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WiFi to HDMI® Wireless Video Extender with Audio

WIFI2HD2

*actual product may vary from photos

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Manual Revision: 05/08/2013

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

Packaging Contents

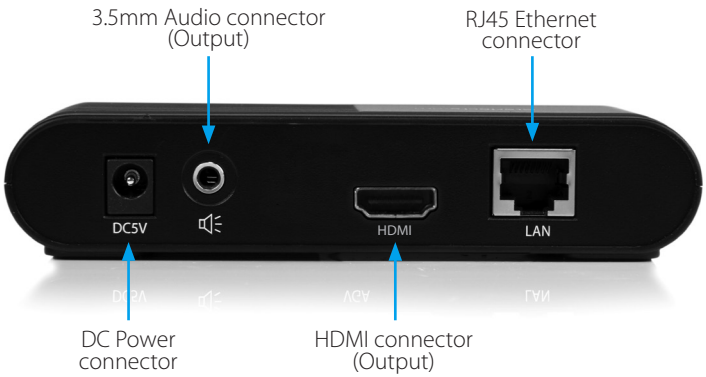
- 1 x WiFi to HDMI Converter
- 1 x Universal Power Adapter
- 3 x Power Adapter Plugs (NA/ UK/ EU)
- 1 x Installation CD
- 1 x Instruction Manual

System Requirements

- CPU: 2nd Gen Intel® Core™ or better
- RAM: 2GB DDR2-800 or better
- IEEE 802.11N or G wireless network
- HDMI enabled display device (i.e. monitor, projector, HDTV, etc.) with HDMI cable
- Available AC electrical outlet
- Microsoft® Windows® 8, 7, Vista, XP (32/64-bit)

Front View

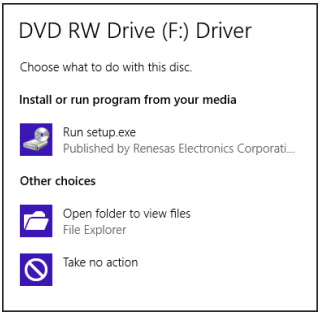
Rear View

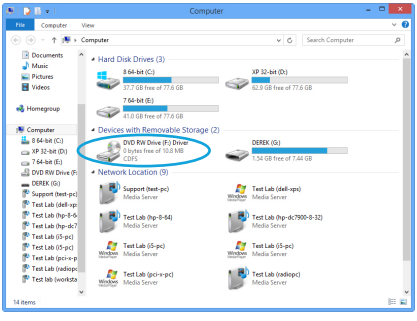


Installation

Software and Driver Installation

1. Insert the included installation CD into the computer's CD/DVD drive.
2. If AutoPlay runs, choose the option to browse/open the folder. Otherwise you can access the files on the CD by going into My Computer and double-clicking the CD/DVD drive.





*photos/screenshots for reference only

3. Run the PC2TV application to begin the driver/software installation wizard.
4. Proceed through the installation wizard until the benchmark application runs.
5. The Benchmark application will test the capabilities/performance of the computer system to run the video extender software. It will provide a rating out of 5 stars (see below for description). Click the "Analysis" button to begin.

Rating	Description
1 Star	CPU and graphics performance are below minimum recommended levels.
2 Star	Music and Photo viewing and web surfing are acceptable. Video playback at a very low screen resolution may be possible.
3 Star	Good Music playback and Photo viewing quality. Video playback may still lag.
4 Star	Video playback should be smooth.
5 Star	Best performance for video playback and all features.

6. After the benchmark is complete, reboot the computer.
7. After the computer has rebooted, there will be an icon for PC2TV that will launch the software for the video extender.

Hardware Installation

1. Connect a male/male HDMI cable from the rear panel of the video extender to the remote display.
2. Connect the included power adapter from an electrical outlet to the video extender.
   OPTIONAL: Connect a USB peripheral, such as keyboard/mouse, to the USB hub port on the wireless video extender.
3. Turn on the remote display.
4. Turn on the video extender by pressing the power button on the front panel.
5. Wait at least 60 seconds for the remote display to show the ready screen from the video extender.
6. You can now connect to the video extender over WiFi. **(SSID: WIFI2HD2)**

Wireless Network Configuration

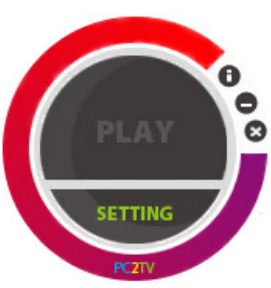
The video extender can operate in two wireless modes: Wireless Access Point mode (AP) or Client Mode (STA).

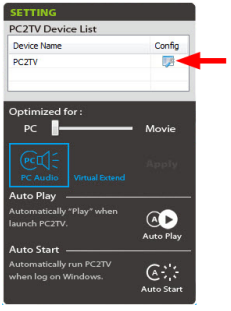
- **AP Mode (default):** The video extender will act as a wireless access point (i.e. wireless router) for other wireless enabled computers. This mode is useful if there is no existing wireless network where the video extender will be used, or you do not wish to have the video extender on your main network.
- **Client Mode:** The video extender will act as a regular wireless client and connect to an existing wireless network. This mode is useful if there is an existing wireless access point (i.e. wireless router) already setup or if the computers need Internet access at the same time.
  NOTE: The wireless AP must have DHCP enabled.

To set the video extender into Client mode:

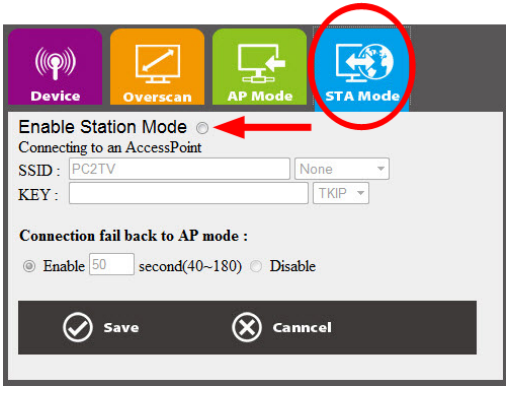
1. By default, the wireless video extender will be set to AP Mode. Check your computer's wireless network settings for the network called "WIFI2HD2".
2. Connect to the WIFI2HD2 network. No encryption/security should be enabled yet.
3. Once connected, run the PC2TV application from the desktop icon.

4. Open the "Setting" menu and then click on the Configuration button.





5. From the Configuration window, click on the "STA Mode" tab then click the "Enable" option. Enter the required information for connecting to your existing wireless network (i.e. SSID, encryption type and network key). Click the SAVE button once complete.



NOTE: Client/STA mode does not support static IP addresses. The wireless AP must have DHCP enabled.

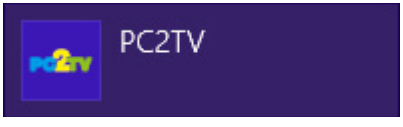
OPTIONAL: If connecting multiple wireless video adapters to this network, be sure to set a unique Device Name for each one for easy identification under the "Device" tab.

6. Restart the wireless video adapter by unplugging and reconnecting the power.

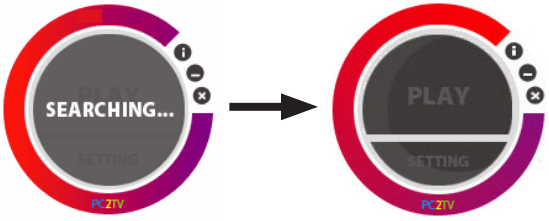
How to Use

NOTE: It is recommended to turn off the screensaver on your computer when using this product

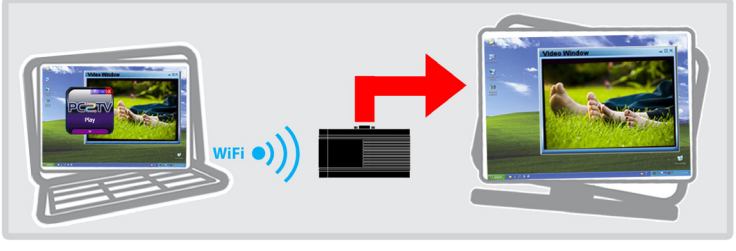
1. Double-click the PC2TV icon from the desktop.



2. At this point, a security alert may pop up on your system, please check to allow the device to communicate on both Private and Public networks.
3. Once the PC2TV application is ready to connect to the wireless video extender, the "Play" button will appear.



4. Clicking the "Play" button will automatically begin streaming the computer desktop to the remote display.



NOTE: Additional users may connect to the wireless video extender at any time. This will cause the currently connected user to be automatically disconnected.

5. To stop the video streaming, click "Play" once more on the PC2TV application.

Advanced Settings

Advanced Settings can be accessed by clicking on the "Setting" button at the bottom of the PC2TV application window. Click the "Apply" button to set changes.

- **Device List:** Displays the name of the detected wireless video extender(s). If multiple are listed, double-click the one you wish to connect to.

- **Optimized For:** Optimizes the streaming video based on what you will be doing on the host computer. By default, this is set for "PC", which should be used when running regular applications, such as web browsers or spreadsheets. Setting the slider bar in the middle should be used when viewing video/movies. If video performance is still not ideal, the slider can be set all the way to "Movie".

- **PC Audio:** By default, when connected to the wireless video extender, audio on the host computer is disabled. Audio will instead be streamed to the wireless video extender only. By enabling this option, audio on the host computer will be restored, while still being streamed to the wireless video adapter.

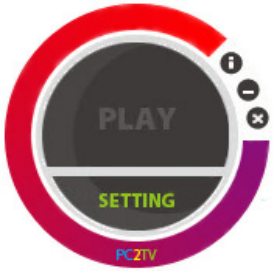
- **Virtual Extend:** Click the icon above the text to create an extended desktop screen that will be streamed to the extender instead of the main desktop screen. Click the text "Virtual Extend" if problems arise while streaming the extended desktop. **NOTE: Compatible with Windows 7/8 only**

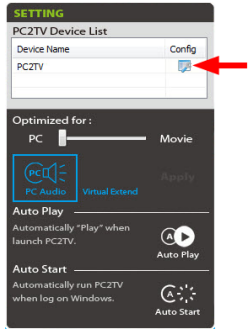
- **Auto Play:** Automatically starts video streaming once the PC2TV application is launched and the device is detected. Click the icon to enable/disable.

- **Auto Start:** Automatically starts the PC2TV application on Windows startup. Click the icon to enable/disable.

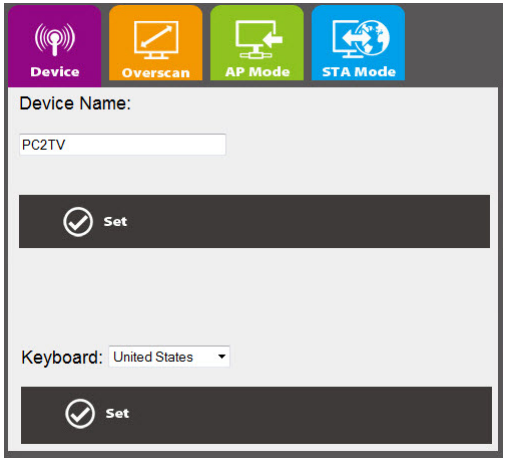
Web Interface Configuration

The web interface for the wireless display adapter can be accessed by clicking the Configuration button in the PC2TV Advanced Setting window.

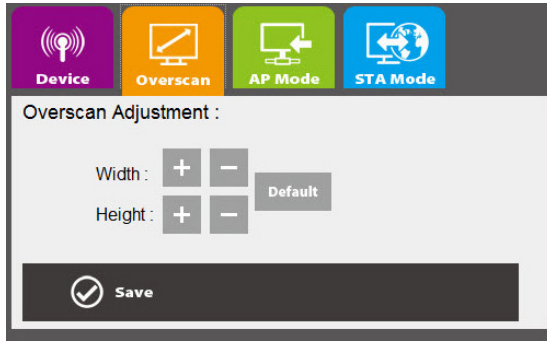




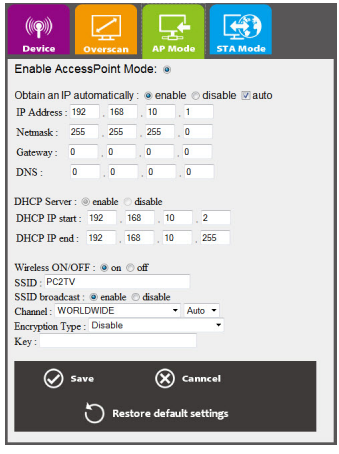
The web interface is divided into several sections that control different settings for the wireless display adapter.

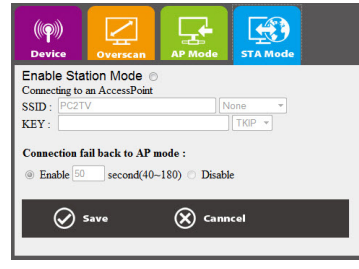


Device: Set the name/identifier for the wireless video extender, for easy identification if multiple extenders are present.



Overscan: Adjust the overall width and height of the streaming image to better fit on the remote display.





AP Mode/ STA Mode: Select between AP Mode and Client Mode (STA Mode) and set any network settings required for each.

UPnP Media Streaming

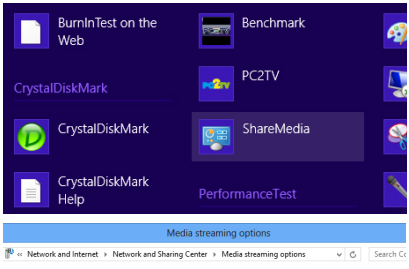
The WIFI2HD2 device is designed to be a UPnP-DMR (Digital Media Renderer) so you are able to stream contents from a PC (Windows 7/8 Media Sharing), Mac, smart phone, and Tablet-PC to your TV through this device.

Usage of UPnP in Windows 7/8

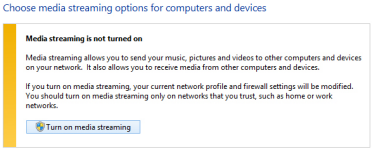
Before streaming a file to the DMR of WIFI2HD2 device using Windows 7/8, you have to connect the device with your PC and then turn on the media streaming first.

Note: Every time the device is disconnected with the PC, you will need to perform these steps again before streaming a file to the DMR through Windows 7/8.

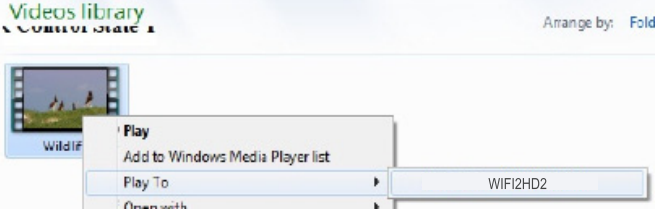
1. Click the "Share Media" icon under "PC2TV" from "All Programs" -> "VideoHome".



2. Click "Turn on media streaming" to allow media streaming from your PC. The WIFI2HD2 device's default DMR name is "WIFI2HD2".



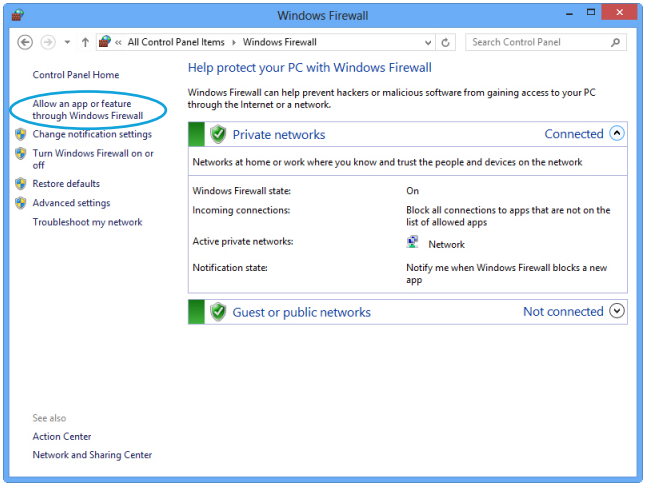
3. After you've turned on media sharing, open the folder with the media file(s) you wish to play.
4. Right-click on the file and select "Play to", then select the WIFI2HD2 device.



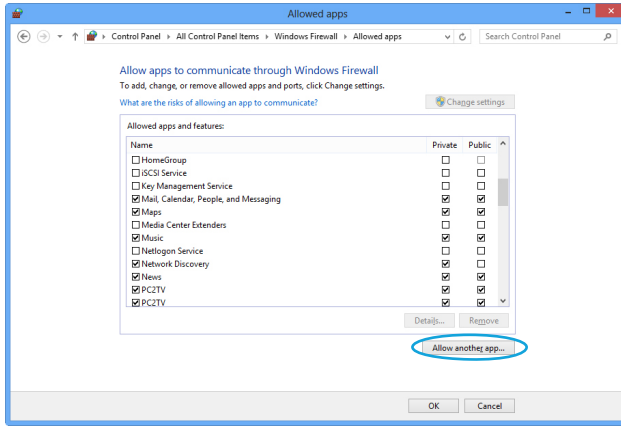
Troubleshooting

The WIFI2HD2 software (PC2TV) must first be "allowed" in any system firewalls before the device can function. Steps to "allow" the software in Windows Firewall are listed below. For additional support, or support for different firewalls, please contact the respective firewall developer.

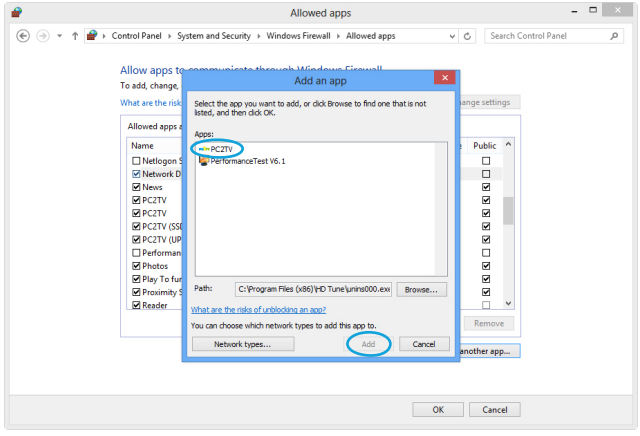
1. Open Windows Firewall by selecting: Windows 8: Control Panel –System and Security –Windows Firewall from the Windows 8 Metro. Windows 7/Vista: Start: – Control Panel –System and Security –Windows Firewall for Windows 7/Vista/XP.
2. In the left hand Panel of the Windows Firewall select "Allow a Program or feature through Windows Firewall".



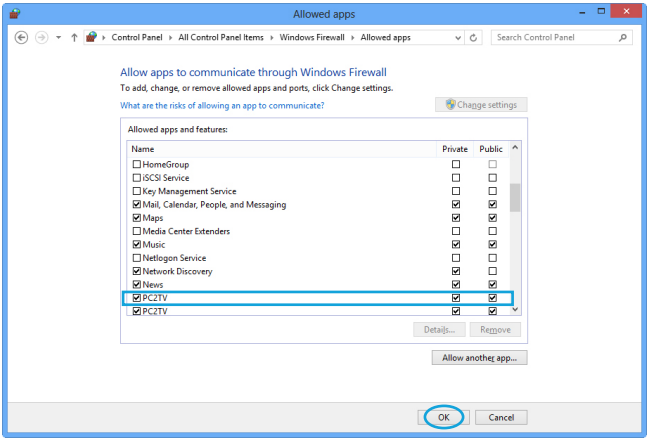
3. Search for PC2TV under the heading “Allowed Programs and features:”. If this program is listed please skip to step 5. If the program is not listed click the “Allow another program…” button.



4. Locate and select PC2TV in the list of programs, and click the “Add” button.



5. Ensure that a check mark is placed in the box next to “PC2TV”, and under the “Home/Work (Private)”, and “Public” sections for PC2TV. Then click “OK”.

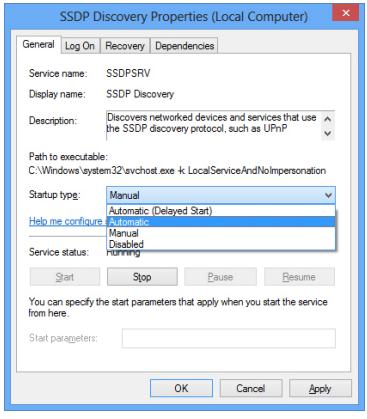


6. Your Windows Firewall is now configured to allow PC2TV.

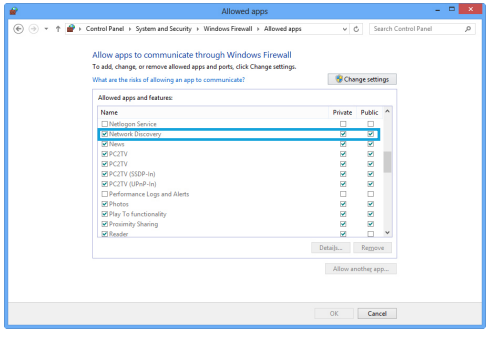
NetDispLib error pops up when launching the PC2TV application.

The SSDP Discovery service may be disabled, or failed to start.

1. To check the SSDP Discovery service, from the main desktop, right-click on Computer, then select "Manage". In the new Computer Management window, select "Service" under the "Service and Applications" heading.
2. Locate SSDP Discovery in the list of services and make sure that it is set to start Automatically. Then make sure that the service is started.

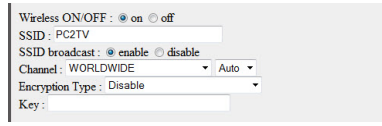


3. Go into the Firewall (by selecting: Windows 8: Control Panel –System and Security –Windows Firewall from the Windows 8 Metro. Windows 7/Vista: Start: – Control Panel –System and Security) and allow for Network Discovery for both Private and Public networks. This setting can be found via "Control Panel", "Windows Firewall", then "Allowed Programs".



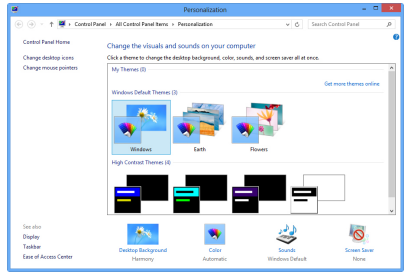
Poor quality video playback/ choppy video
Make sure the optimization for the PC2TV application is set appropriately in the Advanced Setting menu. For video playback, the slider bar should set in the middle, and all the way to "Movie" if problems are still encountered. Click the "Apply" button to confirm the setting.

AP Mode: If the "Channel" setting in the web interface is set for Auto, select a permanent channel.



PC Video / Resolution Settings

1. **Windows Vista/ 7:** If using an Aero® theme, change the desktop theme to one under the "Basic and High Contrast" section.
2. Change the screen resolution size to a lower setting. Also make sure the resolution is one of the supported sizes.
3. Update the drivers for the computer's video card.



Cannot Achieve 1080p Video Resolution

1080p video resolution is only supported on Intel® Family Graphics Chipsets. If using a different type of Graphics Card video resolution will be limited to 720p.

No Sound

The audio devices on your PC.

1. Open the "Sound" properties window from the "Control Panel".
2. The "Speakers" on the "Playback" tab should be "WonderMedia SmartStream Audio".
3. If your PC speakers are currently selected instead, select the WonderMedia speakers and click "OK" or "Apply" to save the setting.
4. Close your media player and restart it.

The PC2TV application cannot connect/find the wireless video extender.

- Double check that computer is connected to the proper wireless network. The default SSID of the wireless video extender is "WIFI2HD2".
- Check that the Windows Firewall is not blocking the application. Set the PC2TV application as an allowed program if necessary.
- If any third-party firewall or anti-virus software is installed, check that the PC2TV application is not being blocked by either. Temporarily disable both to confirm if this is the case.

Unable to connect to the wireless video extender AP.

Reset the AP Mode settings:

1. Turn off the wireless video extender.
2. Connect the computer to the extender with an RJ45 Ethernet cable.
3. Power on the wireless video extender.
4. Launch the PC2TV application, go into Settings and then go into the configuration screen.
5. Click on the AP Mode tab and click on the "Restore Default Settings" button.
6. Once default settings restored, disconnect the RJ45 Ethernet cable and restart the extender.

PC2TV application does not work when connected with RJ45 Ethernet cable.

Make sure to connect the RJ45 Ethernet cable before powering on the wireless video extender.

NOTE: Network Administrators will be required to install the product in a corporate office to allow the service to work with all security software (i.e. Windows Firewall).

UPnP won't connect / respond

1. Please download a Hotfix from Microsoft.
   Hotfix Download Link: http://support.microsoft.com/kb/2619260/en-us
   ("Play To" feature does not work when two network adapters are on different subnets or when you enable Wi-Fi Direct concurrent mode in Windows 7).

UPnP Supported Formats

The following tables show the formats that are supported for each content type, including the associated file extension and MIME (Multipurpose Internet Mail Extensions) type.

1. Supported Picture Formats

Format	File Extension	MIME type
GIF	gif	image/gif
PNG	png	image/png
BMP	bmp	image/bmp
JPEG	Jpg / jpeg	image/jpeg

* Due to limited memory buffer, the largest supported picture is 16MB for JPEG format, and 5MP for GIF, PNG and BMP formats.

2. Supported Audio Formats

Note: The WIFI2HD2 device only supports 2-channel audio content

Format	File Extension	MIME type
LPCM	pcm, wav, l16	audio/L16
MPEG-1 Layer 3	mp3	audio/mpeg
WMA	wma	audio/x-ms-wma
WAV	wav	audio/wav
MPEG-4	mp4	audio/mp4
AAC	aac	audio/vnd.dlna.adts
OGG	ogg, oga, ogv	audio/ogg
3GP	3gp, 3g2	audio/3gpp

3.Supported Video Formats

The bit-rate of a video is recommended to be less than 15Mbps to avoid performance issues. In MPEG-4, Microsoft MPEG-4 V1/2/3 are exceptions.

Format	File Extension	MIME type
WMV	mpe, mpeg, mpg	video/mpeg
AVI	avi	video/avi video/x-ms-avi video/x-msvideo
MPEG-1	mpg, mpeg	video/MP1S
MPEG-2	mpg, mpeg	video/MP2P
MPEG-TS	m2t, tts	video/vnd.dlna.mpeg-tts
MPEG-4	mp4, mp4v, mpeg4, m4v	video/mp4 video/x-divx video/divx
3GP	3gp, 3gpp	video/3gpp
3GP2	3g2, 3gpp2	vidoe/3gpp2
MOV	mov	video/quicktime
MPEG	mpe, mpeg, mpg	video/x-mpeg
MPEG-2	mpe, mpeg, mpg	video/mpeg2
WMV	wmv	video/x-ms-wmv
DVR-MS	dvr, dvr-ms	video/x-ms-dvr
ASF	.asf .wma .wmv	video/x-ms-asf

Windows Media Player Media Sharing Supported Formats

The following tables show the formats supported using the WMP "Play to" function.

1. Supported Picture Formats

Format*	File Extension	MIME type
JPEG	jpg	image/jpeg
PNG	png	image/png

2. Supported Audio Formats

Format	File Extension	MIME type
WMA	wma	audio/x-ms-wma
MPEG-1 Layer 3	mp3	audio/mpeg
WAV	wav	audio/wav
LPCM	N/A	audio/L16

3. Supported Video Formats

Format	File Extension	MIME type
WMA	wmv	video/x-ms-wmv
MPEG-2	mpeg, mpg	video/mpeg
MPEG-1	mpeg, mpg	video/mpeg
AVI	avi	video/avi
DVR-MS	dvr-ms	video/x-ms-dvr

Restore Default Settings

If the above troubleshooting steps do not resolve the issue, try resetting the unit to its default configuration.

1. With the unit powered on and connected to your display, you can reset the WIFI2HD2 device to factory default by pressing the "RST" button located beside the RJ-45 port on the unit for 10 seconds until your display screen goes black.

Specifications

Video Signal	HDMI
External Connectors	1 x HDMI female 1 x 3.5mm Audio mini-jack female 2 x USB type A female 1 x RJ45 Ethernet female 1 x DC Power
LEDs	1 x Power
Maximum Resolution	1080p (1920x1080)
Supported Video Resolutions	Standard: 1600x1200, 1280x1024, 1280x768, 1024x768, 800x600 Widescreen: 1920x1080, 1680x1050, 1440x900, 1366x768, 1280x800, 1280x720
Maximum Data Transfer Rate	Wireless N: 300 Mbps (Dual-band)
Audio Support	Yes (HDMI Digital out and 3.5mm)
Supported Standards	IEEE 802.11n Draft 3.0, IEEE 802.11g,
Wireless Operating Frequency	5 GHz ISM Bands (5.15-5.85 GHz) 2.4 GHz ISM Bands (2.412~2.484 GHz)
Power Adapter	5V DC, 900 mA, center positive
Enclosure Material	Plastic
Dimensions	133.0mm x 71.0mm x 27.0mm
Weight	140g
Compatible Operating Systems	Windows 8, 7, Vista, XP (32/64-bit)

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Warranty Information

This product is backed by a two year warranty.

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