

HDMI® over IP Extender with Audio

IPUSB2HD2



*actual product may vary from photos

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Manual Revision: 08/02/2011

FCC Compliance 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.

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Introduction

The IPUSB2HD2 HDMI® over IP Extender delivers a versatile HDMI-IP link between PCs on your network and an HDMI monitor/projector, at full high definition (1080p, 1920 x 1080) video resolution. Accompanying audio signals are transmitted directly through the HDMI output, or separately through the built-on 3.5mm stereo output port.

An ideal solution for sharing a display or projector over an Ethernet network so that even PCs lacking digital video output can still connect, the IP/HDMI adapter can communicate through a network router at transmission distances up to 100m (300ft). Plus, it offers 2 USB 2.0 ports on the display side, to connect and share peripherals such as USB storage or keyboard/mouse input with the connected PC.

Alternatively, the device can be used directly connected as a USB to HDMI adapter.

Packaging Contents

- 1 x HDMI over IP converter
- 1 x Universal Power Adapter (NA/UK/EU)
- 1 x Driver CD
- 1 x Instruction Manual

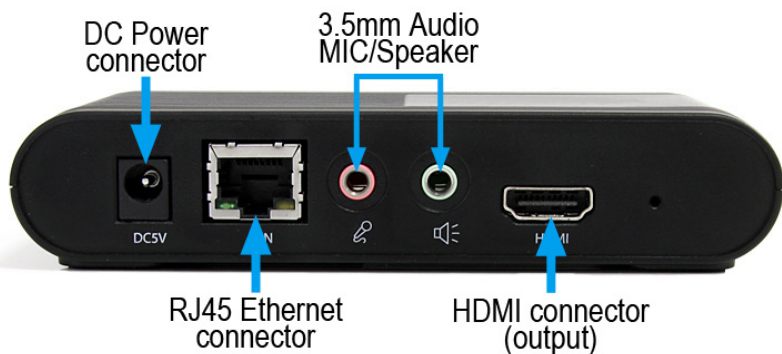
System Requirements

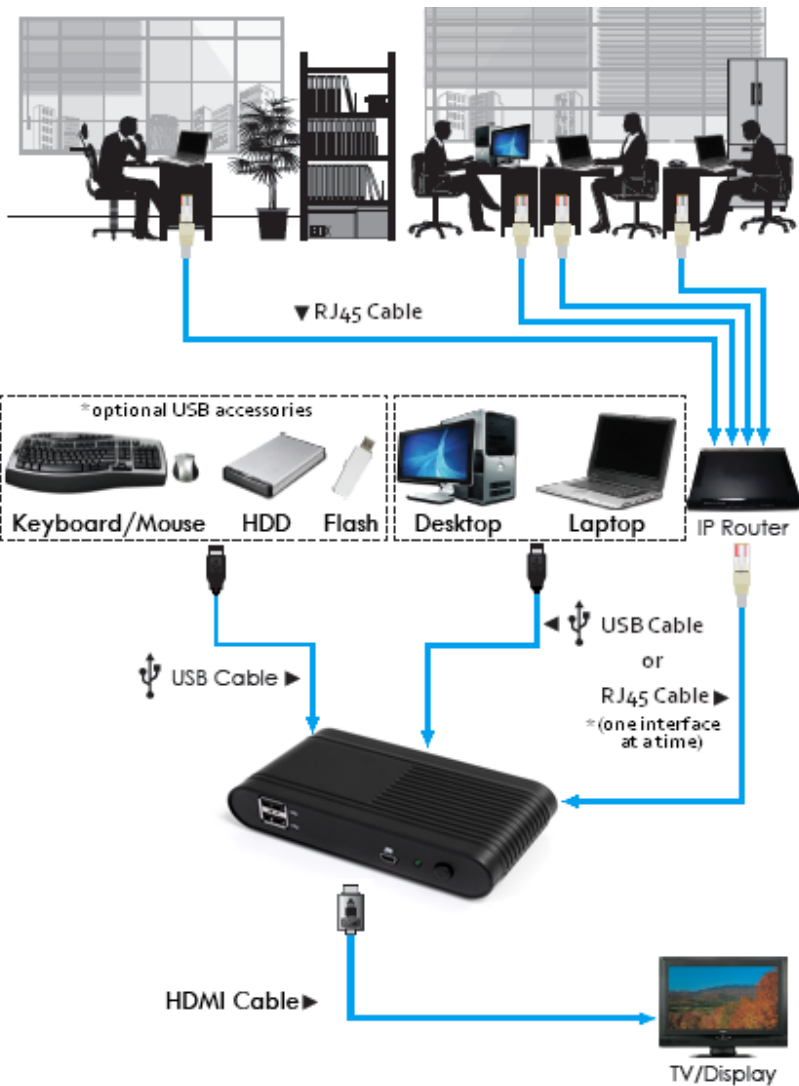
- HDMI enabled display device with HDMI cable
- Available AC electrical outlet
- Minimum CPU: Intel®/AMD® 2.4 GHz single core
- Minimum RAM: 1GB
- Microsoft® Windows® XP (32-bit), Vista/7 (32/64-bit)
- **USB Mode:** USB mini-B to USB type A male/male cable
or
Ethernet Mode: RJ45 terminated Cat5/Cat6 UTP Ethernet cabling

Front View



Rear View





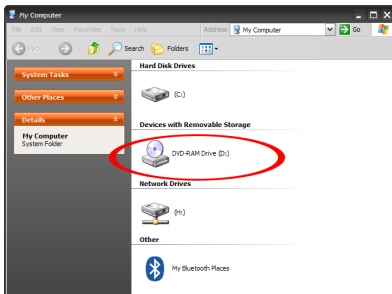
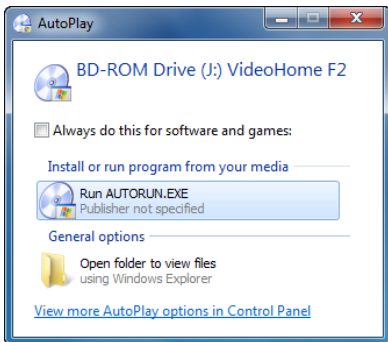
Installation



Please ensure that the driver installation is complete prior to the physical installation (plugging in) of the USB 2.0 Video Adapter

Driver Installation

1. Insert the Driver CD into your CD/DVD-ROM drive.
2. If the installation program does not begin automatically, locate the Autorun.exe application. This file will be located in the root directory of the Driver CD (e.g. D:\ or E:\).



*installation photos for reference only

3. Select the model of the IP Video Extender then select the "Device Driver" installation. This will be the installation wizards for the drivers and USB Server application.



IPUSB2VGA

VGA over IP Extender with Audio

IPUSB2HD2

HDMI over IP Extender with Audio

Thank you for purchasing this StarTech.com product.

The driver CD will install drivers.

For the most current user manual, and driver please visit:
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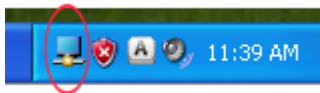
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4. Once both installations are complete, restart the computer when prompted. Once Windows has fully loaded, it will be ready to connect to the video adapter either through USB or Ethernet.

Hardware Installation for USB

1. Connect the HDMI display device (e.g. monitor) to the video adapter and power on the display device.
2. Connect the power adapter to the video adapter and press the power button. The power LED on the video adapter will light up.
3. Connect the USB cable from the mini-B connector on the video adapter to an available USB port on the host computer system.
4. Windows will automatically detect the USB video adapter and install the drivers.

5. Once the installation is complete, a small icon will be visible in the system notification tray (near the system clock).



6. **OPTIONAL:** Connect speakers and/or a microphone to the 3.5mm audio mini-jacks on the HDMI video adapter.

NOTE: When connected, the HDMI video adapter will become the default audio device on the computer system, overriding any onboard audio. Multiple audio output devices cannot be used at the same time, as this is not supported by Windows. To switch back to using the onboard audio, go into the Windows Sound / Audio properties (found through Control Panel) and change the default audio playback device.

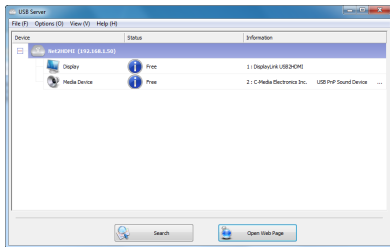
7. **OPTIONAL:** Connect any additional USB devices you wish to use into the USB hub ports on the video adapter.

Hardware Installation for Ethernet

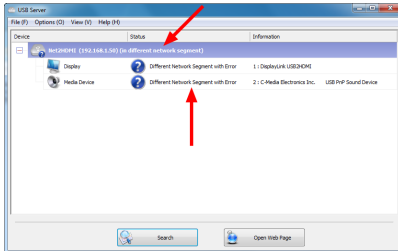
1. Connect the HDMI display device (e.g. monitor) to the video adapter and power on the display device.
2. **OPTIONAL:** Connect speakers and/or a microphone to the 3.5mm audio mini-jacks on the HDMI video adapter.
3. **OPTIONAL:** Connect any additional USB devices you wish to use into the USB hub ports on the HDMI video adapter.
4. Connect the power adapter to the video adapter and press the power button. The power LED on the video adapter will light up.
5. Connect the UTP Ethernet cable to the RJ45 connector on the video adapter. The other end of the Ethernet cable should be connected either directly to the host computer, or to a network router/switch/hub. The Link LED on the RJ45 connector should light up solid.
6. Launch the USB Server software application by double-clicking the desktop icon.



7. If DHCP (automatic IP) is available on the network, no configuration should be required.



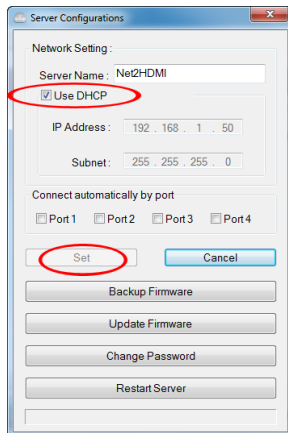
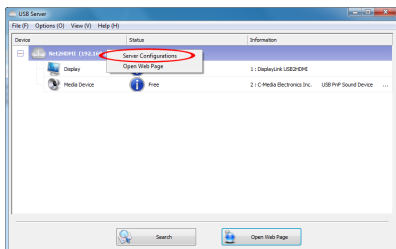
Correct network configuration



Incorrect network configuration

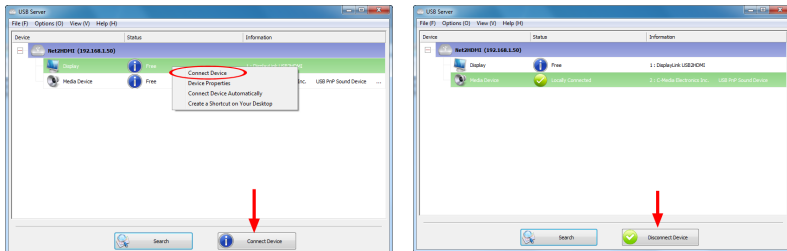
If a DHCP server (automatic IP) is not available on your network (such as connecting directly to the host computer), the video adapter will use a default IP address of **192.168.1.50**. If this is not compatible with your network, the video adapter will need to be manually configured.

- If not already, connect the HDMI video adapter to a host computer directly via UTP Ethernet cable.
- Assign the host computer with a manual (static) IP address of 192.168.1.51. If the HDMI video adapter will only be connected directly to this computer, no further changes need to be made (skip to step g).
- Run the USB Server application program. The HDMI video adapter will appear in the list.
- Right-click on the main HDMI video adapter device. Select the "Server Configuration" option.
- Uncheck the "Use DHCP" option and manually enter the IP address and Subnet Mask you wish the HDMI video adapter to use. Click "Set" when complete.



- f) Disconnect the HDMI video adapter from the host computer and connect both back to the network.
- g) Launch the USB Server software application.
8. The HDMI video adapter should appear as an available device, with the video and audio components listed below it. If any additional USB devices are plugged into the video adapter, they will also be listed. If a device status is listed as "Free" it can be connected to. Only one user may connect to each device at a time.

To connect to any of the devices, select it from the list, then click the "Connect Device" button or right-click on it and select "Connect Device". The status of the device will change to "Locally Connected" and Windows will then detect the device, as if it had been connected via USB and automatically install it. To disconnect from any device, select it from the list and click the "Disconnect Device" button.



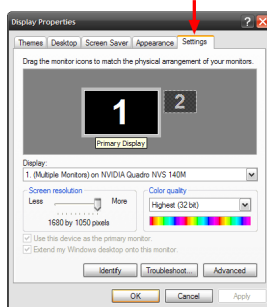
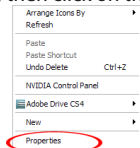
NOTE: When connected, the "Media device" will become the default audio device on the computer system, overriding any onboard audio. Multiple audio output devices cannot be used at the same time, as this is not supported by Windows. To resume using the onboard audio, the "Media Device" must be disconnected.

How to Use

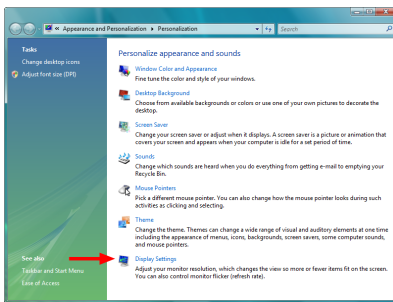
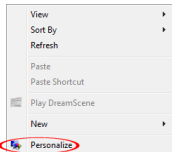
Configuring the image being displayed by the monitor that is connected to the HDMI Video Adapter, can be done in one of two ways:

1. Accessing the Windows Display Settings

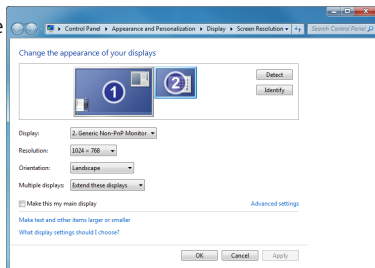
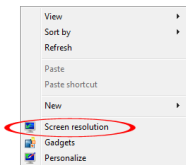
- **Windows XP:** right-click on a blank area of the desktop, select **Properties**, then click on the **Settings** tab:



- **Windows Vista:** right-click on a blank area of the desktop, select **Personalize**, then select the **Display Settings** option.

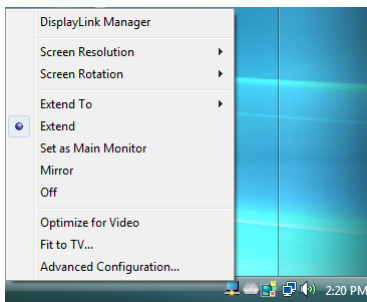


- **Windows 7:** right-click on a blank area of the desktop, select **Screen Resolution**.

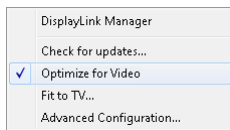


2. Right-clicking the DisplayLink tray icon (🖥️) in the system notification area.

NOTE: In Windows XP/Vista, changes can be made directly from the DisplayLink icon, however in Windows 7, the DisplayLink icon automatically takes you to the Windows Display Settings, where the same settings are available.



Windows XP/Vista



Windows 7

Display Modes

“Extend” DISPLAY MODE (DEFAULT)

A default display mode; this feature allows the attached HDMI Video Adapter enabled display to work as an “Extended” display to the on-board display. The extended working space improves work efficiency.

You may change the relative position of this extended display through the Windows Display Settings or the “Extend To” option in the DisplayLink icon menu.

“Mirror” DISPLAY MODE

This feature allows the same content from the on-board display to be duplicated (mirroring) to the HDMI Video Adapter enabled display.

The screen resolution setting on the HDMI Video Adapter enabled device will match the on-board displays resolution. For example, if the on-board displays resolution is 1024 x 768*32-bit, then the HDMI Video Adapter will use the same resolution.

“Set as Main Monitor” DISPLAY MODE

A unique feature to allow the HDMI Video Adapter to act as the main working display. The HDMI Video Adapter will work as the main graphics adapter on the system, while the on-board display will work as the extended display.

Please be advised that some display utilities and drivers that shipped with certain AGP and built-in display adapters may prevent this option from working on some systems. You may be able to disable the other utility program (usually found in the same toolbar located on the bottom right hand corner) to make this function work properly.

“Off” DISPLAY MODE

This option disables the video output from the HDMI Video Adapter.

Display Resolution

Select the desired video display resolution for the connected monitor in Extend Mode.

The default setting resolution is: 1024 x 768 * 32-bit.

Display Rotation

4 options are available: 0°(**Normal**), 90°(**Left**), 180°(**Upside-Down**), 270°(**Right**) when used with the Extended or Primary display modes. It is a useful function for some rotatable display devices.



Normal



Rotated left



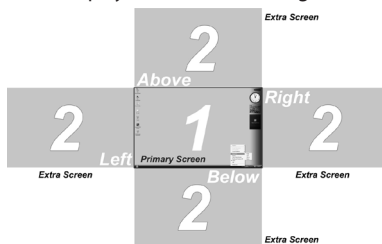
Upside-Down



Rotated Right

Extend to

When using the "Extend" display mode, 4 options are available for placement of the extended display, relative to the primary display: **Left, Right, Above, Below**. More fine adjustments to the placement of the extended display can be made through the Windows Display Settings.



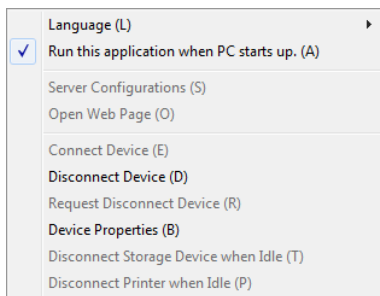
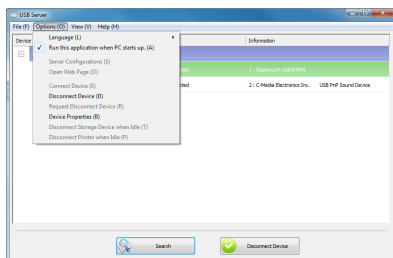
Fit to TV

When using "Extend" mode, if the image displayed on the remote display is not properly centered, then this option can be used to manually adjust the position of the image. Using the + and - buttons will adjust the image horizontally or vertically, and holding the CTRL key while pressing the + and - buttons will allow for smaller adjustments.



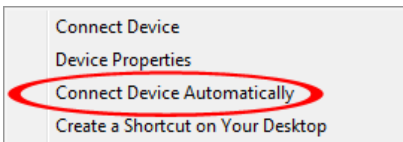
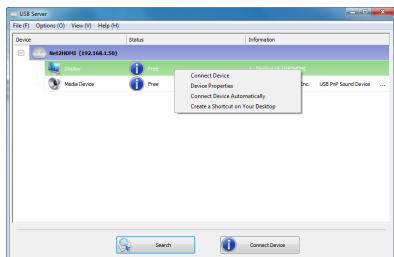
USB Server

The USB Server software can be configured to automatically startup when Windows starts and also connect certain devices automatically. In the "Options" menu of the USB Server window, the option to start the software automatically on Windows bootup is available. This will allow the software to automatically run, if the computer ever is restarted, instead of having to manually double-click the desktop icon each time.



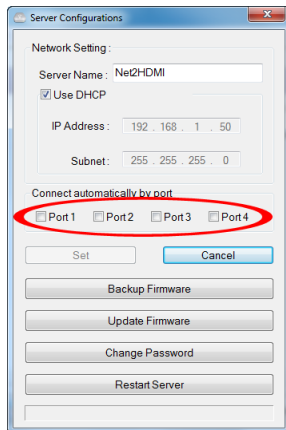
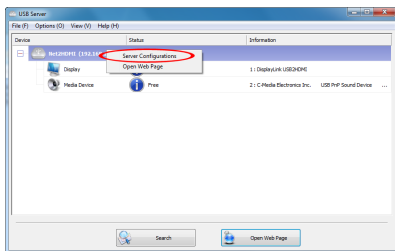
Automatic Device Connection

Certain devices can be set to automatically connect (if available) to the host computer, when the software is running. This will allow the video and/or the audio to automatically connect, whenever the USB Server software is launched, or if unavailable originally, to automatically connect whenever the device does become available.



This can also be applied to USB devices connected to the USB Hub ports. **Right-clicking** on the device and selecting the "Connect Device Automatically" option will enable this feature for the specific USB device.

Alternatively, devices on the USB Hub ports can be set to connect automatically, based on the USB port they are plugged into on the HDMI video adapter (instead of based on the specific USB device itself). This will allow for any type of USB device to be automatically connected to the host computer, so long as it is connected to the specified physical port on the HDMI video adapter. This option can be accessed by right-clicking on the HDMI Video adapter itself, and going into the Server Configuration. **NOTE:** The software will show Port 3 and Port 4, however enabling these ports for automatic connection will have no result.



NOTE: With both methods of automatic connection, if the USB device is manually disconnected by the user, it will not automatically reconnect until the USB Server application is restarted.

Specifications

Video Signal	High Speed HDMI™ (HDMI 1.3)
Host Interface	TCP/IP USB 2.0
External Connectors	1 x HDMI type A female 2 x 3.5mm Audio mini-jack female 2 x USB type A female 1 x USB mini-B female 1 x RJ45 Ethernet female 1 x DC Power
LEDs	1 x Power 1 x Ethernet Link 1 x Ethernet Activity
Maximum Video Resolution	1920 x 1080 / 1080p
Maximum Data Transfer Rate	USB 2.0: 480 Mbps Ethernet: 1000 Mbps
Power Adapter	5VDC, 2000mA, center positive
Operating Temperature	0°C ~ 70°C (32°F ~ 158°F)
Storage Temperature	0°C ~ 85°C (32°F ~ 185°F)
Humidity	10% ~ 80% RH
Dimension (LxWxH)	133.0mm x 71.0mm x 27.0mm
Weight	142g
Compatible Operating Systems	Windows XP (32-bit), Vista/7 (32/64-bit)

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