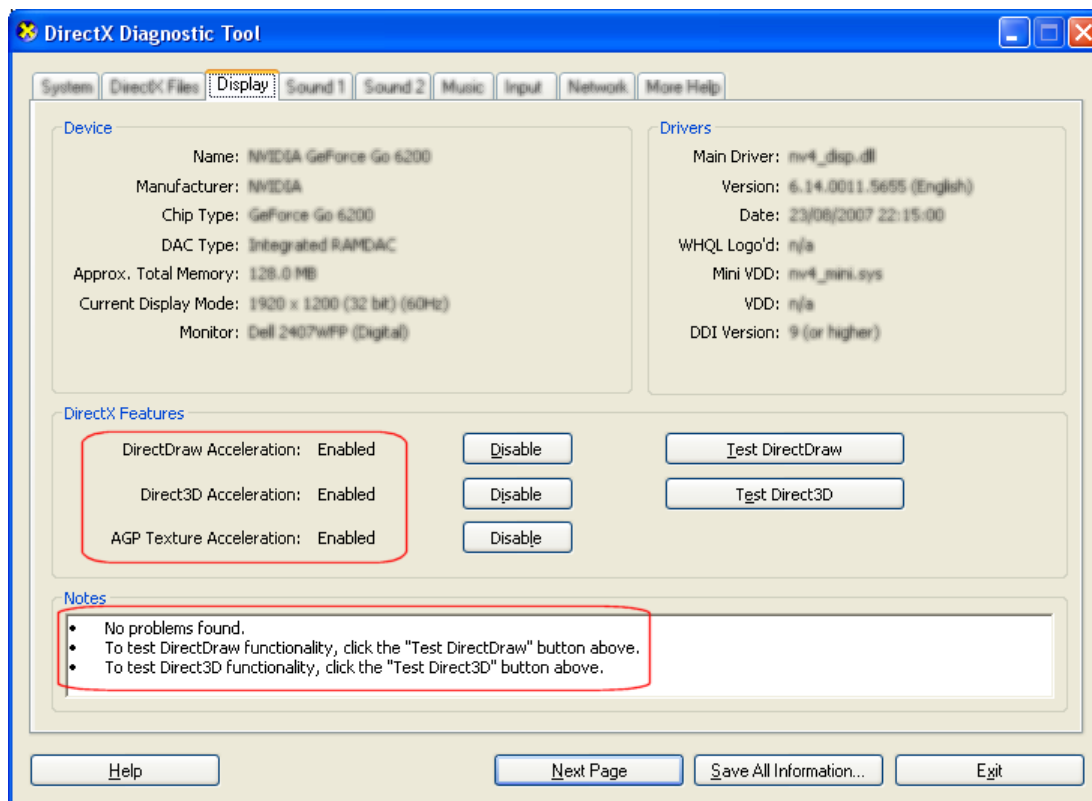
Unfortunately many PC manufacturers ship desktop PCs with a *very* basic graphics card as part of the motherboard. Whilst these cards are suitable for word processing, or viewing YouTube clips, they simply do not have the display capabilities for use with video in an editing environment.

Fortunately, this can be remedied by installing a suitable graphics card that supports directX in hardware. Cards at the lower end of this specification typically cost less than £100. One such example is the nVidia Quadro NVS290, equivalents are also available from ATI and other manufacturers. You should assess the card capabilities and physical interface connections to ensure compatibility with your system before making any purchase.

The following section will help you test your current card, and also provide some additional notes regarding interface types.

Testing Your Graphics Card Using DXDiag

This software requires full hardware support for DirectX. To check the suitability of your current graphics card, Microsoft provide DxDiag as a diagnostics utility that is installed as part of **DirectX**. To run the test, type `dxdiag` from a command prompt or from the **Run** command in the **Windows Start** menu.



All three **DirectX Features** must show as **Enabled** as above. You must also run and pass the **DirectDraw** and **Direct3D** tests.

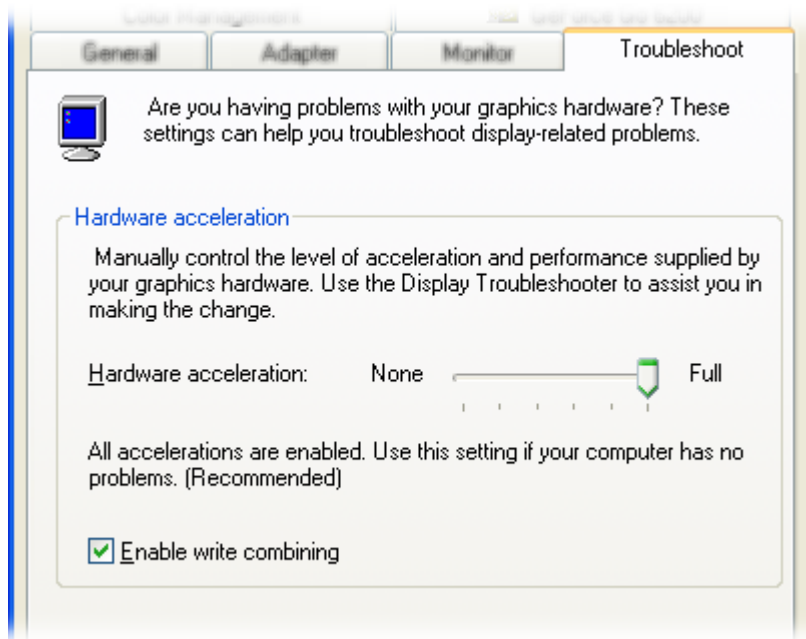
In **Notes**, the system must report **No problems found**.

Please be aware that **AGP Texture Acceleration** is nothing to do with the now defunct AGP card interface specification.

Hardware Acceleration

Server operating systems often default to lowering the level of hardware acceleration provided by the graphics card, and this needs to be corrected.

- Right click your desktop, select **PROPERTIES**, **Settings** tab.
- Click the **Advanced** button, and select the **Troubleshoot** tab.
- Your graphics card must have the **Hardware acceleration** set to **Full** as shown below.



Graphics Card

New PC systems use PCI Express for connecting graphics cards, and it is the modern replacement for the AGP interface for using high performance graphics cards.

The official abbreviation for PCI Express is PCIe but is often written as PCI-E. These cards use a serial connection between the card and motherboard. PCIe should not be confused with PCI or PCI-X which use parallel communications between the card and the motherboard.

The serial connections used by PCIe cards are called lanes, and you will see graphics cards specified as PCIe x1 or PCIe x16. The x1 and x16 refer to the number of lanes that the card requires to *operate* correctly. There are no card manufacturers currently making x2, x4 or x8 cards.

A PCIe card will fit into a slot which has the same number of lanes or more. Some manufacturers provide PCIe slots with open-ended sockets to permit physically longer cards that has more lanes to fit. You should also be wary that the number of lanes actually connected to a slot may be less than the number supported by the physical slot size. For example, a x8 connector may exist that actually only runs at x1. This slot would will allow any x1, x2, x4 or x8 card to be used, but it would only running at x1 speed. This type of socket is described as a x8 (x1 mode) slot, meaning it physically accepts up to x8 cards but only runs at x1 speed. They are commonly found on server chassis, and are often badly marked regarding their reduced capacity!

As already mentioned, the number of lanes a graphics card specifies is the number it *requires* to run with *full* capabilities. This means that although you may be able to physically fit a PCIe x16 card into a PCIe x8 slot, the card driver will disable most of the hardware DirectX support, and as such it will not be suitable for this system.

Desktop workstation PCs usually come supplied with a fully capable x16 slot available for you to fit a "premium" graphics card, but servers chassis are commonly supplied with only x1 and x8 slots. This means that you must chose a PCIe x1 graphics card for these type of systems in order to get the full capabilities required of the card.

Ensure you carefully check your motherboard's capability before you buy a PCIe card.

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