

**User's Manual >>**



# Network A/V Adapter

Rev 1.0

## ABOUT THIS MANUAL

This manual is designed for use with the Network A/V Adapter. Information in this document has been carefully checked for accuracy; however, no guarantee is given to the correctness of the contents. The information in this document is subject to change without notice. The manufacturer does not make any representations or warranties (implied or otherwise) regarding the accuracy and completeness of this document and shall in no event be liable for any loss of profit or any commercial damage, including but not limited to special, incidental, consequential, or other damage.

## SAFETY INSTRUCTIONS

Always read the safety instructions carefully:

Keep this User's Manual for future reference

Keep this equipment away from humidity

- If any of the following situation arises, get the equipment checked by a service technician:
- The equipment has been exposed to moisture.
- The equipment has been dropped and damaged.
- The equipment has obvious sign of breakage.
- The equipment has not been working well or you cannot get it to work according to the User's Manual.

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## TRADEMARKS

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### WEEE Directive & Product Disposal



At the end of its serviceable life, this product should not be treated as household or general waste. It should be handed over to the applicable collection point for the recycling of electrical and electronic equipment, or returned to the supplier for disposal.

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**This Manual for:**

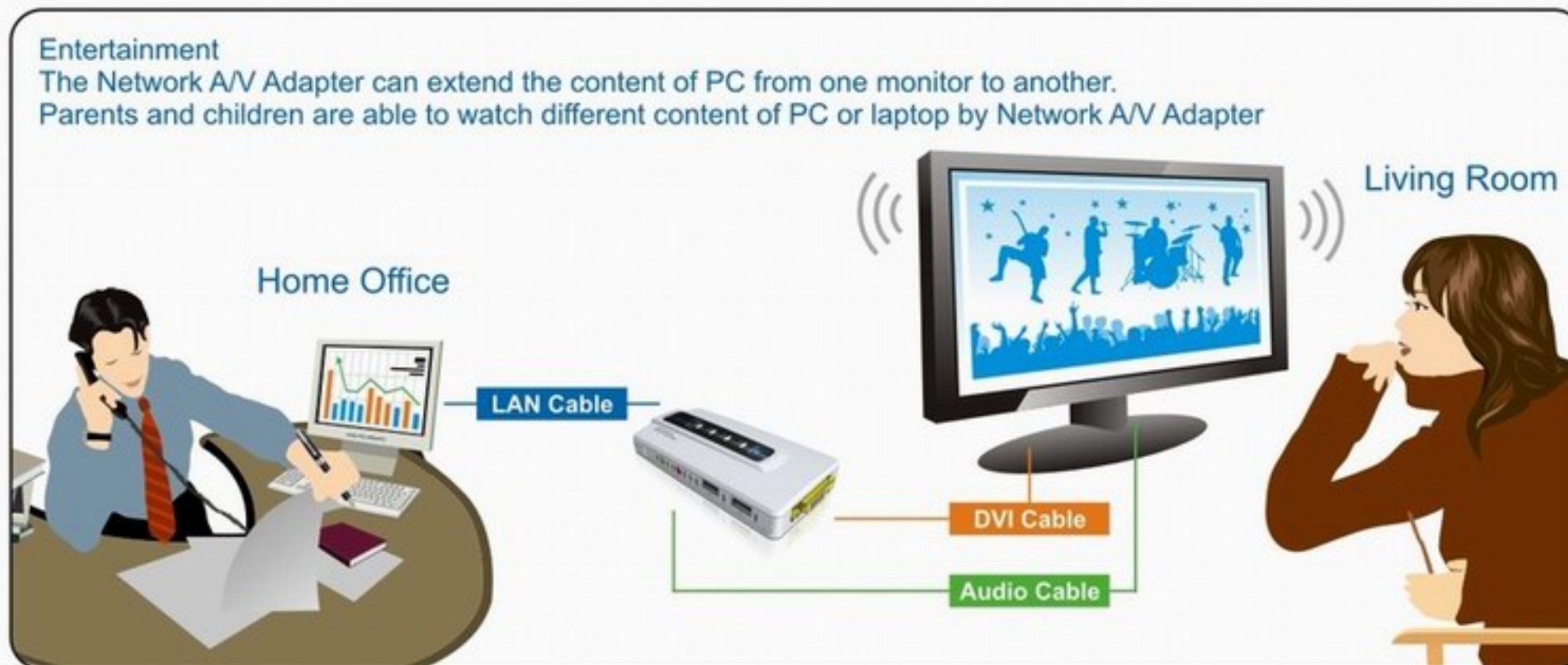
- 100Mbps Network A/V Adapter
- Gigabit Network A/V Adapter

## Introduction

The Network A/V Adapter can be up long away from your computer with CAT5/6 cable. What it essentially accomplishes is to allow you to remotely control your PCs with a set of keyboard/mouse, a monitor and a network connection. You may perform a high quality presentation and Imagine yourself sitting in front of your TV and you are still able to play game, watch movie downloaded to your computer and chat via Windows Live Messenger or making a Skype call. This product makes all of that possible.

### What are the benefits and use?

- Entertainment
- Bank / POS Terminal
- Presentation
- Zero Client Environments



### Features

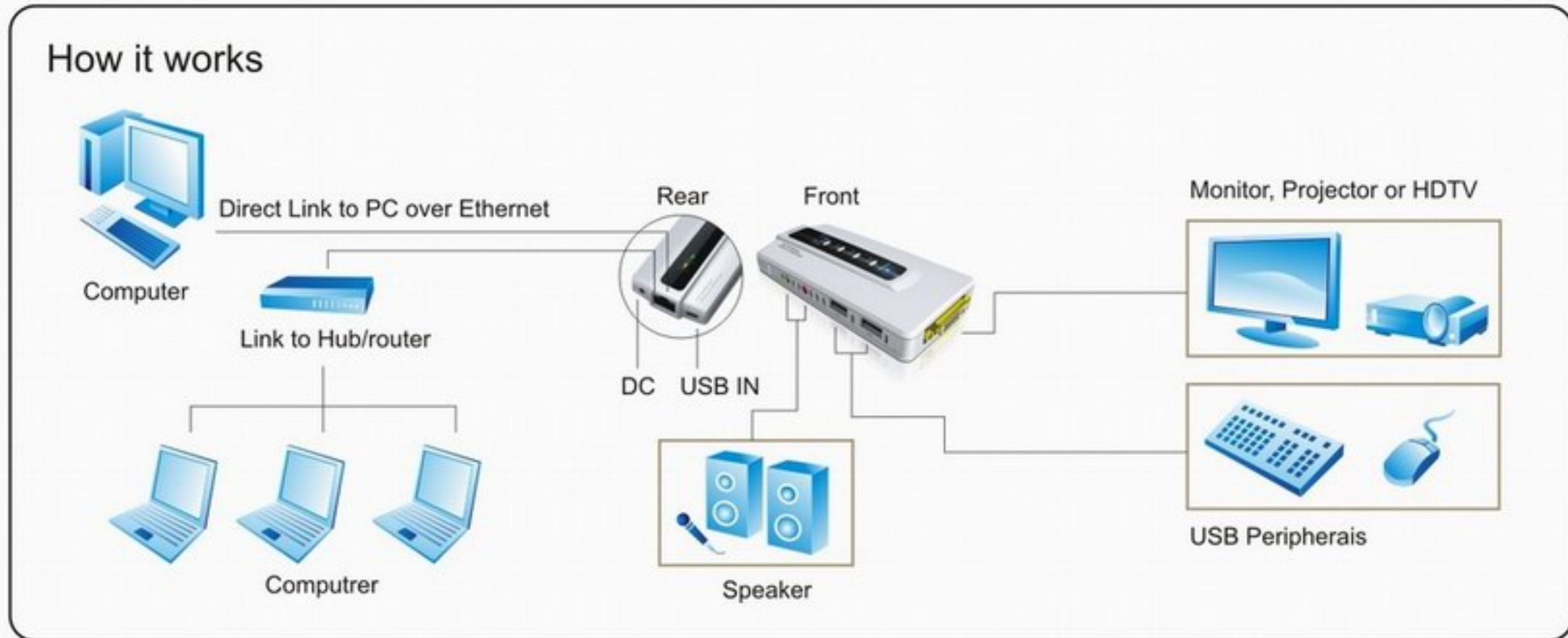
- Video and Audio applications on CRT, LCD monitor or projector shared through Ethernet port.
- Extend or mirror video through a network to a DVI display and Audio
- Compatible with Ethernet and USB 1.1/2.0 specification.
- Provide 2 x USB 2.0 ports, can connect to keyboard, mouse or other USB Devices.
- Controls up to six DVI displays from a single computer
- Display remote control.
- Supports primary display, mirror desktop, and extended desktop video modes
- Stream and share High Definition multimedia content over standard configured network
- Intuitive interface for easy configuration and monitoring
- Long transmission distance up to 100 meters.

### Package Contents

- 1 x Network A/V Adapter
- 1 x Power Adapter
- 1 x CD (Driver and User's Manual)
- 1 x Quick Installation Guide
- 1 x USB Cable
- 1 x Networking Cable
- 1 x DVI to VGA Adapter
- 1 x DVI to HDMI Adapter(Optional)

## Hardware Installation

### Hardware Connections



1. Make sure your network is working properly.
2. Connect the Keyboard/Mouse or USB Devices to the USB ports on the Network A/V Adapter.
3. Connect the Network A/V Adapter to the router or Ethernet switch/hub or bridge by enclosed network cable.
4. Plug in the power adapter to the Network A/V Adapter.
5. Install the driver of the Network A/V Adapter (please find instructions in the next section).

**LED Status**

LED	Description										
Power	On for connected to the power adapter Off for not connected to the power adapter										
Link	LAN Connected										
Act	LAN activity. Blinking when there is data flow between LAN and the host computer										
PC1 ~ 4	<p>We design 4 LED indicators the status of which tells user a lot of information about the Host PC. By reading the LED you should be able to tell the current status of the Host PC and sometimes about what this product is doing. Each LED corresponds to a Host PC, and this is a list of their status and what it means</p> <table border="1"> <tbody> <tr> <td>Green/Red Off</td> <td>PC is offline (powered off/Hibernation/etc) Or No Host PC is registered for this position</td> </tr> <tr> <td>Green On</td> <td>Host PC is online and ready to be connected.</td> </tr> <tr> <td>Rotating Green/Red Flashing</td> <td>Connection to the Host PC is being established.</td> </tr> <tr> <td>Green/Red On</td> <td>Host PC is connected. What you are controlling right now is this Host PC.</td> </tr> <tr> <td>Red On</td> <td>The Connecting process failed for some reason.</td> </tr> </tbody> </table>	Green/Red Off	PC is offline (powered off/Hibernation/etc) Or No Host PC is registered for this position	Green On	Host PC is online and ready to be connected.	Rotating Green/Red Flashing	Connection to the Host PC is being established.	Green/Red On	Host PC is connected. What you are controlling right now is this Host PC.	Red On	The Connecting process failed for some reason.
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	Rotating Green/Red Flashing	Connection to the Host PC is being established.									
	Green/Red On	Host PC is connected. What you are controlling right now is this Host PC.									
	Red On	The Connecting process failed for some reason.									

## Drivers Installation On Windows

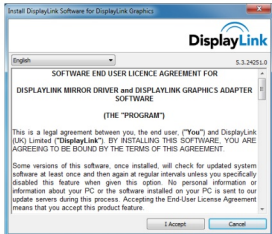
Caution: DO NOT connect the adapter to your computer before installing the driver on the provided CD.

To start the installation, Please Insert the provided CD into your disc drive. double click **Setup.exe**, and then click **Network A/V Adapter -> Windows XP/Vista /7 Auto Installation** from autorun setup cover page.

The DisplayLink software end user licence agreement window opens. Click **I Accept**.

DisplayLink Core software and DisplayLink Graphics installs.

Note: The screen may flash or go black during the install. No message will be shown at the end of the install. If you encounter a **User Account Control** dialog box when attempting to install program, enter an administrator password or click **Allow/Yes** to start the installation.





When the Install **Networking USB Server** Software screen appears, and you can see the screen.

Note: If you encounter a **User Account Control** dialog box when attempting to install a program, enter an administrator password or click **Allow/Yes** to start the installation.

When InstallShield Wizard Complete Window appears, Select **Yes**, I want to restart my computer now and click Finish to reboot your computer.

After the installation completes, a shortcut will be created on your Desktop.



## Running Network A/V Adapter on Windows

Please plug power cable into Network A/V Adapter and connect the Ethernet adapter's LAN port end to a free Router.

Please return to the desktop and Double-click the shortcut icon of **Launch Networking USB Server** on the desktop. This will bring up the main dialog box. The following is what you will see at program start up; please click **Connect Device** when a device is selected.



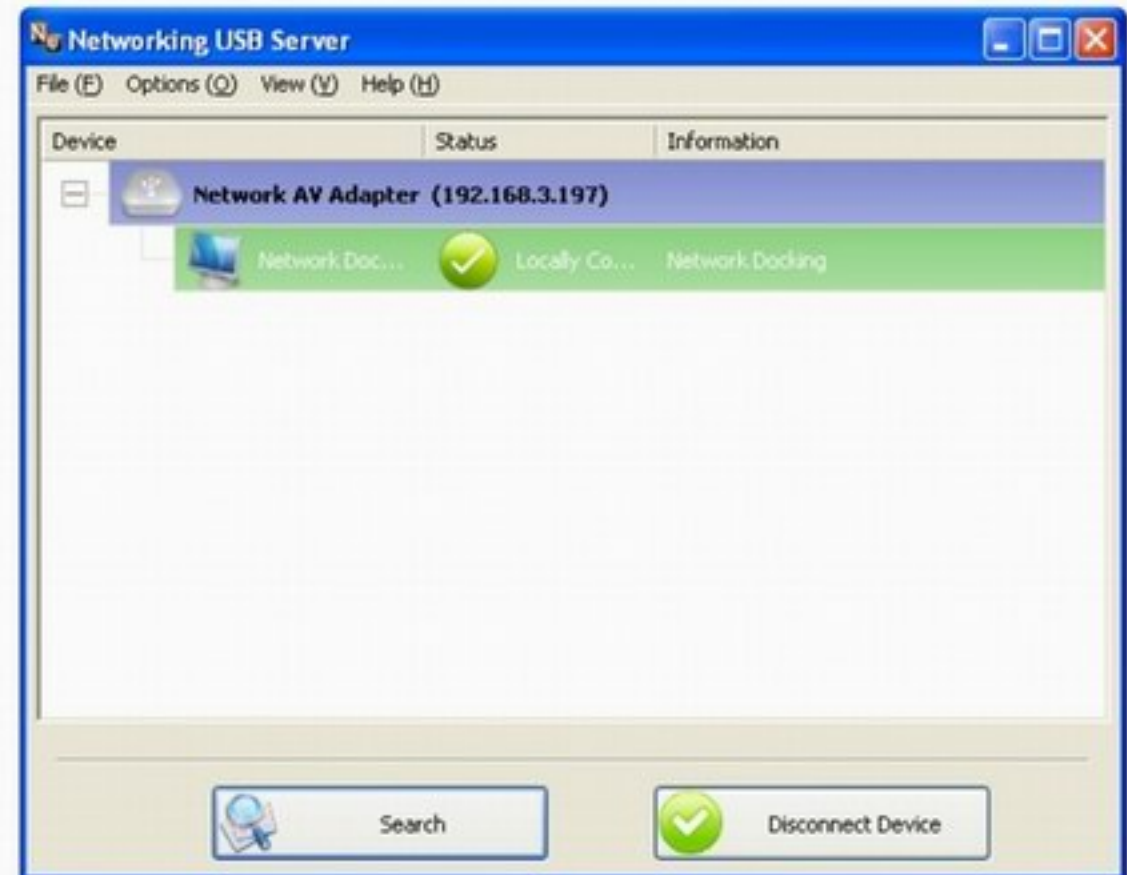
Note : The **Windows Security Window** will appear when making connection. Please click **Unblock** or **Allow Access** button to make connection.



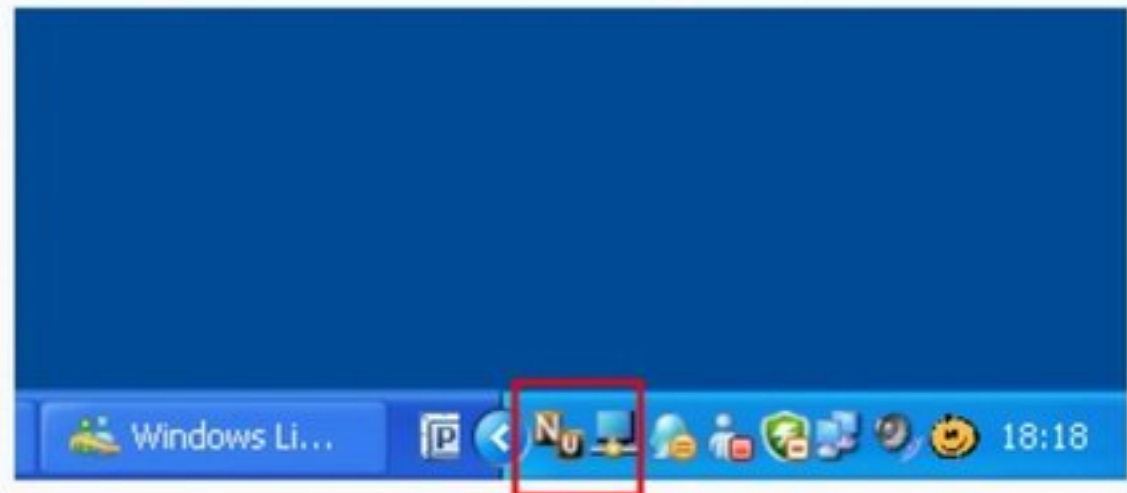
## 4. Running Network A/V Adapter on Windows

When the device is connected, the check mark will be green.

If your monitor is not yet connected to the adapter, make the connection and power on your monitor.



When minimized to system tray, the Networking USB Server Utility and UGA icon will still be running.

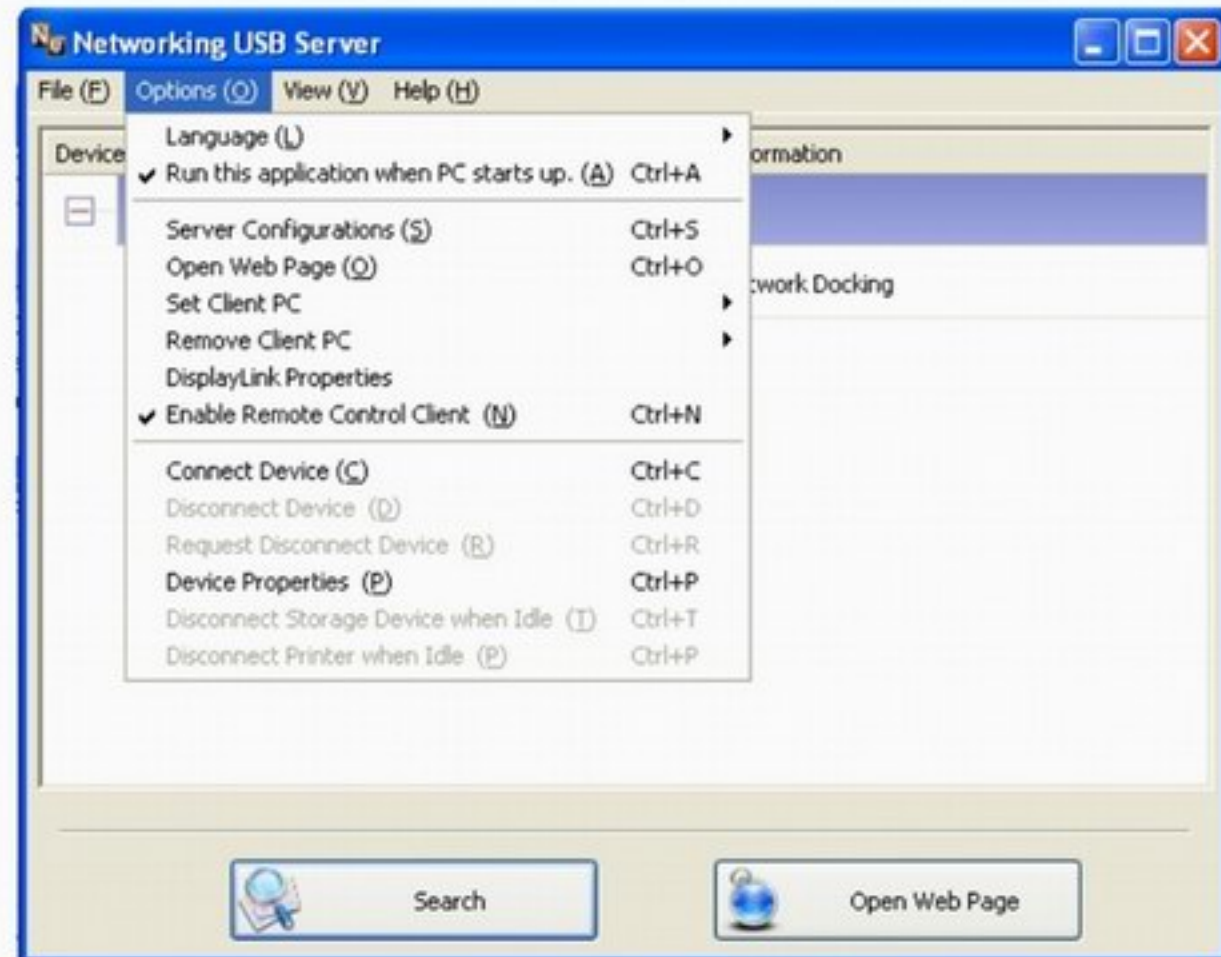


The first thing you need to do is ***Run this application when PC Starts up*** and ***Enable Remote Control Client.***, simply click on the Control menu "***Options***", and select.

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Note: If need to remote control your PC, Select Mirror your Windows desktop. (Please find instructions in the ***Display Mode Setting*** section)

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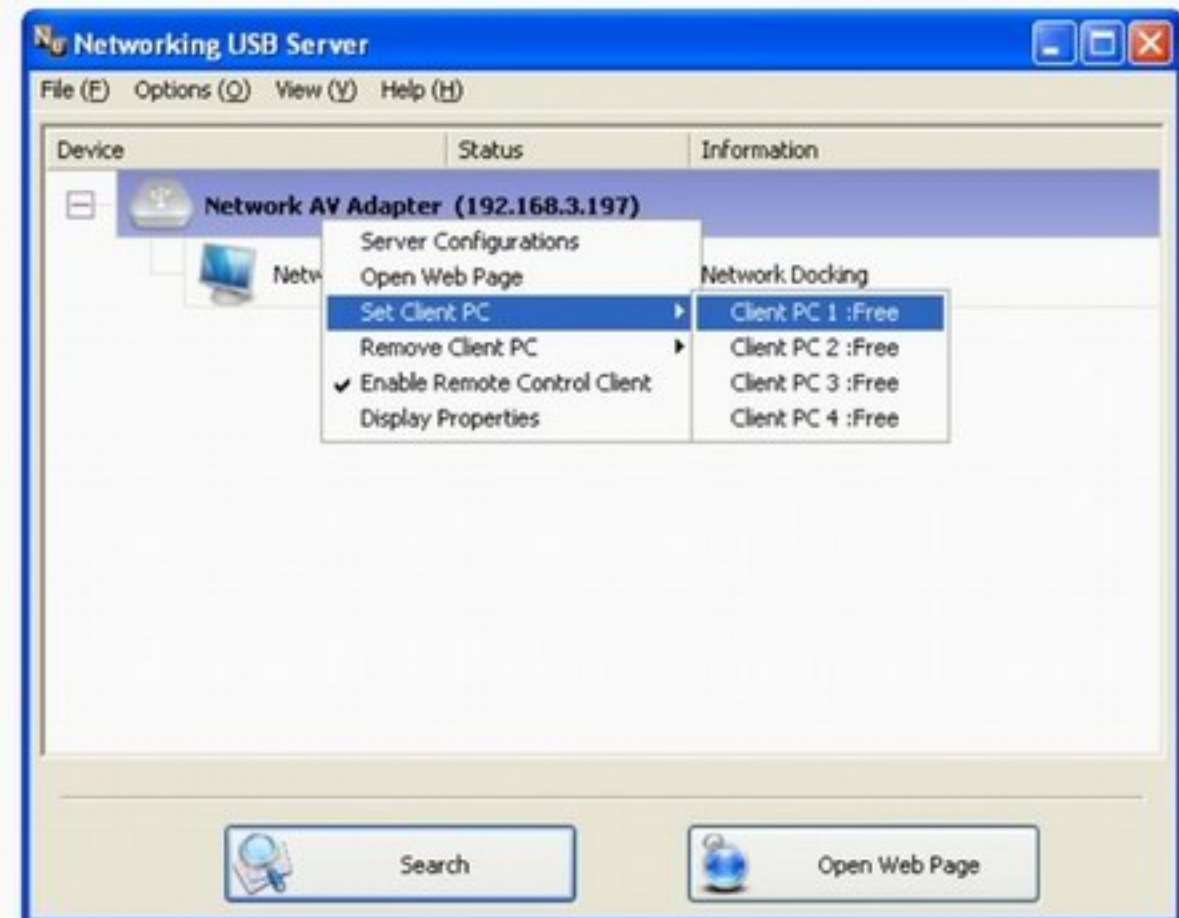
## Register PC as HOST

Caution: DO NOT connect device before Registering PC as Host.

The first thing you need to do is registering your PC as a Host. Being a Host allows you to control your PC remotely via this product. To register, simply right click on the device icon, move the cursor to the Set Client PC option, and select the Host number.

Once successfully registered, you can see your PC name appeared on the list.

Please remember, at most 4 PCs could be registered on one single product.



## Remotely Connect Host PC

So can you do with the Host PC? You can remotely connect to it with a press of a button on the product, or you can do so with a set of combination key if you have a keyboard plugged into this product.

**REMEMBER, YOU MUST HAVE THE SOFTWARE RUNNING ON THE HOST PC TO UTILIZE THIS FUNCTION.**

### 1. PC1 ~ 4 Switch Button

Each of the 4 buttons corresponds to a Host PC. Simply press the one corresponding to the Host and wait a few second for the connecting process to complete.

**Disconnect:** Simply press the one corresponding to the Host PC, will disconnected.

PC1 ~ 4 Switch Button



### 2. Keyboard Hot key

You can remotely connect to it with a set of combination key if you have a USB keyboard plugged into this product.

Pressing **Ctrl + Ctrl + Number**(**Double-press Ctrl + Number**), where Number is the number corresponding to the Host PC you would like to connect, would also trigger a remote connection to that Host PC.

For example, if you press **Ctrl+Ctrl+1**, then **PC Host 1** will be remotely connected.

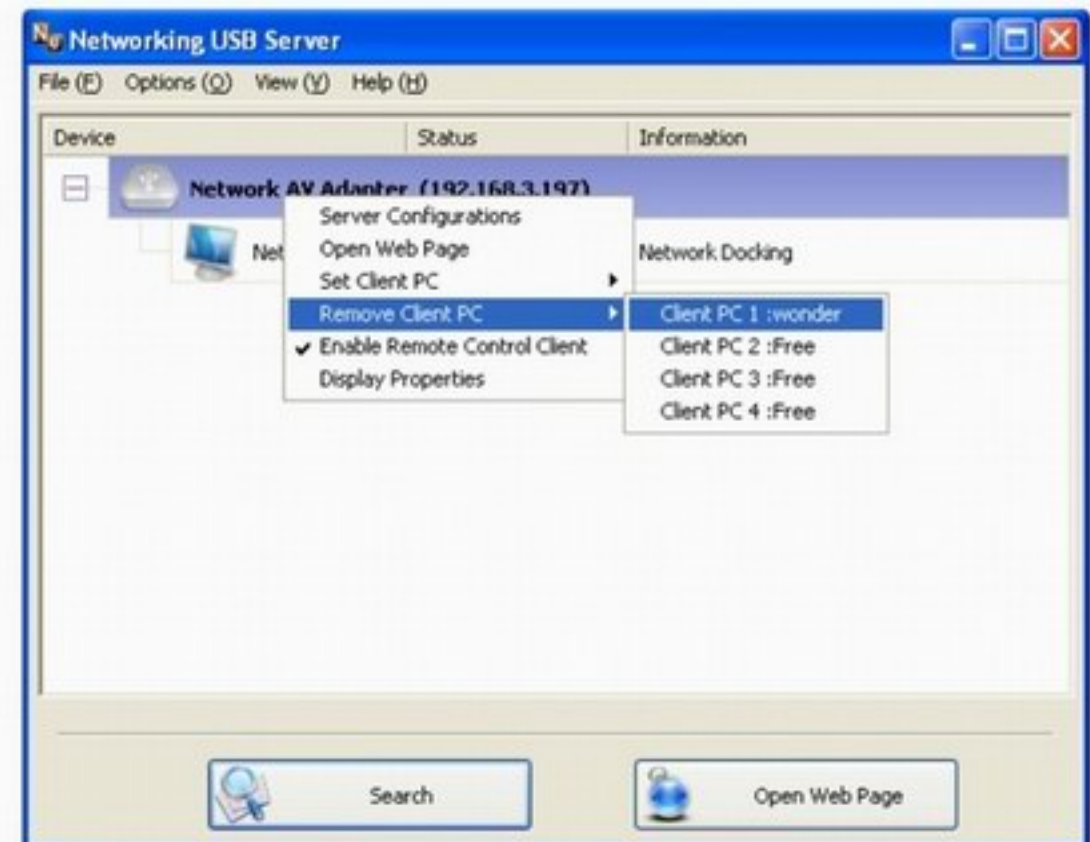
Note: The login screen may appear when you switch one computer to another, please login again to use Network A/V Adapter.

### 3. Other Keyboard Command

If you don't remember which number is the Host PC you would like connect but you remember its PC name, you can also connect to that PC by pressing **Scroll Lock + Scroll Lock + PC name + Enter (Double-press Scroll Lock + PC Name + Enter)** to connect that Host PC.


#### Unregister a PC

At most 4 PCs could be registered as a Host on one single product at any time. So, if you would like to register the fifth PC, you must remove a current host, this could be accomplished with **Remove Client PC** option. Then select the Host PC you would like to remove.

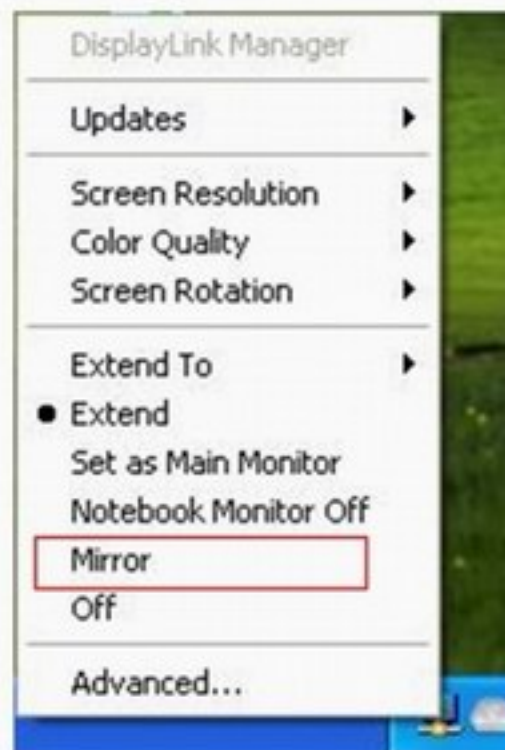


## Display Mode Setting

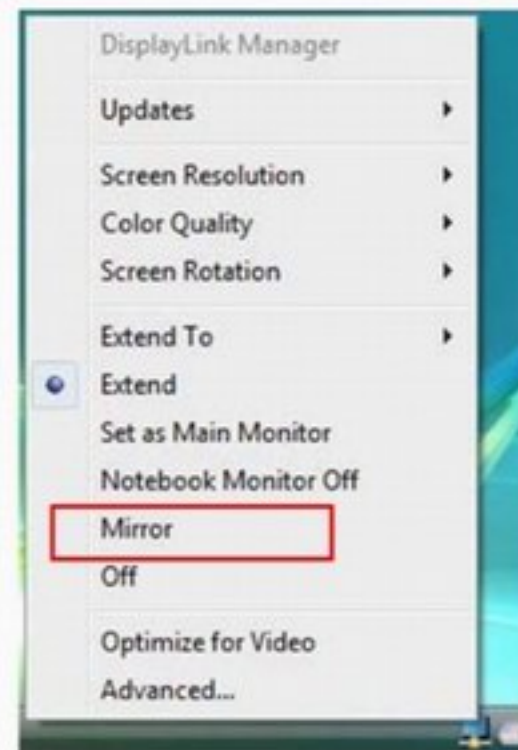
### On Windows XP/ Vista

To change the display mode, please right-click on your desktop and click **Properties > Settings** on XP, **Personalize > Display Setting** on Vista or use the icon  in the system tray that looks like a monitor as below. The USB-attached monitor can be configured to:

On Windows XP



On Windows Vista



**Note:** If need to remote control your PC, Please select the **Mirror** to Mirror your Windows desktop



Menu Option	Sub-menu option	Description
Updates	Check Now	Connects to the Update Server to check for newer driver versions and downloads them, if available.
	Configure	Opens the Update Options window where you can configure automatic updates.
Screen Resolution		Displays a list of available resolutions. Some resolutions may be enclosed by [ ]. Please see, Inferred Modes.
Color Quality	Medium (16-bit)	Changes the colour depth of the extending display to 16 bit
	Highest (32-bit)	Changes the colour depth of the extending display to 32bit
Screen Rotation	Normal	No rotation is applied to the DisplayLink display
	Rotated Left	Rotates the extended or mirrored display by 270 degrees.
	Rotated Right	Rotates the extended or mirrored display by 90 degrees.
	Upside-Down	Rotates the extended or mirrored display by 180 degrees.
Extend To	Right	Extends the display to the right of the main display.
	Left	Extends the display to the left of the main display.
	Above	Extends the display above of the main display.
	Below	Extends the display below the main display.
Extend		Extends your desktop onto the secondary display.
Set as Main Monitor		Sets the secondary display as the main display.
Notebook Monitor Off		Switches off the display of an attached notebook and makes the DisplayLink display primary.
Mirror		Copies what is on the main display and reproduces it on the secondary display.
Off		Switches off the secondary display.
Optimize for Video (Vista and Windows 7 Only)		Configures the secondary display for optimum full screen video performance output. Note: Text may appear less clear.
Advanced		Opens the Display Settings window.

DisplayLink Software menu – Windows

## Display Mode Switch Function(Optional)

The ways that you can change extended mode or mirror mode easily

(Only for Windows XP and Vista users):

1. If Product have the Switch Function (**Optional**)  
Press the switch button for one second to change display mode to extended mode or mirror mode.

Display Mode  
Switch Button



## ON Windows 7

On Windows 7, you can configure a UGA device through the use of Windows Display Properties (WDP). WDP provides a simple method to attach, rotate, duplicate or extend screens as well as modify screen resolution.

### To open WDP


There are several ways to open WDP.

1. Right-click on the desktop.
2. Select Screen Resolution from the menu.
3. WDP opens.

**OR**

1. From Start menu > Devices and Printers.
2. Double-click the DisplayLink Device icon.
3. WDP opens.

**OR**

1. Right click on the DisplayLink icon 
2. Click Advanced.
3. WDP opens.

### Setting the Display

Follow this procedure to set the display.



## To set the display

1. Open WDP.
2. Set the display options. Refer to the table below for details on each option.

Menu	Sub-Menu	Description
Display		Use the drop down list to select a display to be configured.
Resolution		Use the drop down list and user the slider to choose a resolution.
	Landscape	Sets the display to landscape view.
Orientation	Portrait	Sets the display to portrait mode.
	Landscape (flipped)	Sets the display to upside down landscape mode.
	Portrait (flipped)	Sets the display to upside down portrait mode.
	Duplicates these displays	Reproduces the main display on the second display.
	Extend these displays	Extends the main display onto the secondary display.
Multiple displays	Show Desktop only on 1	The desktop appears on the display marked 1. The display marked 2 becomes blank.
	Shows Desktop only on 2	The desktop appears on the display marked 2. The display marked 1 becomes blank.

### WDP Options

To control the behavior of an attached DisplayLink display, it is also possible to use Windows Key+P to display a menu (and cycle through it) to switch mode.

## To control the Display

1. Select the Windows **Key + P**.  
The following menu appears.



2. Click on one of the options.  
The display updates to reflect your choice.

**Note:** If need to remote control your PC, Please select the **Duplicate** to Mirror your Windows desktop

## Audio Configuration

Prior to using the speaker/microphone connected to the Adapter, you have to correctly configure your application to use USB (Multimedia) Audio Device, i.e., the audio components of the Adapter.

When the Adapter is connected to your computer, the audio devices named USB (Multimedia) Audio Device are automatically installed and may override Windows default audio settings. The most obvious effect is that your original music playback will be re-directed to the speaker connected to the Adapter. However, it's possible that users may want to use original sound card for music playback and use the Adapter's audio ports for Play Movie via Media Player software (such as Windows Media Player, Real Player, WinDVD, PowerDVD etc...). In such cases users need to manually configure required audio device for each application.

### Configuring Windows Audio Device

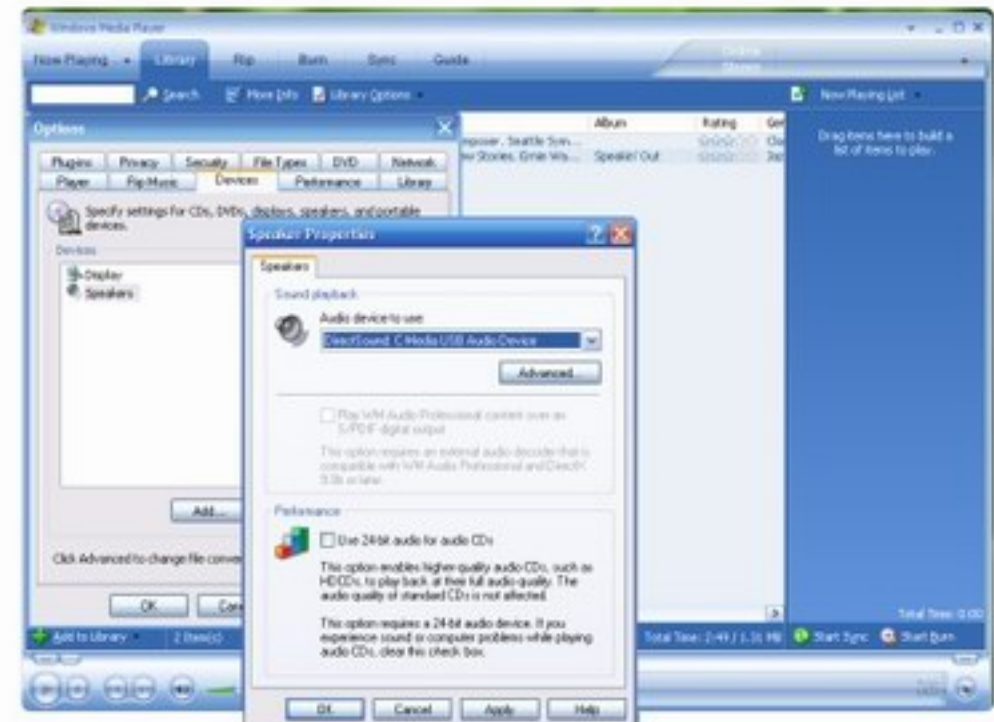
To specify a sound device for music playback in Windows, open Control Panel and double-click the sound or audio icon. Then select a desired device in the playback section. If you want to use your original sound card for music playback, make sure to select it instead of USB Audio Device.



## Configuring Application Audio Device

To Play Movie via Media Player software using the Headphone or Speaker connected to the Adapter, make sure the Media Player software (such as Windows Media Player, Real Player, WinDVD , Power DVD etc... ) are configure to use USB Audio Device as the 3audio in and out devices.

To chat via instant messaging software using the headphone and microphone connected to the Adapter, make sure the instant messaging software, (such as MSN messenger, Yahoo messenger or Skype) are configured to use USB Audio Device as the audio in and out devices.



## Network A/V Adapter Configuration

### Control menu

**File** -> The **Quit** function exits the program.

**Options** -> Language : You can change the utility's language with this option. The default language would be the same as your system's language.

->**Server Configurations**: Same function as the Setting Server option on the server icon's right click menu.

->**Run this application when PC Starts Up**: This utility automatically runs when your system starts up.

**Open Web Page**: Brings up the server's configuration web pages.

->**Connect Device and Disconnect Device**: Connects and disconnects the selected device.

->**Request Disconnect Device**: When you want to use a device occupied by other user, you can highlight that device and use this function. This sends a message to the occupying user with your request. The occupying user would either release the device or deny the request if s/he is still using the device.

### View

The tree view in the main dialog has two display modes: "**Servers and Devices**" mode and "**Devices Only**" mode. The default setting is "**Devices Only**" mode. You can toggle between these two display modes with the View option on the control menu:



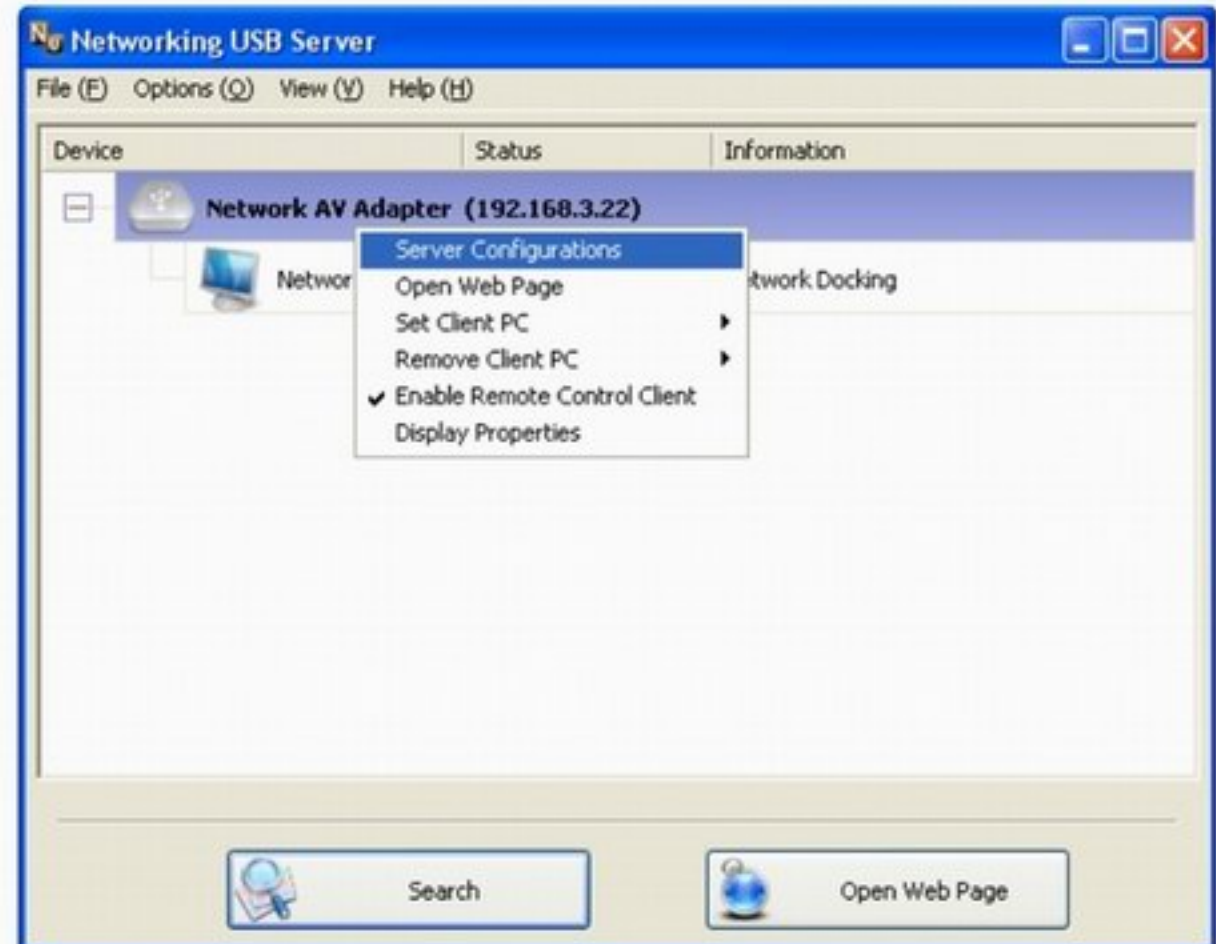


### Configuration with the Utility

Networking USB Server utility provides some advanced setting function for users to configure the device to better fit their needs. To bring up the configuration dialog, please RIGHT-CLICK on the device you would like to configure like this,

And select the "**Server Configurations**" option.

You might be prompted to enter password if a password has been set. If not, you will immediately see the dialog.



NOTE: ONLY A FREE DEVICE IS ALLOWED TO BE CONFIGURED, AND TEHEREFORE THIS SETTING OPTION ONLY APPEARS ON FREE NETWORK USB DEVICE

**Server Name:** This field allows you change the Server name. Change it whatever you want.

**USE DHCP:** When this field is checked, your server acquires IP address automatically. Uncheck it and you can enter IP address automatically.

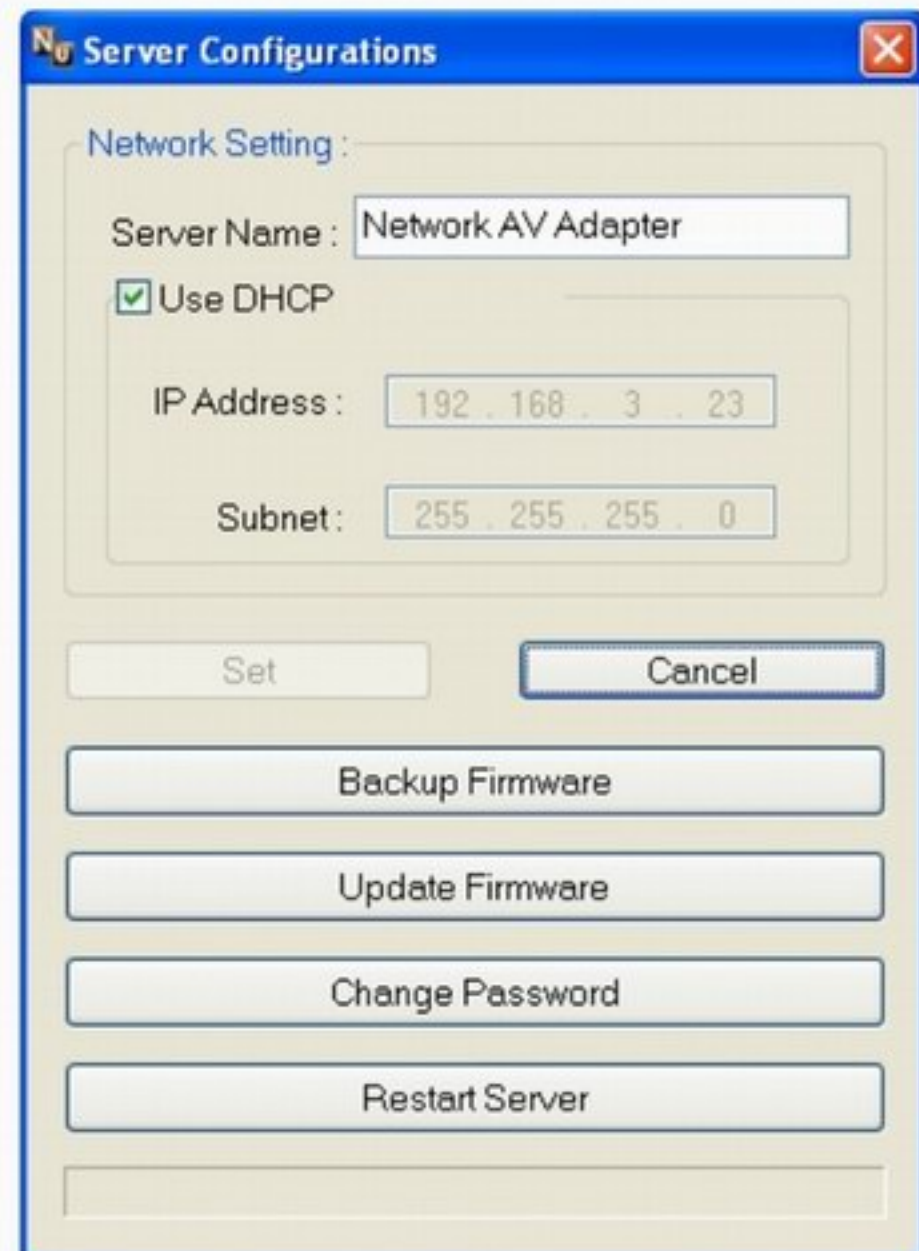
**NOTE:** You can apply this function to a server under different network segment. HOWEVER, some router/switch hub does not allow communication between servers under different segment. In this case, you won't even see the server on a different network segment.

**Backup Firmware:** this function is a fail-save mechanism for the Update Firmware function. Just browse to where you want to save the backup file and click on Save to save the file.

**Update Firmware:** update firmware with this function. Use the Browse button to choose the firmware to update. Click on Open to start.

**Change Password:** Simply enter the new password and enter it again for confirmation. Click on Submit to change.

**Restart Server:** This button reboots the server. Please note that this function will not work if the server you attempt to reset has a device connected to it and the device is occupied by a user.



**Server Configurations**

Network Setting :

Server Name : Network AV Adapter

Use DHCP

IP Address : 192 . 168 . 3 . 23

Subnet : 255 . 255 . 255 . 0

Set Cancel

Backup Firmware

Update Firmware

Change Password

Restart Server

## Configuration with Web-based UI

We allow the users to configure the settings of the USB Servers via the web-based UI. Select the target server on the tree view and then click on the **Open Web Page** button or the same option on the right-click menu of server icon, to bring up the web-based configuration UI.

Your default web browser will pop up and take you into the web-based configuration UI of the server.

This is the main page of the configuration UI. You can see the important information about the Networking USB Server and the device(s) connected to it. The links at the left-hand side each represents a function. Clicking on "**Device Status**" brings you back to this page, and the other links take you to pages with different functions.

The screenshot shows a Windows Internet Explorer browser window displaying the Network A/V web-based configuration UI. The address bar shows the URL <http://192.168.3.91/>. The page features a navigation menu on the left with options: Select Language, Status, Network, Restart Device, Factory Default, and Password Change. The main content area is titled "Status" and contains three tables of information:

Server Information	
Server Name	Gigabit Network AV Adapter
Manufacturer	Generic
Model	Network AV Adapter
Firmware Version	V. 2.022.001
Server UP-Time	0 days, 0 hours, 32 minutes, 45 seconds.
Web Page Version	001

Device 1 Information	
Device Name	
Link Status	Online
Device Status	Ready
Current User	

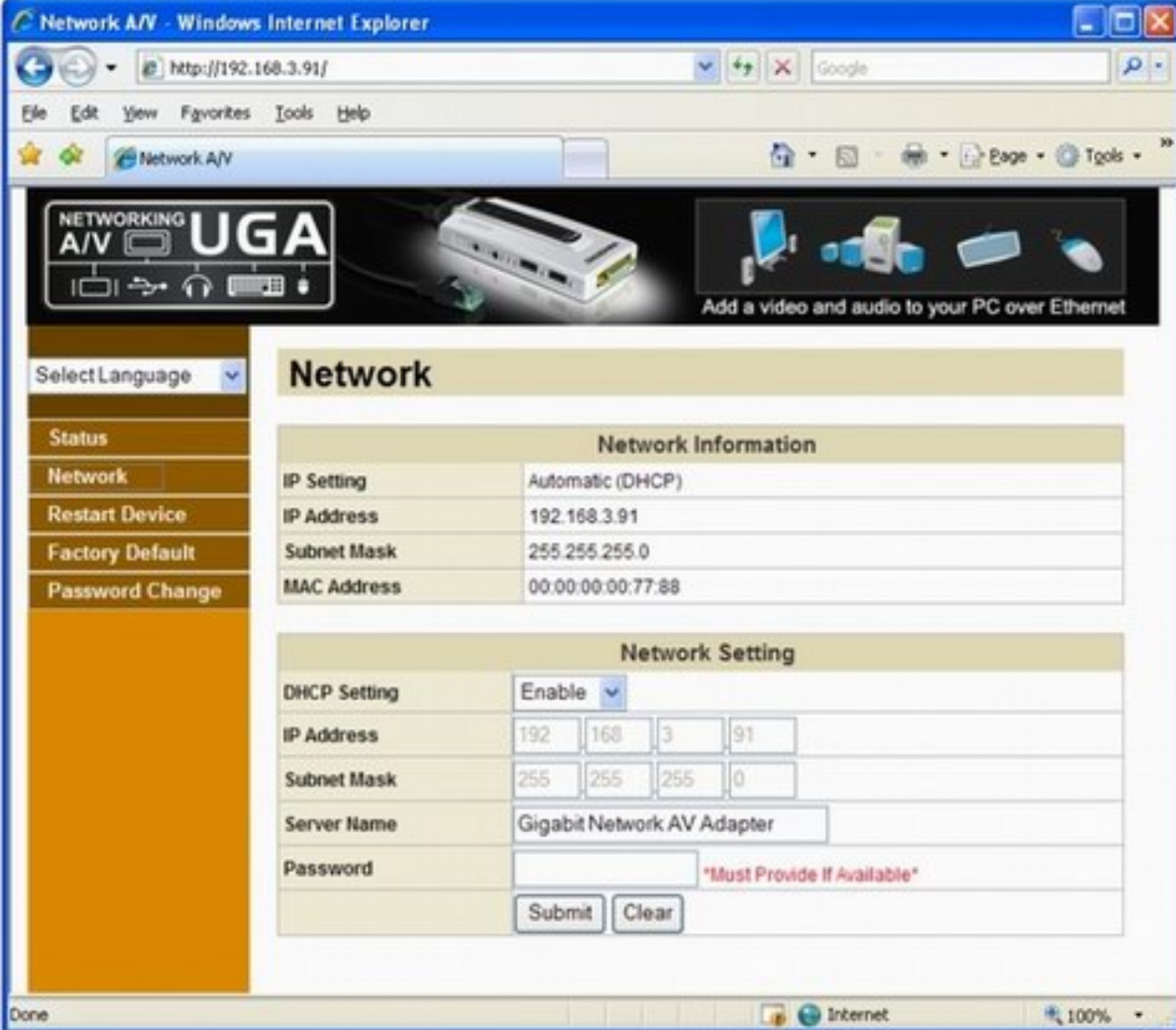
Device 4 Information	
Device Name	USB Generic USB Audio Device
Link Status	Online
Device Status	Ready

The status bar at the bottom of the browser window shows "Done" and "Internet" with a 100% zoom level.

### Networking Information/Setting

This page displays the current network setting of the server and provides links to the pages where you can perform special actions. You can change the network setting according to your need. However, please note that if you would like to give this server a static IP, please disable the DHCP option. Once you are done, please click on the “**Submit**” button and reboot the server.

**NOTE: A Server with busy device(s) connected is prohibited to be configured to prevent interruption of any on-going tasks.**



The screenshot shows a web browser window titled "Network A/V - Windows Internet Explorer" with the address bar showing "http://192.168.3.91/". The page content includes a header with the "NETWORKING A/V UGA" logo and a navigation menu on the left with options: "Status", "Network", "Restart Device", "Factory Default", and "Password Change". The main content area is titled "Network" and contains two sections:

Network Information	
IP Setting	Automatic (DHCP)
IP Address	192.168.3.91
Subnet Mask	255.255.255.0
MAC Address	00:00:00:00:77:88

Network Setting	
DHCP Setting	Enable <input type="button" value="v"/>
IP Address	192   168   3   91
Subnet Mask	255   255   255   0
Server Name	Gigabit Network AV Adapter
Password	<input type="text"/> *Must Provide If Available*
<input type="button" value="Submit"/> <input type="button" value="Clear"/>	

## Change Password

Clicking on this link takes you to the password update page below:

To change the password, you must enter current password, input new password and re-input new password for confirmation and then click on "**Submit**". If you are setting the password for the first time, you don't have to provide current password.

## Restart Server

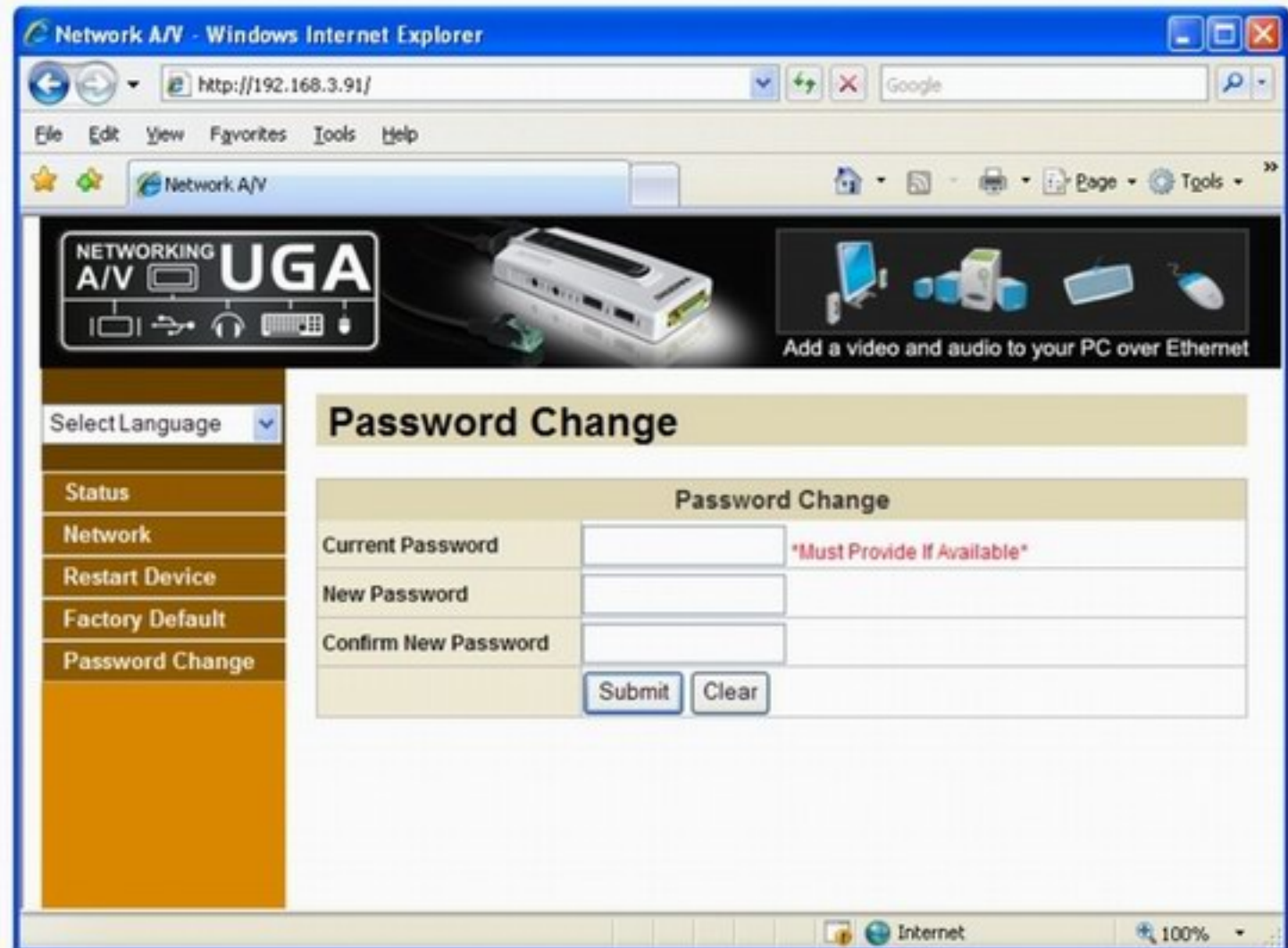
Clicking on this link takes you the page show below:

With the "**Restart Server**" button you can reboot the server. However, if there is a password, you must enter it for this function to work. Password is by default blank. So, unless a password is explicitly set, you do not have to enter anything for the reset function to work.

## Factory Default

Clicking on this link takes you the page where you can restore the server's settings back to default:

Again, the password is not necessary if no password is set. Just leave the field empty and click on the "**Factory Default**" button to restore the factory default settings.



## Uninstalling Networking A/V Adapter from your System

To uninstall Networking A/V software, please go to Control Panel > Add or Remove Programs

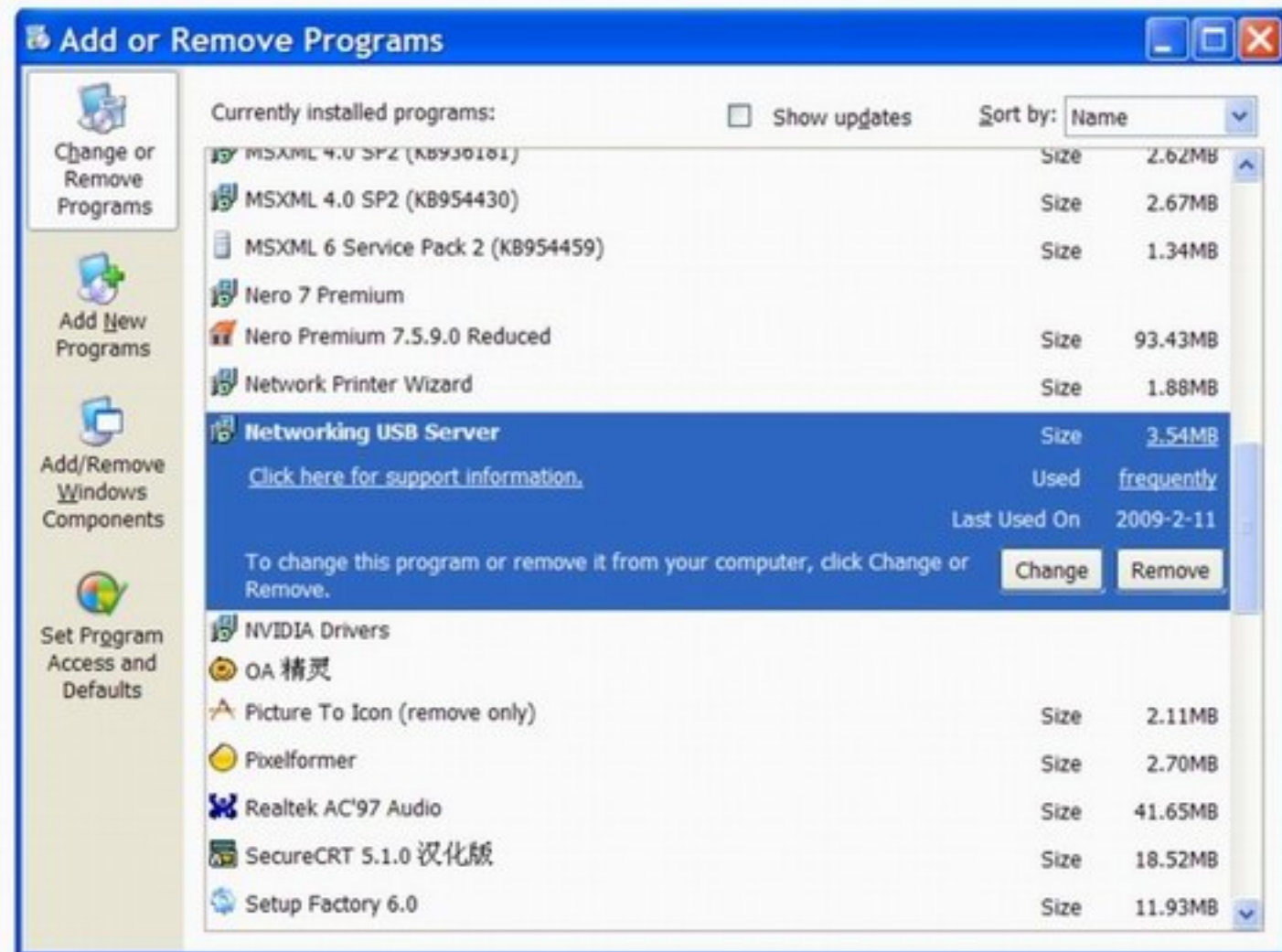
## Uninstalling Networking USB Server Until

Please browse through the program list and find Networking USB Server program

Please select it and click on the **Change/Remove** button. Then the uninstaller will start up and prompt you:

When done the installer will prompt you to reboot, Please select **No**

than select **Finish**. This completely uninstalls the Networking USB Server software from your computer.



### Uninstalling the DisplayLink Graphics Software

#### To uninstall the USB Graphics Adapter on Windows

From the program list and find **DisplayLink Core software**.program

Please select it and click on the Change/Remove button. Then the un-installer will start up and prompt you:

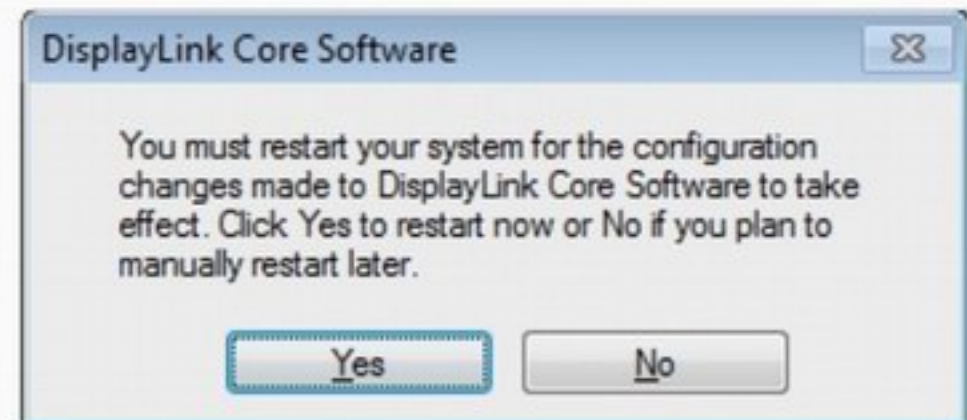
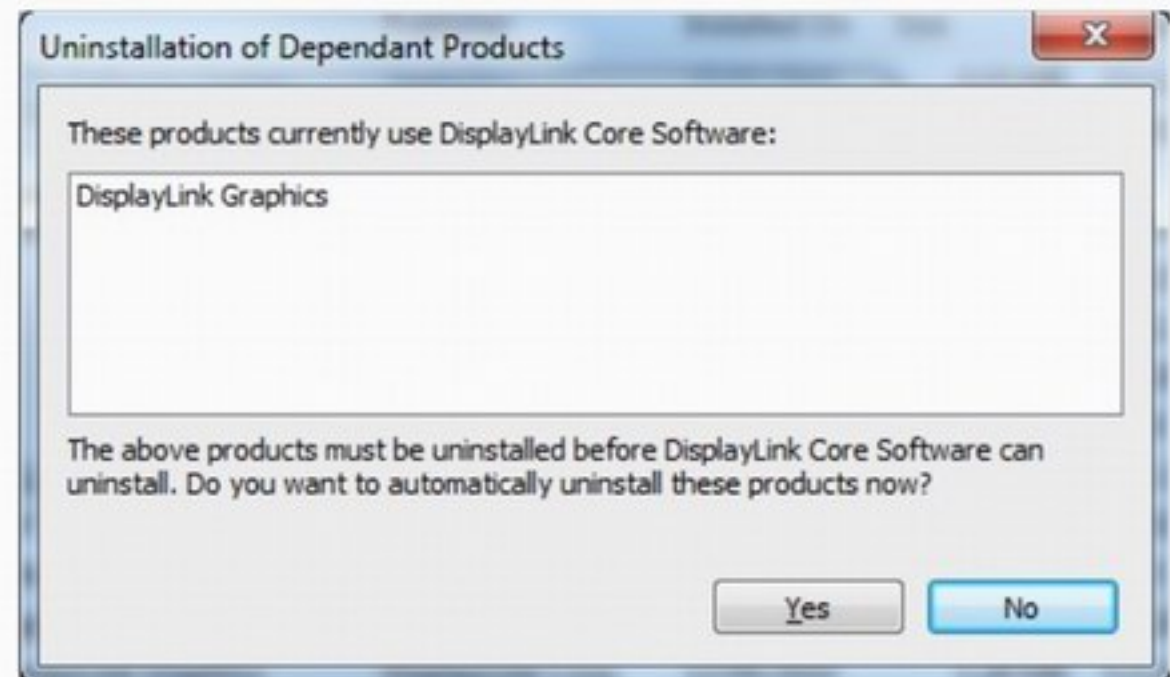
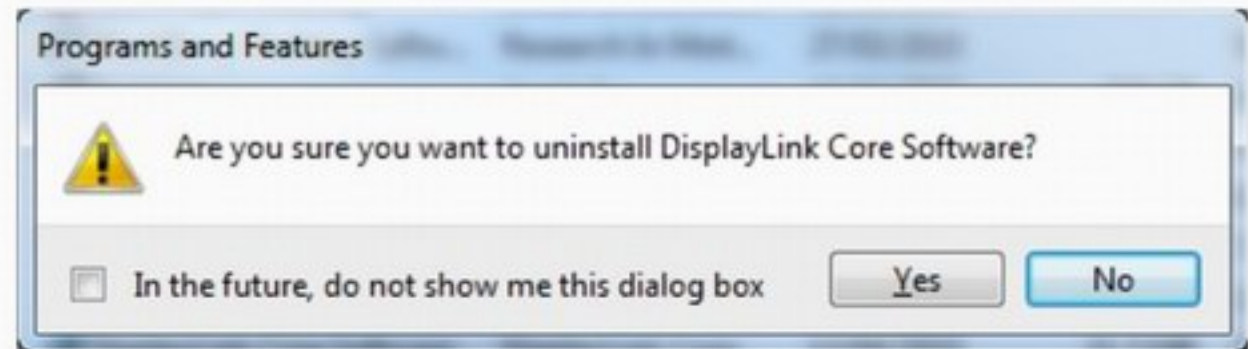
A windows confirmation dialog opens (if enabled) Click **Yes**.

A message may appear to state which software packages will also be uninstalled.

Click **Yes** to uninstall the packages that use DisplayLink Core Software.

The uninstaller automatically uninstalls the software.

Once uninstalled, you will be prompted to reboot Click **Yes** to complete the uninstall.





USB to VGA



USB to VGA



USB to DVI



USB to DVI w/Audio



USB to HDMI



Network A/V



PC Docking+UGA



Wireless UGA