INSTALLING A GRAPHICS CARD

Graphics cards are typically the first item a gamer or general computer user decides to upgrade when they are seeking better graphics performance from their system. There are a number of different graphics cards and you want to be sure that you choose the correct card for your needs and for your system. There are currently three different types of graphics card interfaces to choose from.

The first type of card interface is not very common and is limited to specialty use cards most commonly used for multiple monitor systems. These cards use the standard PCI (peripheral component interconnect) slot. The second type of graphics card interface that is still common in many "older" systems is the AGP (Accelerated Graphics Port) slot. AGP slots are typically seen in the 4x and 8x varieties. The last type of card interface is the PCI Express slot. PCI-E (or PCIe) is the newest graphics card interface and offers the highest performance.

I mention the different graphics card slots so that you will understand that not all graphics cards will work with all types of mainboards. Be sure that you buy the card that has the appropriate interface for your system. If you are in doubt as to which type of card your system will support, check with the computer or mainboard manufacturer for your system before you buy.

Once you get the correct type of graphics card for your PC, follow these simple steps below to install your new graphics card. Installing the graphics card is one of the easiest upgrades you can perform on your system and also one of the upgrades you will see the most benefit from when it comes to gaming.

1. The first step is to gather the tools you will need to install your new graphics card. Many newer computer cases are tool-less. You may not need any tools to install your graphics card. However, it is still very common to have cases that use screws to hold the side panels on the case, as well as to hold the expansion slot covers on the case. So, have a medium Phillips-head screwdriver ready just in case.

2. After you get your tools together, you are ready to disconnect your computer from the power outlet and remove the cables connecting your peripherals to the computer. After the cables are removed, you are ready to remove the side panel.

3. After you remove the side panel, locate the appropriate expansion slot cover on your case and remove it to allow for the install of your new graphics card. Some cheaper cases have expansion slot covers that snap off and can't be replaced. Be sure that you choose the correct slot cover or covers to be removed. Often, the easiest way to be sure that you are removing the correct slot cover is to hold your graphics card over the appropriate slot on the motherboard and see which cover needs to be removed.

4. Once you have removed the correct expansion slot cover from your case, you are ready to actually install the card. It is important to point out here that you must be very careful at this

step of the installation. The capacitors and components that are on the surface of the graphics card are very fragile. Mishandling the card can cause irreparable damage that will likely not be covered by the warranty.
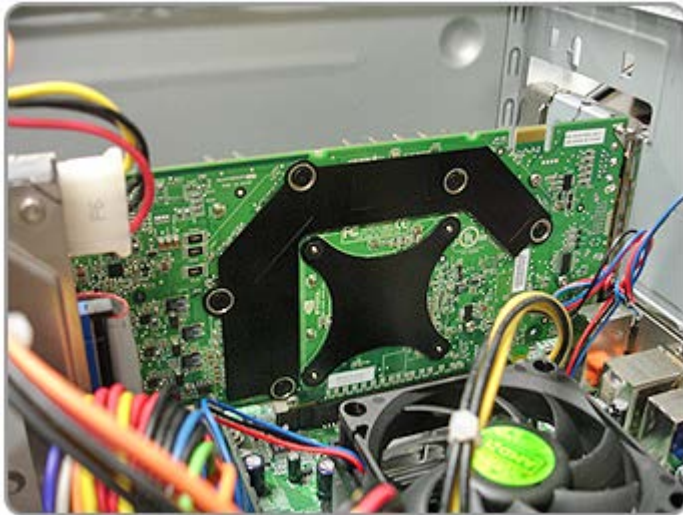
Hold the graphics card by the edges of the board, not by the heat sink or fan and not by any of the components of the graphics card. Once you have the card aligned correctly for the slot you have chosen to use, gently but firmly press the card into place. Every mainboard manufacturer uses a retainer system of some sort to lock the card into place on the mainboard. After you get the graphics card secured in place on the mainboard, be sure that you secure it to the case where you removed the expansion slot cover with the same hardware that held the expansion cover in place.

5. This step only applies to those installing some higher end PCI Express graphics cards. Many PCI-E graphics cards require a special six-pin power adapter from the computer's power supply to operate. The PCI-E power connector will typically be black and located near the rear edge of the graphics card. If your graphics card has this six-pin power plug, be sure that you connect it or your card may not function correctly.
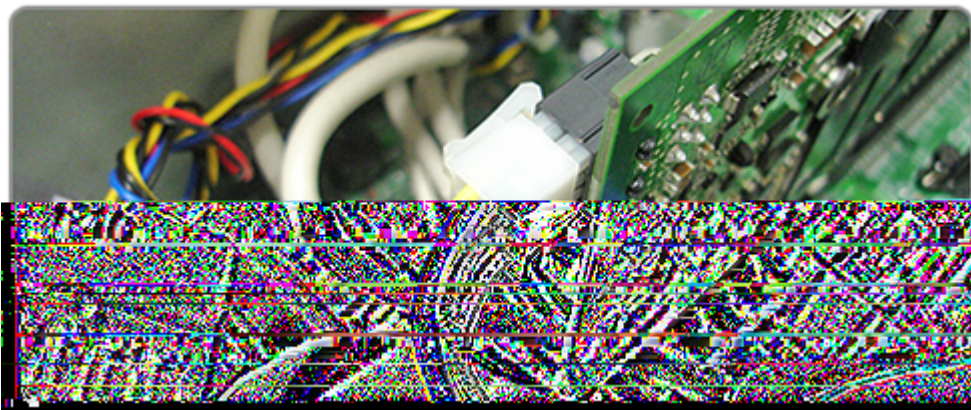
6. You have now completed the hardware portion of the graphics card install. When completed, your system should resemble the image below. You are now ready to replace your side panel,

reconnect your peripherals, and power your computer back up.
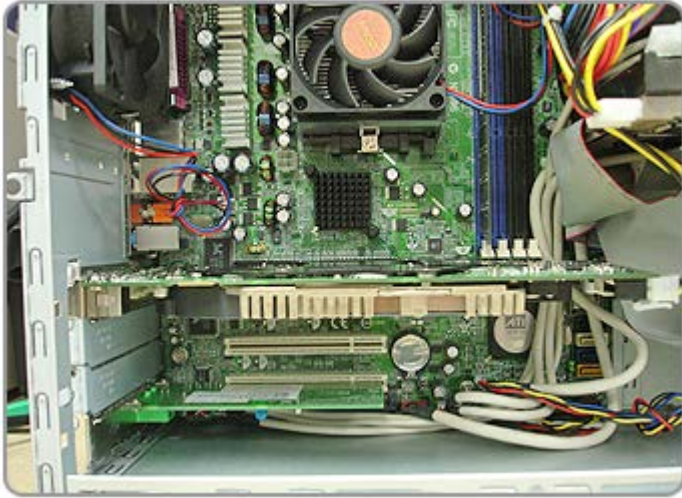
7. The final step after powering your computer back up is to install the drivers for your new graphics card. While most graphics cards will come with a disk containing the drivers and possibly other applications, it is recommended that you download the newest drivers for your graphics card from the manufacturer's website. Follow the instructions from the manufacturer to install the graphics card drivers and you are finished! Congratulations - you have installed your new graphics card!