Gaming
Imaging
3D
Video
Entertainment
Photos
Graphics

Graphics Card
Installation Guide

Table of contents

Overview

Thank you for purchasing a genuine EVGA graphics card. EVGA is an NVIDIA® Authorized Solution Provider that builds high performance 3D accelerators based on reference designs by the NVIDIA Corporation. Our graphics accelerator cards are fully compatible with the latest 2D and 3D graphical requirements with full support for Microsoft® DirectX®, DirectDraw®, DirectShow®, Direct3D®, and OpenGL®.

Hardware Installation

Preparing Your Computer

WARNING: Turn off the power to your system and discharge your body's static electric charge by touching a grounded surface – for example, the metal surface of the power supply – before performing any hardware procedure. **EVGA assumes no liability for any damage, caused directly or indirectly, by improper installation of any components. If you do not feel comfortable performing the installation, consult a qualified computer technician. Damage to system components, the graphics card, and injury to yourself may result if power is applied during installation.** Now that you have prepared your computer, you are ready to install your graphics card.

Quick Start

1. Power off the computer and all attached devices such as monitors, printers, and external components.
2. Disconnect the display cable from your current display adapter from the back of your computer.
3. Remove the cover of your computer case. In most cases this is held in place by several screws or clips – you may need to consult your system manual or case manual for additional information.
4. Remove your existing graphic adapter (if you have one) from your computer. You will do this by removing the retaining screw and gently rocking the card back and forth, applying upwards pressure. **(Please note: if your motherboard has integrated video, you may need to disable it on the motherboard. Please contact your system or motherboard manufacturer for additional information).**
5. Align your new card with the PCI-Express slot, the brown AGP™ slot or the white PCI slot, as appropriate, and press it in firmly until the card is fully seated. Make sure that the metal contacts of the card are completely pushed into the expansion slot.
6. Replace the retaining screw to fasten the card into place and then replace the computer cover.
7. Reconnect any devices that you detached during installation and then connect the monitor's video cable to your new video card.
8. Apply power to your system and reboot.

Hardware Installation Details

Power off the computer –
disconnect the display cable
Remove your existing graphics adapter (if applicable)

PCI EXPRESS X16

PCI Express X2 or X4 Slot   **PCI Express X1 Slot**

* Note that the notch is on the edge connector and slot.

PCI

AGP 4X 8X

AGP 3.0 or 2.0 Slot
.8v

AGP 2.0 Universal Slot
1.5v

AGP 1.0 Slot*
3.3v

*Note that the notch(es) may be offset to the right or left from the middle of the edge connector and slot.

Important Information
PCI and PCI-Express slots are different, so prior to in-stalling a video card in to your system, please verify that the video card bus type and available slot are the same.

PCI-Express Video Cards: Insert the video card into the motherboard's primary PCI-Express slot.

AGP Video Cards: Insert the graphics card into the brown AGP 2.0 or above compliant slot.

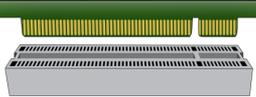**PCI Video Cards**: Insert the graphics card into an available white PCI 2.1 or above compliant slot.

Graphics Cards Requiring Additional Power

If your card is equipped with a supplemental power adapter, we strongly advise that it be connected at the time of installation. This supplemental power adapter ensures that your video card receives a clean and strong power signal that will allow it to function at optimal performance levels. Your card may require a 6 pin PCI-E and/or an 8 pin PCI-E supplemental power connection.

Preparing Your Operating System

Although the EVGA driver CD provides a simple solution for most installation situations, we still advise you to correctly prepare your system before installing any display drivers. Before installing any of our drivers, please make sure that you have uninstalled prior display drivers from the Windows Control Panel and have disabled any integrated display adapters in the Device Manager if necessary. (Disable anti-virus software during installation).

Software Installation

When you boot up your computer for the first time after installing your new graphics adapter, Windows will detect a new display device and attempt to search for the drivers. Please click cancel.

Installing the drivers for your new graphics card is made fast and simple through the use of the included EVGA driver installation CD. Insert the EVGA Installation CD and allow the autorun driver installation menu to start.

> *Note: If the autorun driver installation menu does not appear, it can be launched manually by choosing the Run command from the Windows Start Menu and entering: D:\autorun.exe (where D is the letter of your CD-ROM drive).*

Once the autorun installation menu appears, select the "**Install Video Drivers**" button from the menu. This will start the driver installation process.

If you are prompted by the Microsoft WHQL (Windows Hardware Quality Labs) warning, please select the Continue/Install Anyway option, as it is safe to do so. *See the examples below.*

Windows XP   Windows Vista

6

NVIDIA Control Panel™ Features:

The NVIDIA Control Panel allows you to configure a multi-display environment, whether it is through multiple computer monitors (either digital or analog) or by using a monitor in conjunction with a television set. The ability to use multiple displays within Windows can simplify many everyday tasks by spreading out the Windows Desktop area or by allowing you to watch your favorite DVD movie on your television.
Please visit *http://www.evga.com/support/guides* for our web site tutorial.

Single Mode

The Single Mode option in the Display section of the control panel disables secondary output, allowing viewing in only one display.

DualView

A multi-display capable graphics card will be able to have two independent resolutions that can be configured differently from each other. Unlike span mode, where the desktop stretches across two screens, DualView can control different resolutions, color depth and refresh rates settings for each display.

### Horizontal and Vertical Span Modes

In these modes, the desktop area is spread across both displays at equal resolution. This mode can be set for either horizontal or vertical orientation.

Clone Mode

In Clone Mode, two monitors display identical images, which is useful for presentations. A presenter may use the smaller monitor on the podium, while a projector monitor reflects the presentation to the audience. Clone mode also requires identical resolutions between both displays.

SLI/PhysX Configuration

The NVIDIA Control Panel also provides configuration options for SLI (multiple display adapters) in the form of 2way SLI, 3way SLI, and Quad SLI. These options will be located under the 3D Settings section when two or three (requires compatible 3way SLI video card) matching Video Cards are installed. You may also enable PhysX for supporting games and designate which video card will handle PhysX processing. *See example below.*
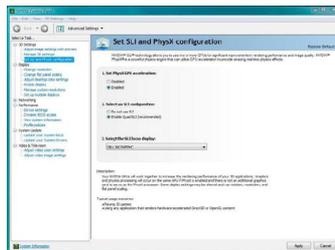
NVIDIA Control Panel Features:

Configuring HDMI for Audio Output (Select Models only):

Connecting your HDTV via HDMI allows you to output both digital audio and video from your graphics card to an HDTV through a single cable. Connecting through intermediary devices such as hubs or receivers is not recommended.
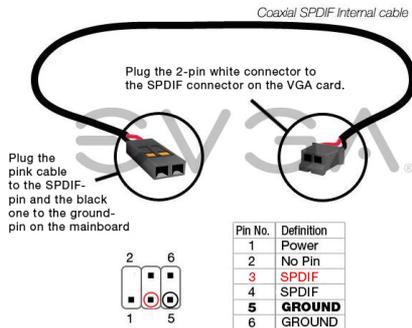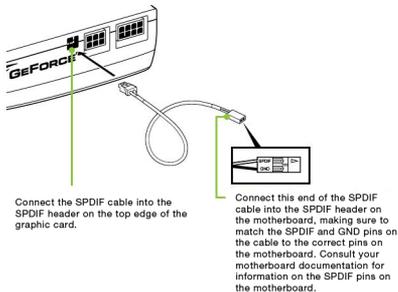
If you are connecting to your display over HDMI and have attached the SPDIF cable for audio output (refer to the illustrations below for instructions on connecting the SPDIF cable), you need to set the SPDIF output to be your default audio device. The SPDIF cable may be connected to a SPDIF header on a motherboard or sound card.

In Windows Vista, select **Start, Control Panel, Sound**. On the *Playback* tab, select the **SPDIF output device** and select
Set Default.

Windows XP may require additional driver support. Please consult your motherboard or sound card documentation for additional information.

Connecting SPDIF to the Video Card   *Connecting to your EVGA Motherboard SPDIF header*

Connect the SPDIF cable into the SPDIF header on the top edge of the graphic card.

Connect this end of the SPDIF cable into the SPDIF header on the motherboard, making sure to match the SPDIF and GND pins on the cable to the correct pins on the motherboard. Consult your motherboard documentation for information on the SPDIF pins on the motherboard.

Coaxial SPDIF Internal cable

Plug the 2-pin white connector to the SPDIF connector on the VGA card.

Plug the pink cable to the SPDIF-pin and the black one to the ground-pin on the mainboard

Pin No.	Definition
1	Power
2	No Pin
3	SPDIF
4	SPDIF
5	GROUND
6	GROUND

Quick Fixes

Problem: When powering the system, all I hear is a loud and high-pitched squealing noise.

Cause: The video card is not receiving sufficient or any supplementary required through the 6 pin PCI-E or 8 pin PCI-E power connections from the Power Supply Unit.

Solution: Verify whether your card requires additional power connections. Depending on the model, these are located at the back end of the card (opposite side of the DVI and VGA ports) or on the side of the card near the back end. Ensure that you have connected the appropriate 6 or 8 pin PCI-E supplementary power cables and are not using unapproved power adapter cables.

Problem: The computer will only display a black screen after it boots into Windows.

Cause: The integrated video adapter has not been disabled prior to installing the new PCI based video card and/or not having uninstalled the display drivers from your previous display adapter.

Solution: Ensure that the integrated video adapter has been disabled through your motherboard's BIOS or the Windows Device Manager prior to installing the new video card and that you have uninstalled the drivers through the Windows Control Panel. After the new card has been installed, connect the monitor cable and if required, any supplemental power adapters to the new video before booting up the system.

Quick Fixes (continued)

Problem: At boot-up, all you hear is a series of beeps from the computer but see no screen at all.

Cause: The beep sounds are a warning sound from the motherboard BIOS that says that it cannot initialize the video card. This can mean one of three things:

1) The card is not seated correctly.
2) There is a problem with the motherboard's video card slot.
3) There is a problem with the video card.

Solution: Remove the card from the computer and reinsert it, making sure that the card is seated properly in the slot. Then try to boot the computer again. If this does not work then the problem is either with the motherboard or the video card and you should contact your hardware manufacturer for further assistance.

Problem: On systems with an integrated graphics chip, you get error messages and conflicts after you install your new video card.

Cause: Many systems with an integrated graphics chip need to have these adapters disabled before you can correctly use an add-in graphics adapter. If they are not properly disabled, they will cause conflicts with the adapter that you are trying to install.

Solution: Disable any built-in graphics adapters through the Windows Device Manager prior to installing your new graphics card. For additional information relating to this issue, please consult your motherboard or system manual, or contact your system vendor or motherboard manufacturer to get detailed information on how to accomplish this for your particular system.

Quick Fixes (continued)

Problem: My card carries the support for TV-Out but cannot get a display on the TV.

Cause: The TV is not properly detected by Windows due to signal loss and/or is not enabled within the Display Control Panel.

Solution: There must be a direct connection from the TV to the graphics card through an RCA, S-Video cable or DVI cable connector. There cannot be any intermediary devices such as a VCR, receiver or switch box within the connection. Power on the TV before booting Windows and enable the TV-Out feature under Device Selection of the Display Control Panel.

Problem: Games lockup or crash to the desktop.

Solution: Verify that all the necessary hardware drivers are installed and up to date including the chipset, video and sound card drivers. Reinstall the latest version of DirectX or the faulty program itself. Also, verify the game has all the necessary patches installed that are available from the developer/manufacturer.

Problem: Where can I find the latest drivers for my graphics card?

Solution: The latest drivers can be found at: ***http://www.evga.com/support/drivers***

Quick Fixes (continued)

Problem: How do I enable the DVD playback feature?

Cause: The video card can output DVD's in conjunction with a DVD hardware or software rendering application such as PowerDVD™ or WinDVD™.

Solution: Verify that the add-on hardware DVD decoder is compatible with the graphics card or that the DVD software rendering application is installed properly and/or updated.

Problem: My HTPC's monitor's sides are cut-off.

Cause: This problem is called "overscan" and some DLP / Plasma / LCD TVs have options to compensate for "overscan". Please refer to your TVs mfg. or manual on whether or not you have this option.

Solution: Make sure you have the latest NVIDIA Forceware drivers for your video card and that your HTPC monitor is setup properly in the NVIDIA Control Panel. (Located under the Video & Television section)

Default BIOS Settings

If for any reason you made changes to your BIOS settings and your system is unstable, change the BIOS back to its default settings.

*Note: For problems not listed in this document, please go to the EVGA Knowledge Base at **http://www.evga.com/FAQ***

Contacting Customer Service

EVGA is dedicated to supporting our graphics display products. Contacting EVGA Customer Service is easy! We can be reached by phone, fax, and on the web. Before contacting Customer Service, please review this manual. If you need to contact Customer Service, please have your system configuration as well as your card's model number and serial number ready. You will need to register your product before a support technician can assist you. You may register your card online at: ***http://www.evga.com/register***, or when you call for support, a staff member will register you.

- Hours of Operation: 24/7 Technical Phone Support
- Phone Support: (888) 880-EVGA (3842)
- Fax Support: (714) 528-4501
- Tech Support Web Site: ***http://www.evga.com/support***

Information to keep handy before calling

- Motherboard Model and Manufacturer: _____

- Motherboard Chipset (not processor): _____

- Processor Type and Speed: _____

- Operating System and Version (Service Packs installed, if any):_____

- Model Number of EVGA Graphics Card: _____

- Serial Number of EVGA Graphics Card: _____

Warranty VOID if removed from video card

Thinking about registering? Do it now!

"Why should I register?" you ask. Well, in order for you to receive the best possible support, we need to know who you are and what kind of product you have purchased. So don't wait … **register online now**!

Should you require any assistance with the installation or troubleshooting of your EVGA graphics card, please visit the Support section of our website at **http://www.evga.com/support/**. There you'll be able to download drivers, check out our extensive Knowledge Base, and submit technical and customer support inquiries. Be sure to visit the EVGA Forums at: **http://forums.evga.com/**

Contact our Customer Service through email to get all of your questions answered and problems resolved - its fast, its easy, and it works! If you require immediate assistance, please contact our Customer Service at **888.880.EVGA (3842)**.

Point your browser to **http://www.evga.com/register** and have the following information ready before contacting customer service:
-Card Name & Part Number
-UPC Number
-Serial Number

Warranty Program To Fit Your Needs

For most of our **Retail Products**, EVGA is offering a **Lifetime Warranty program**. For more information please visit: **http://www.evga.com/support/lifetime/** (Must be registered within 30 days of purchase date.)

The rest of the EVGA product line is still covered under the excellent **1+1 Warranty**. For more information please visit: **http://www.evga.com/support/1+1/**

As a valued EVGA customer; you'll be sure to receive a warranty that will fit your needs.

The EVGA Advanced RMA (EAR) Program
The EVGA Advanced RMA (EAR) Program is a program to protect yourself and your product in the case of product failure. For more details please visit: **http://www.evga.com/EAR/**

The EVGA Step-Up TM Program
In order to give our customers the greatest amount of flexibility when purchasing EVGA video cards, we have instituted the EVGA Step-Up™ Program. For more details please visit: **http://www.evga.com/stepup/**

Compliance Information

FCC Compliance Information

This device complies with FCC Riles Part 15. Operation is subject to the following two conditions:

This device may not cause harmful interference, and this device must accept any interference received, including interference that may cause undesired operation. This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are deigned to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the manufacturer's instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur 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: Increase the separation between the equipment and signal source. Connect the equipment to an outlet on a circuit different from that to which the signal source is connected.

Consult the dealer or an experienced computer technician for help. The use of shielded cables for connection of the monitor to the graphics card is required to ensure compliance with FCC regulations. Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

CE Compliance Information

EMC Directive 89/336/EEC and Amendment 92/31/EEC, Class B Digital Device EN 50081-14, Generic Emissions Standard for Residential, Commercial and Light Industrial Products (EN 55022/CISPR 22, Limits and Methods of measurement of Radio). (EN 55022/CISPR 22, Limits and Method of Measurement of Radio Interference Characteristics Information Technology Equipment) Warning: This is a Class B product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measure. EN 50082-1, Generic Immunity Standard for Residential, Commercial and Light Industrial Products (IEC 801-2, IEC 801-3, IEC 801-4)

Macrovision Product Notice

This product incorporates copyright protection technology that is protected by U.S. patents and other intellectual property rights. Use of this copyright protection technology must be authorized by Macrovision, and is intended for home and other limited viewing uses only unless otherwise authorized by Macrovision. Reverse engineering or disassembly is prohibited.

Trademark Information

09-01