

GALAXY

GEFORCE GTX460 WHDI

User Manual

Equipment

The following equipment and documentation are included in the GeForce GTX 460 WHDI graphics card box.

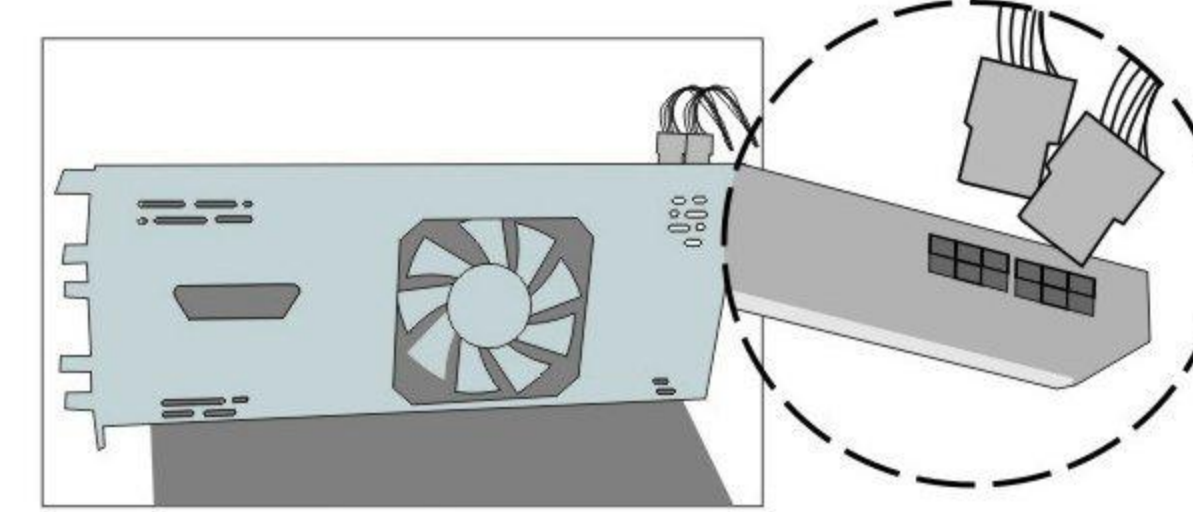
GeForce GTX 460 WHDI Graphics Card	x1
Antenna	x5
Receiver	x1
Transformer	x1
HDMI cable	x1
Mini USB cable	x1
USB extension cable	x1
6-pin PCI-E power converter	x2

Features

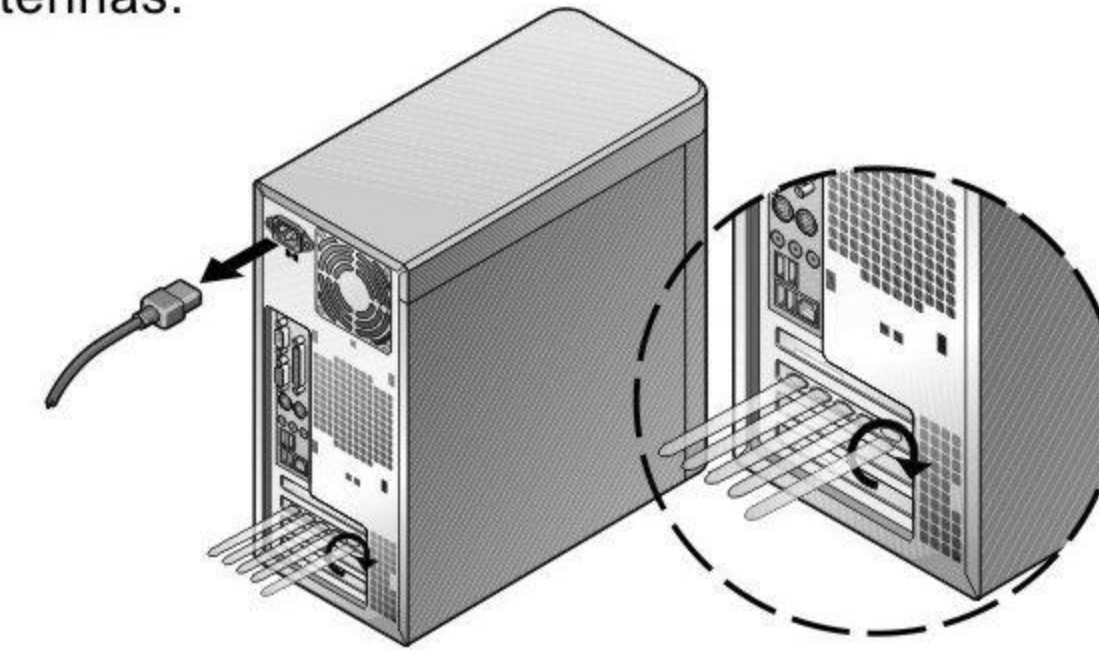
- Transmit uncompressed high definition video wirelessly
- for up to 720p/1080i resolution
- Works at 5GHz baseband, 40MHz bandwidth
- Up to 30 meters coverage
- Latency less than 1ms
- Compatible with HDMI 1.3
- 128-bit AES data encryption
- Supports EDID, HDMI CEC and HDCP
- Firmware upgradable via USB

Hardware Installations

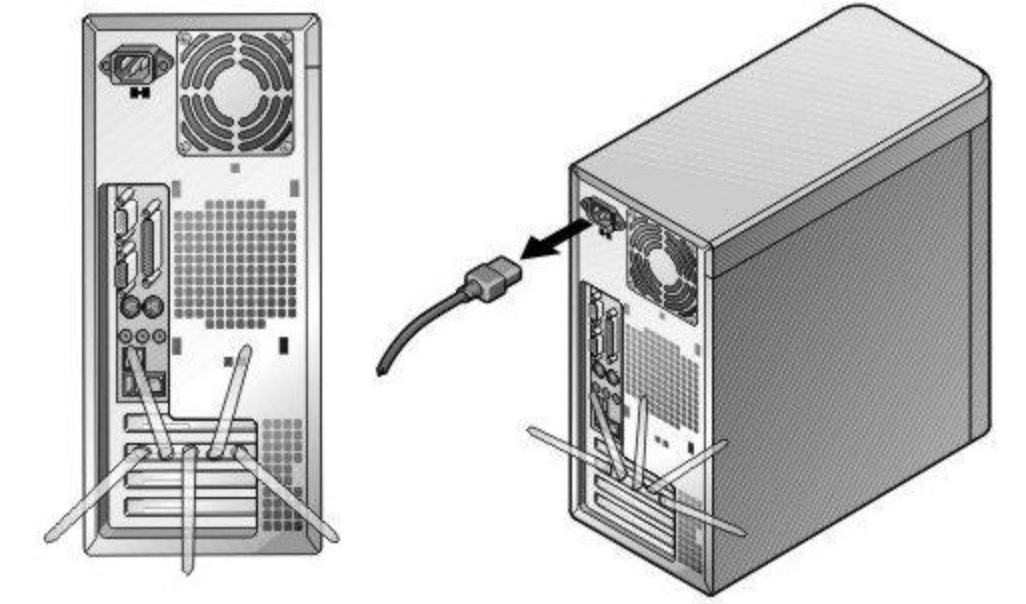
1. Plug the GeForce GTX 460 WHDI Graphics Card into the primary PCI-E x16 slot on your motherboard, and connect the two 6-pin PCI-E auxiliary power connectors coming from the computer power supply to the connectors on the top edge of the card.



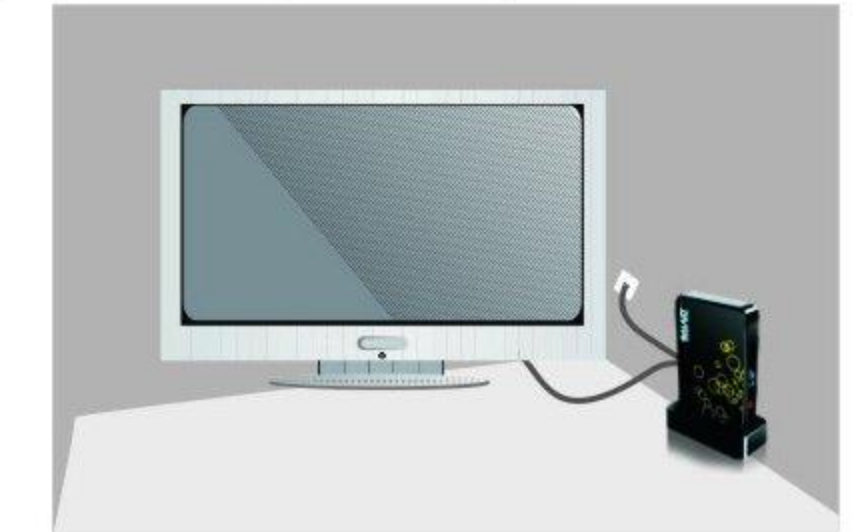
2. Install the five antennas; turn the antennas in clockwise direction to fasten the antennas.



3. The signal quality of WHDI heavily depends on how the antennas are positioned. Both “W” shape and rounded shaped are recommended (see diagram below). You can also test and adjust the shape manually to fit the usage environment.



4. Connect the supplied power transformer to the WHDI receiver. Use the bundled HDMI cable to connect the receiver with LCD TV or AV receivers. NOTE: It is recommended to use the bundled stand to place the receiver vertically for best signal reception.



5. Make sure all cables are connected; you can now switch on the computer. It is recommended to connect the WHDI display alone for the first time to test the WHDI connection. The WHDI graphics card and the receiver will identify and pair with each other automatically.

During startup, messages will be shown up on the top right hand corner of the display:

“NETWORK CONNECTING”

Indicates the receiver is trying to connect to the WHDI graphics card.

“NETWORK CONNECTED VIDEO CONNECTING”

Indicates the receiver has already established a connection with the graphics card, and is trying to send video signals.

“NETWORK CONNECTED VIDEO CONNECTED”

Indicates the receiver has connected with the WHDI graphics card successfully. Video and Audio is now synchronized with the PC.

“Network connect failed. Please the device is ready”

Indicates a connection could not be established. Please make sure all hardware are set up and connected properly.

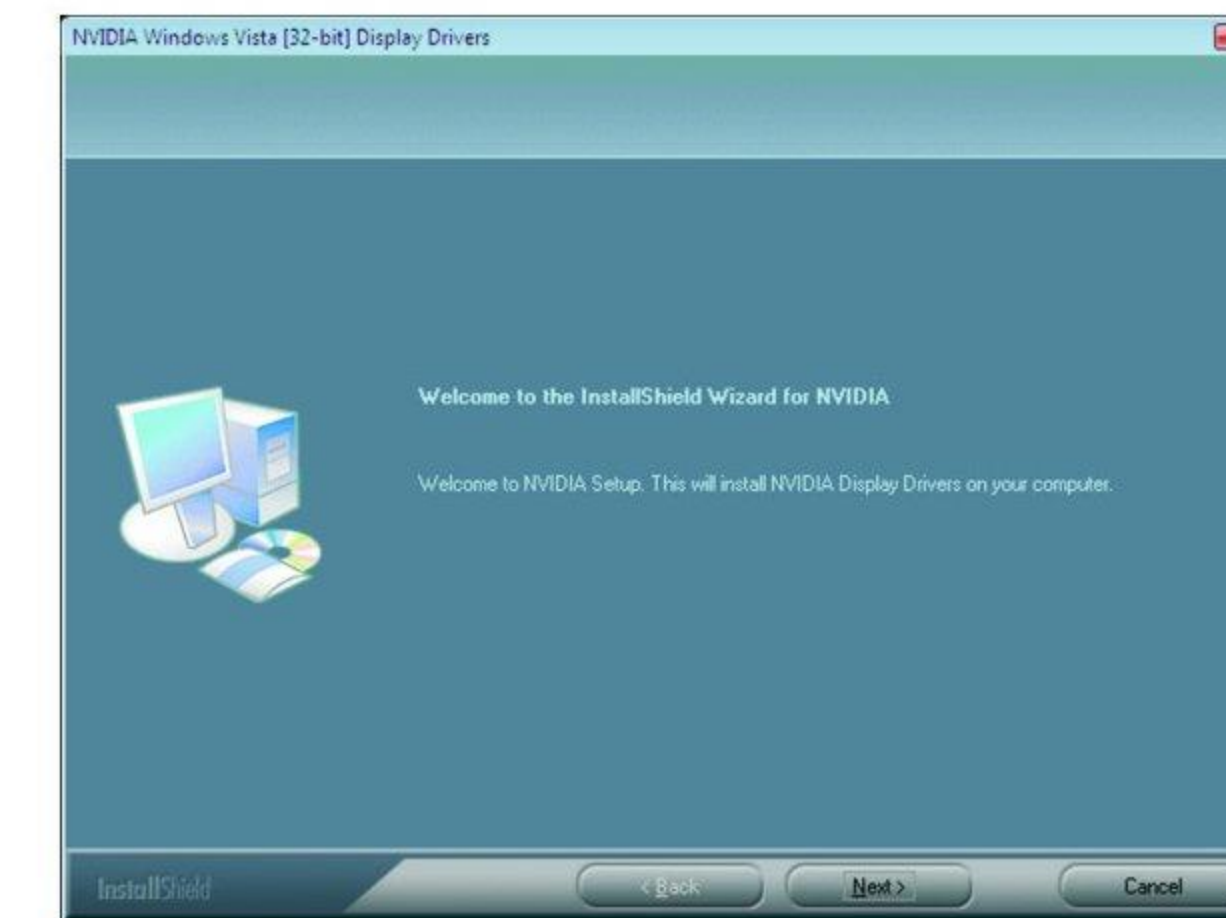
Driver Installation

With the hardware installed, it is now time to install the graphics driver. NVIDIA recommends downloading and installing the most recent drivers available at <http://www.nvidia.com/drivers>. Use the following procedure to load the graphics drivers.

1. Power up your system.

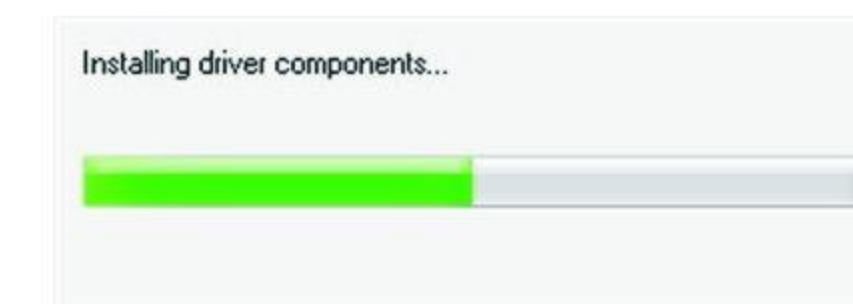
2. Insert the driver installation disk or double click on the GeForce driver executable file you downloaded from www.nvidia.com/drivers. The NVIDIA Setup program takes over and installs the drivers.

3. Click Next when the Welcome to the InstallShield Wizard window displays. Click Next when the Welcome to the InstallShield Wizard window displays.

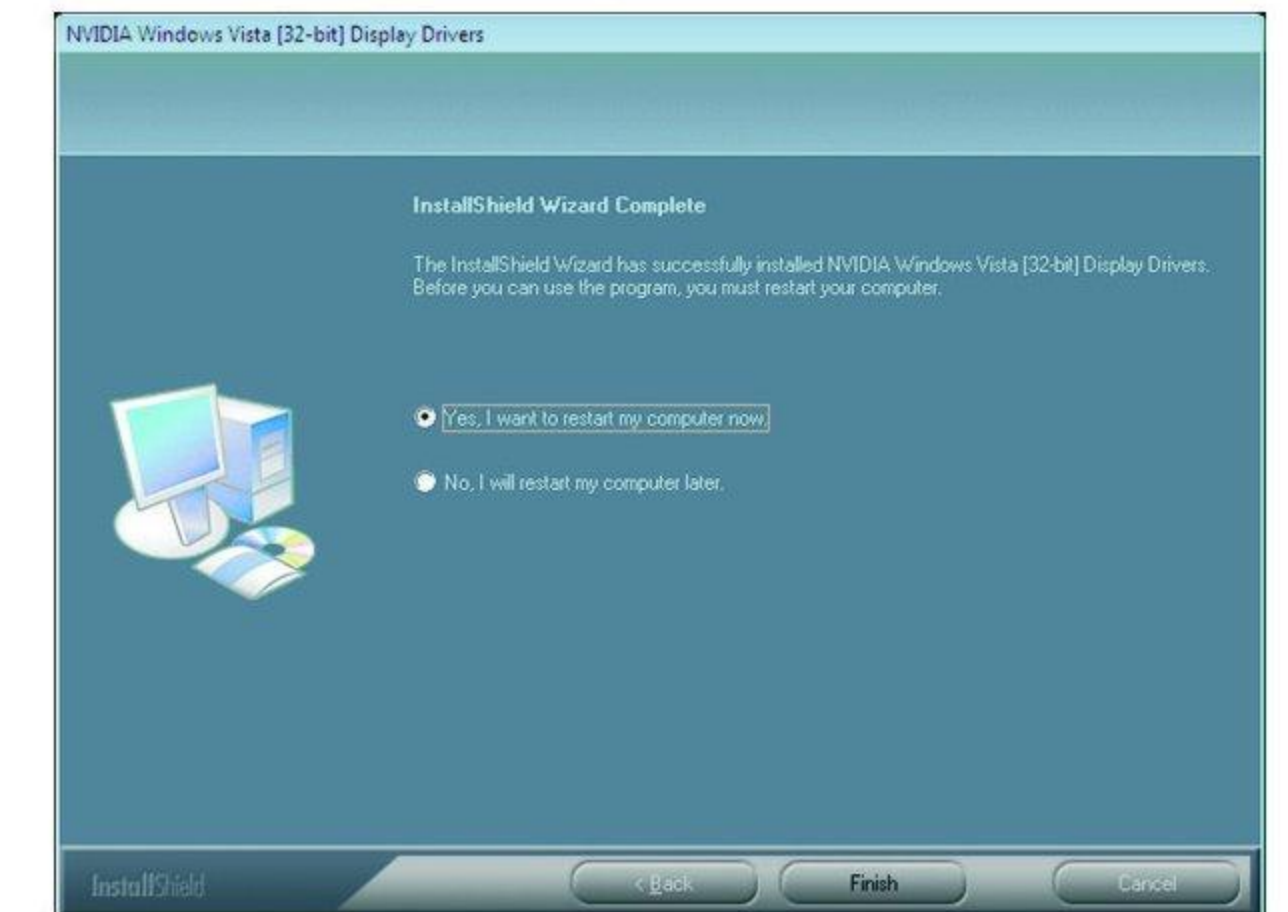


Note:

It may take several minutes for the installation to take place. Your screen may go blank for a few seconds one or more times during installation. This is normal. The Installing driver components... screen will let you know when the installation is complete.



4 Select Yes, I want to restart my computer now.



5 Click Finish to complete the installation and restart your system.

Appendix

1. Audio format supported

GeForce GTX 460 WHDI supports HDMI 1.3 standard, and supports streaming both HD video and audio wirelessly. However, due to design limitation, this product does not support bit-steaming of Dolby TrueHD and DTS HD Mater Audio / High Resolution Audio. Traditional Dolby Digital 5.1 / DTS Audio and uncompressed LPCM 7.1 channel high definition audio are both supported. As a result, only the “core” part of the Dolby TrueHD / DTS HD audio will be transmitted to the AV receiver.

Audio format	Video format	Result
Dolby Digital 5.1	720p/1080i	Supported
Dolby Digital Plus	720p/1080i	AC3 core 5.1
Dolby True HD 5.1	720p/1080i	AC3 core 5.1
Dolby True HD 7.1	720p/1080i	AC3 core 5.1
Dolby Digital 2. 0	720p/1080i	Supported

2. USB firmware upgrade

Both the GeForce GTX 460 WHDI Graphics Card and the WHDI receiver is equipped with a mini USB port. Please check www.galaxytech.com for further information regarding firmware upgrade and connection procedure. More information will be released on our website once the final firmware is available.

3. Maximum resolution supported

The DVI and DisplayPort on the graphics card supports a maximum resolution of 1920 X1080 . Other standard resolutions, such as VGA(640x80), SVGA(800x600) and XGA (1024x768) are supported as well.

Q&A

1. What is WHDI?

WHDI™ (Wireless Home Digital Interface) sets a new standard for wireless high-definition video connectivity. It provides a high-quality, uncompressed wireless link which can support delivery of equivalent video data rates of up to 3Gbps (including uncompressed 1080p) in a 40MHz channel in the 5GHz unlicensed band, conforming to worldwide 5GHz spectrum regulations. Range is beyond 100 feet, through walls, and latency is less than one millisecond.

More information regarding WHDI could be found on www.whdi.org

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2. What is the transmit signal strength of Galaxy GTX 460 WHDI?
12dBm typical. GSM1800/1900 cell phones could not exceed 30dBm.

3. Does the card need special drivers?

Galaxy GTX 460 WHDI uses normal NVIDIA drivers. The WHDI part works transparently to the GPU and OS.

4. What is the use of the small button on the card?

The button is used for pairing receivers. By default the card is already paired with the bundled receiver.

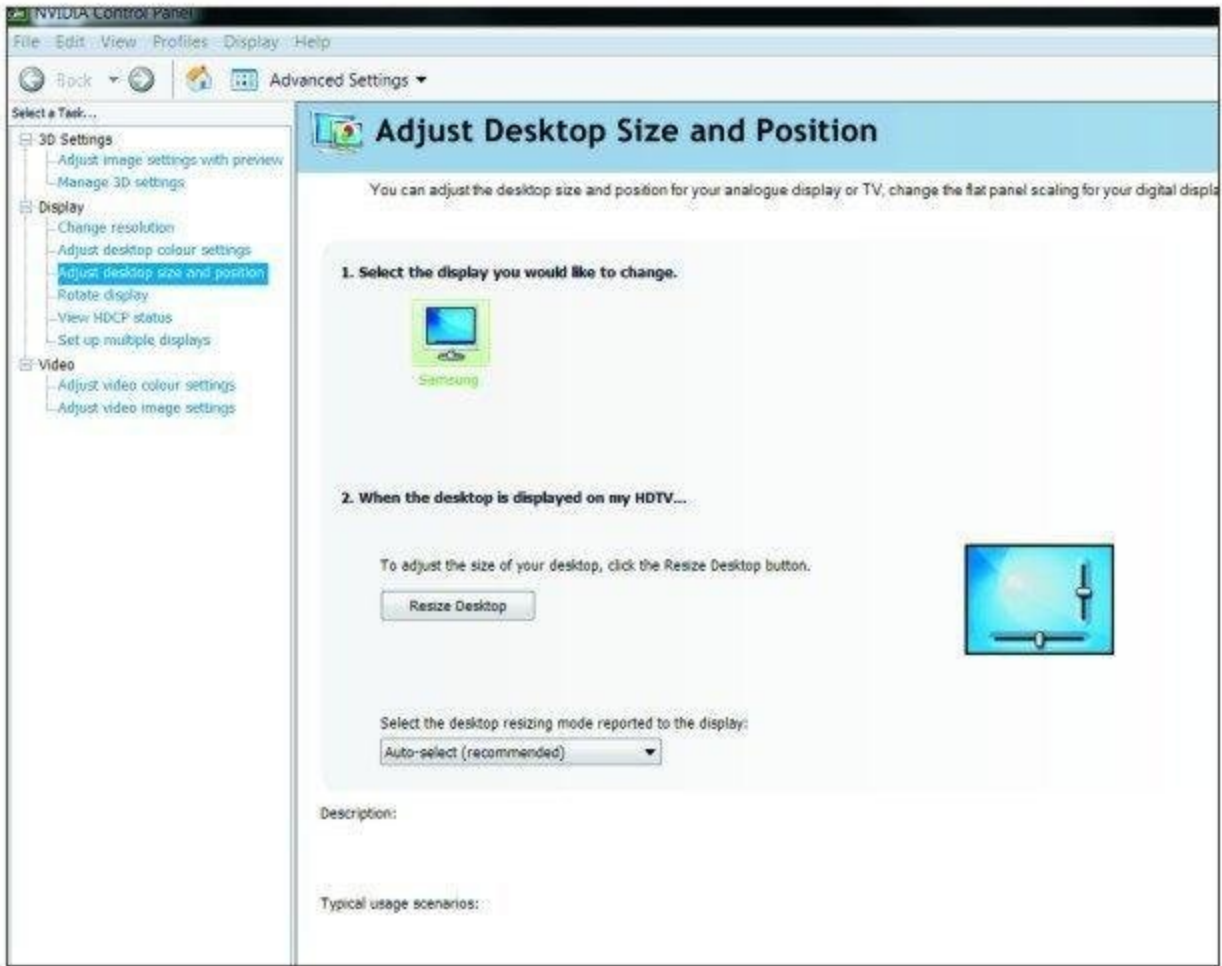
5. What do the LEDs on the card and receiver mean?

There are 2 green LEDs. The Network LED lights when a connection is established between the card (transmitter) and the receiver. The Video LED lights when there is data transfer.

6. I got oversized screen on the LCD TV (The “actual” screen size exceed the LCD area), how to fix that?

This is a common problem for PCs connecting to a LCD TV, and is not a WHDI-specific problem. This is due to the fact that traditional analog signals trend to have degraded video quality on the edges of the screen, thus TVs often overscan the screen to remove the degraded areas by common practice. This could be fixed by setting the video mode of LCD TV to “Full screen” or “Pixel Fit” mode. Most modern LCD TVs offer this setting.

If you could not find this setting on your LCD TV, you can also fix this issue by using the “Resize Desktop” option found in NVIDIA Control Panel, under the “Adjust desktop size and position” page.



FCC Statement
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 designed 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 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:
-Reorient or relocate the receiving antenna
-Increase the separation between the equipment and receiver.
-Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
-Consult the dealer or an experienced radio/TV technician for help.
To assure continued compliance, any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. (Example- use only shielded interface cables when connecting to computer or peripheral devices).

FCC Radiation Exposure Statement
This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
This equipment complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and
(2) This device must accept any interference received, including interference that may cause undesired operation.
Caution!
The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user authority to operate the equipment.