# INSTALLATION & CONFIGURATION MANUAL

# FIP-1100

## HD IP Streaming Server


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# SAFETY PRECAUTIONS

***The presence of this symbol is to alert the installer and user to the presence of uninsulated dangerous voltages within the product's enclosure that may be of sufficient magnitude to produce a risk of electric shock.***

**TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS DEVICE TO RAIN OR MOISTURE. DO NOT OPEN THE UNIT. REFER SERVICING TO QUALIFIED PERSONNEL ONLY.**

- DO NOT apply power to the unit until all connections have been made, all components have been installed and all wiring has been properly terminated.
- DO NOT terminate, change or uninstall any wiring without first disconnecting the unit's power adapter from the device.
- This device is supplied with the appropriately rated 12VDC power supply with the center pin positive. The use of any other power supply could cause damage and invalidate the manufacturer's warranty.
- DO NOT power on the unit until all cables and connections to the device have been properly connected.
- The device should be installed in an environment consistent with its operating temperature specifications. Placement next to heating devices and ducts is to be avoided as doing so may cause damage. The device should not be placed in areas of high humidity.
- DO NOT cover any of the device's ventilation openings.
- If the device has been in a cold environment allow it to warm to room temperature for at least 2 hours before connecting power.

# PACKAGE CONTENTS

This package contains:

- One FIP-1100 HD IP Streaming Server
- One Adaptor 12VDC
- One installation / configuration manual

Inspect the package before starting installation to ensure there is no damage and all supplied contents are present. Contact your distributor or dealer should the device be damaged or package contents are incomplete.

# PRODUCT DESCRIPTION

**FENGER**'s FIP-1100 HD IP Streamer allows the user to stream any one audio/video source over a IP Network to up to any 16 Smart-TV's, IP STB's, or connected Computers within the IP Network. The IP Streamer accepts an HDMI, Component, or Composite video input and the unit is designed to deliver a rich HD/SD Streaming experience for its users deploying MPEG-2 or MPEG-4 AVC standards.

Combine any sources and stream them over the network for multiple sources. The FIP-1100 HD IP Streaming Server enables high-definition streaming with resolutions up to 1080p, providing a high quality viewing experience for your customer. The unit is MPEG-2 or MPEG-4 AVC switchable and supports UDP/RTP Streaming. The compact design saves space and is easily controlled via a GUI for rapid deployment.

**The FIP-1100 features:**

- **Front panel LED Status Display**
- **Video resolution: Up to 1080p**
- **HDMI, Component, Composite inputs with auto detection**
- **Dual Mode H.264/MPEG-4 AVC / MPEG-2 selectable**
- **Variable Bit Rate Control**
- **Closed Captioning Support**
- **Audio format: MPEG-1-Layer2 (MP2), AAC, AC-3 Pass through**
- **Easy installation and use**
- **GUI for setup and control**
- **GigE output port**
- **Light weight and compact design**

## SPECIFICATIONS

| | |
|---|---|
| **INTERFACES** | |
| Ethernet (output) | 1Gbps, RJ-45 |
| USB Port | USB 2.0 |
| Video Input | HDMI, Component (YPbPr), Composite (CVBS) |
| Audio Input | HDMI, Digital Coaxial, Digital Optical, Analog Stereo |
| **ENCODING** | |
| Video Format | MPEG-2<br>MPEG-4 AVC H.264, Main/High Profile |
| Audio Format | MPEG-1 Layer II (MP2)<br>Advanced Audio Codec (AAC)<br>AC-3 Passthrough |
| Video Resolution | 480i, 480p, 576i, 576p, 720p, 1080i, 1080p |
| Video Bitrate | MPEG-2 HD: 10~20 Mbps<br>MPEG-2 SD: 2~8 Mbps<br>MPEG-4 AVC HD: 2~10 Mbps<br>MPEG-4 AVC SD: 1~4 Mbps |
| Max. Video Quality | H.264/1080p60 Up to 10 Mbps for each HTTP Stream |
| Audio Bitrate | 128, 256, 384 Kbps |
| Streaming Protocols | HTTP Server (DLNA)<br>UDP/RTP multicasting<br>UDP/RTP unicasting<br>TCP unicast |
| **MISC** | |
| Digital Living Network Alliance (DLNA) | Media Server 1.5 |
| Closed Caption | Yes |
| Setup and Control | GUI |
| Language | English |
| Power Supply | 12 VDC / 1.5 Amp. |
| Consumption | 500 mA |
| Temperature Rating | 0ºC to +45ºC |
| Dimensions | 236mm x 155mm x 35mm |
| Weight | 940g |

***Specifications subject to change without prior notice***

# INSTALLATION

***System Installer must adhere to Article 820-40 of the NEC that provides guidelines for proper grounding and specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as possible***.

## UNPACKING and INSPECTION

Each unit is shipped factory tested. Ensure all items are removed from the container prior to discarding any packing material.

Thoroughly inspect the unit for shipping damage with particular attention to connectors and controls. If there is any sign of damage to the unit or damaged or loose connectors contact your distributor immediately. Do not put the equipment into service if there is any indication of defect or damage.

## HARDWARE INSTALLATION and CONNECTIONS

***It is highly recommended that quality cables and connectors be used for all video and audio source connections***

1. Connect the media source (Satellite STB, Media player, or other media device) to the FIP-1100 streaming server by HDMI, YPbPr, or CVBS cables.
2. Connect the FIP-1100 Streaming Server to local area network (LAN)
3. Plug the power adapter to the device and power up
4. Network Setup
5. In the same network segment, find the FIP-1100 Streaming Server from Windows XP/7 “My Network Places”

   ** Note: For Windows XP enable UPnP.
6. Open the streaming server’s configuration web page by double-clicking the device icon(XP)
7. There are three (3) use cases supported by FIP-1100 Streamer: DLNA media server, UDP/RTP multicasting and TCP/UDP/RTP unicasting.

Limitations:

1. All UPnP/DLNA devices, including the FIP-1100 Streaming Server (media-server), media-players, the Smart TV, the set-top-box, and the controlling PC, should be located within same network segment/LAN.
2. If a DHCP server is present in the private network, the FIP-1100 Streaming Server will use the IP address assigned by the DHCP server.
3. If no DHCP server is present, the FIP-1100 Streaming server will use an assigned IP address (169.254.xxx.x).


# Front-Panel

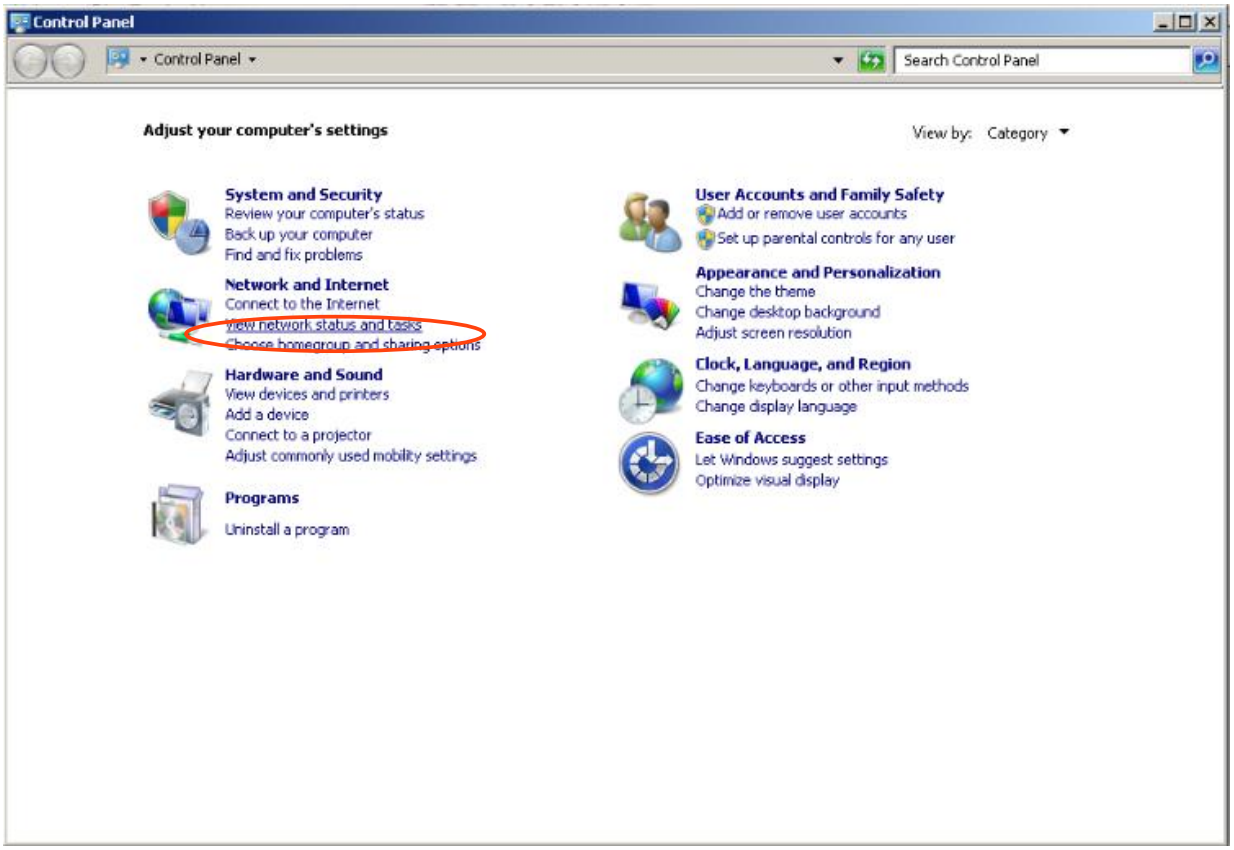
| Buttons/LEDs | Description |
|---|---|
| Reboot button | Reboots the device (unsaved settings will be lost) |
| RST / UPG button | To reset all the settings of the device to factory default:<br>1. Press and hold the RST/UPG button and boot-up the device<br>2. Hold the button until CFG led to flashes 10 times (about 10 seconds)<br>3. After the CFG led stops flashing release the button<br><br>To upgrade firmware using the USB port:<br>1. Plug-in the USB drive with the upgraded firmware image (“hdip_upg.img”)<br>2. Press and hold the RST/UPG button and boot-up the device<br>3. USB led will flash while copying the image from USB drive (about 3~5 seconds)<br>4. Wait until the CFG led stop flashing<br>5. Release the RST/CFG button and wait for the device to reboot and upgrade the firmware (about 1 minute) |
| PWR | Power is ON |
| CFG | Indicates device is in configuration mode |
| USB | Indicates USB drive is mounted |
| MPEG-2 | Indicates device is encoding video using MPEG-2 |
| AVC | Indicates device is encoding video using AVC |
| MP2 | Indicates device is encoding audio using MPEG-1 Layer 2 |
| AAC | Indicates device is encoding audio using AAC |
| AC-3 | Indicates device is encoding audio using AC-3 |

## Procedure to connect to the Streaming Server via the Network port

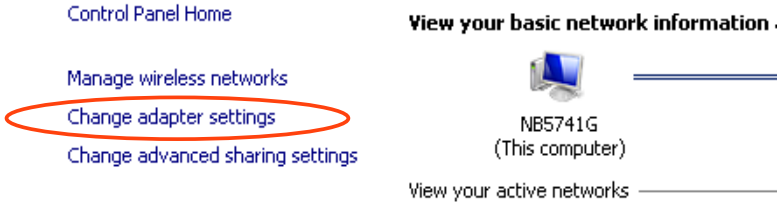
The following procedure will allow the installer to setup the Streaming Server via the GUI

1. Connecting a standard CAT5e cable from FIP-1100 Network port to a switch then connecting from the switch to TV and PC.
2. Set the PC via the Control Panel to **"Obtain an IP address automatically"**

   **Start- Control Panel ==> View Network Status and Task**



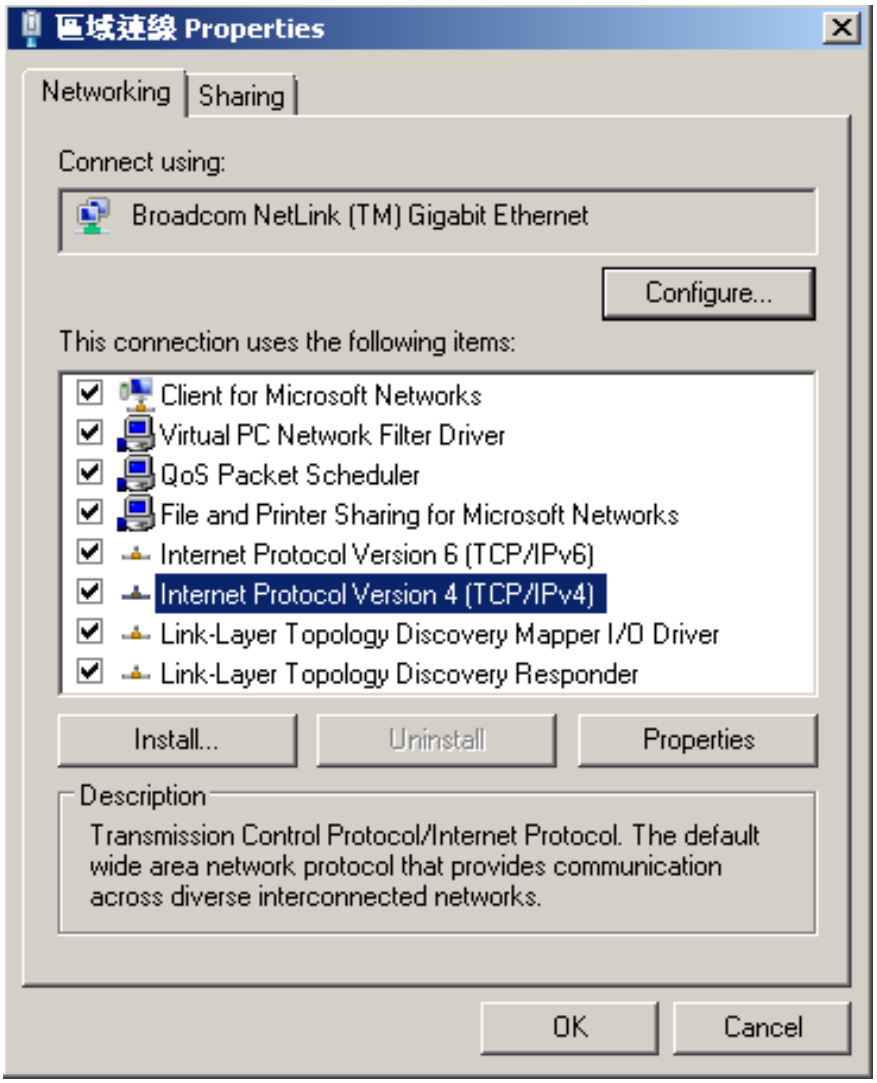

3. **Select** 'Change Adapter Settings' from the left plane



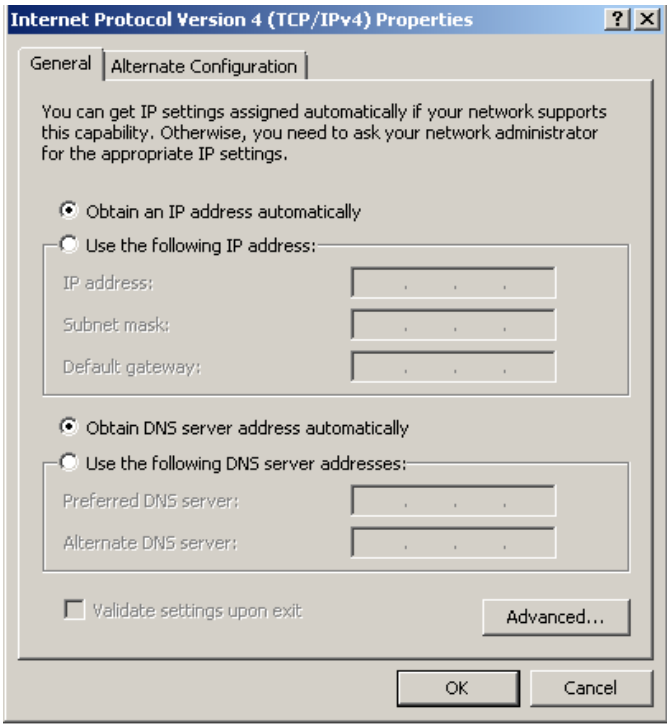
4. **Select** Local Area Connection Icon

   Then **Right Click – Select Properties**

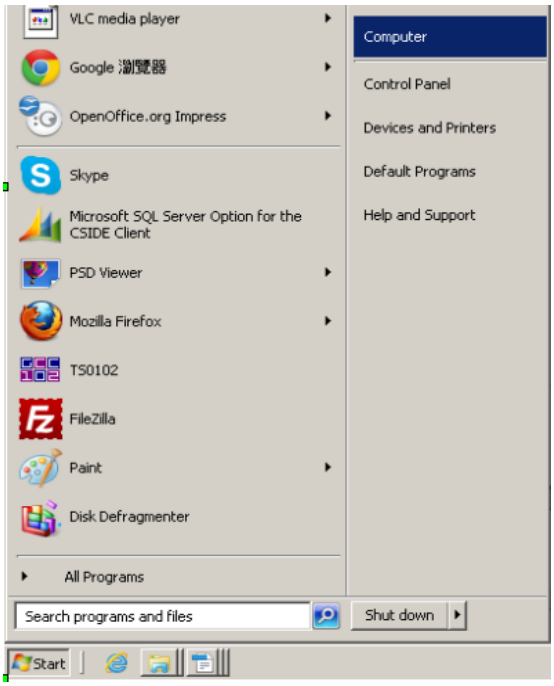
   Internet Protocol Version 4 (TCP/IPv4) Properties



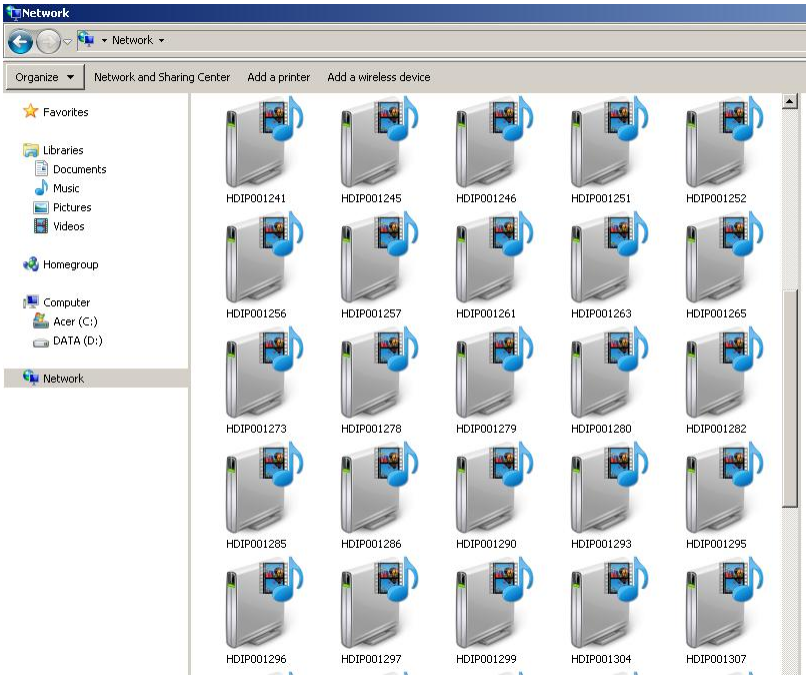
5. **Select** “Obtain an IP address automatically” & “Obtain DNS server address automatically”



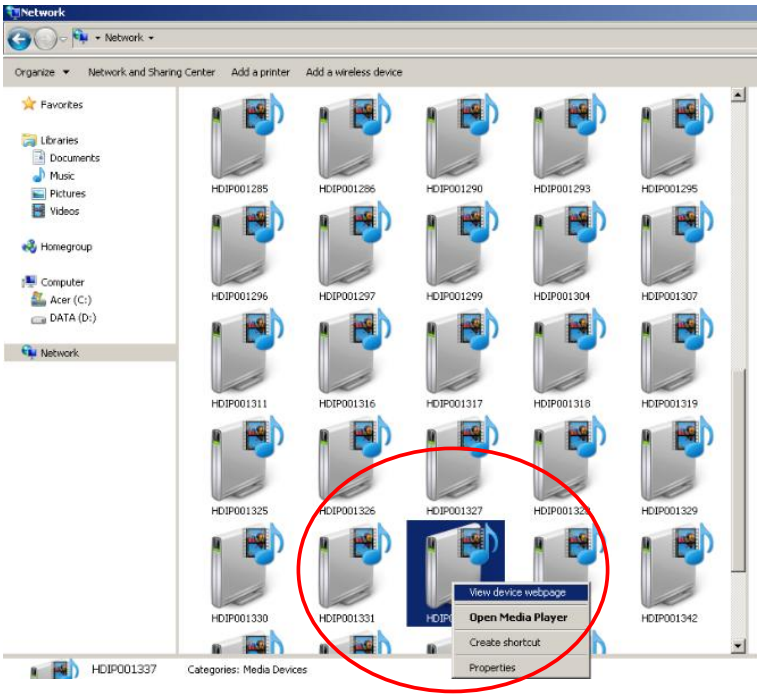

6. After setting the PC to obtain IP address & Obtain DNS server automatically
   **Select Start ==> Computer ==> Network**



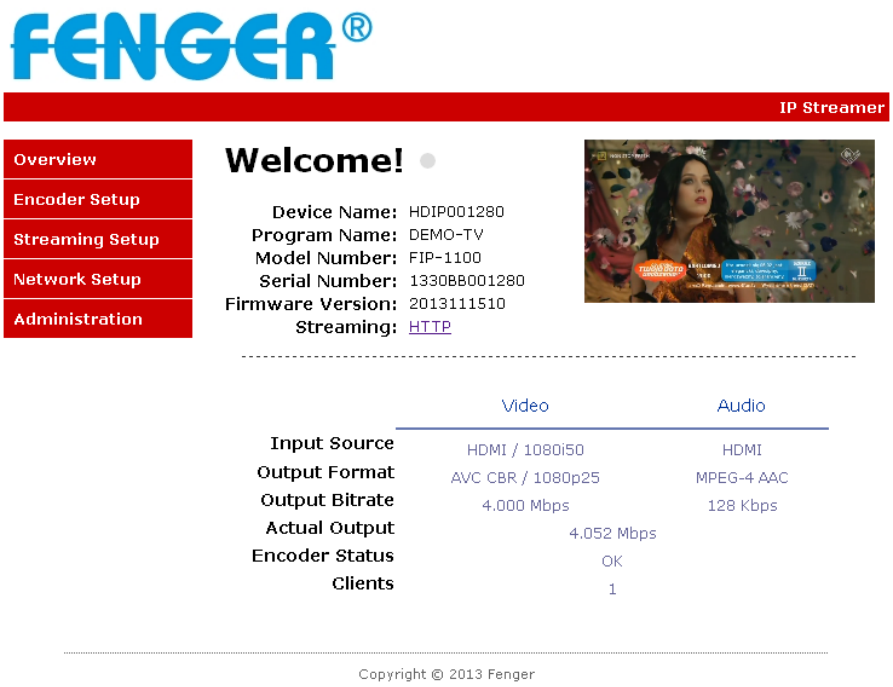
7. After selecting Network- the HDIP Icon will show up on the right side under Media Devices. Each device found will be displayed by the Device Address.




8. Right Click on the device icon, **Select 'View Device Webpage'**



9. **Overview Welcome page will be displayed**



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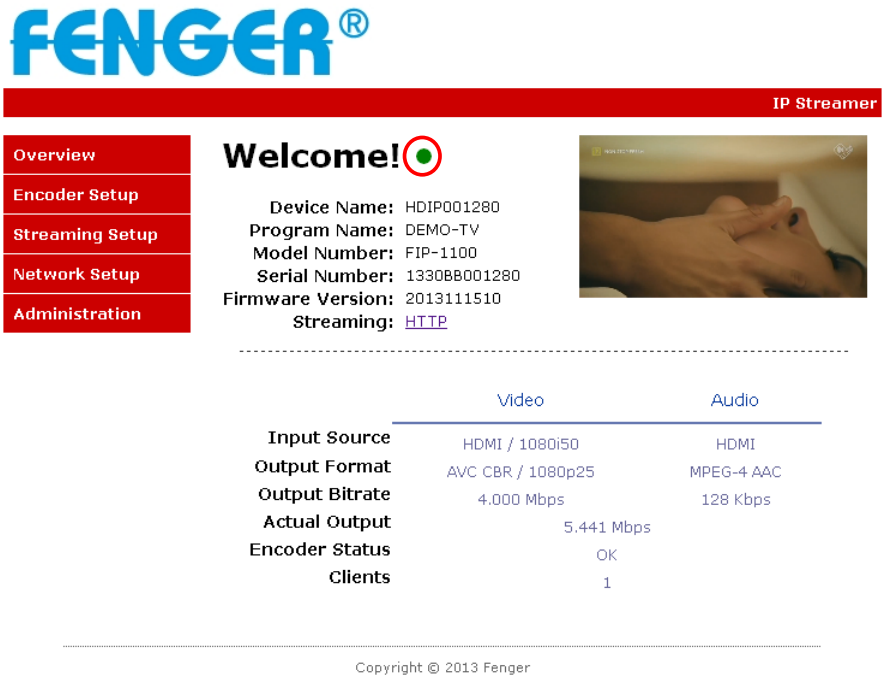
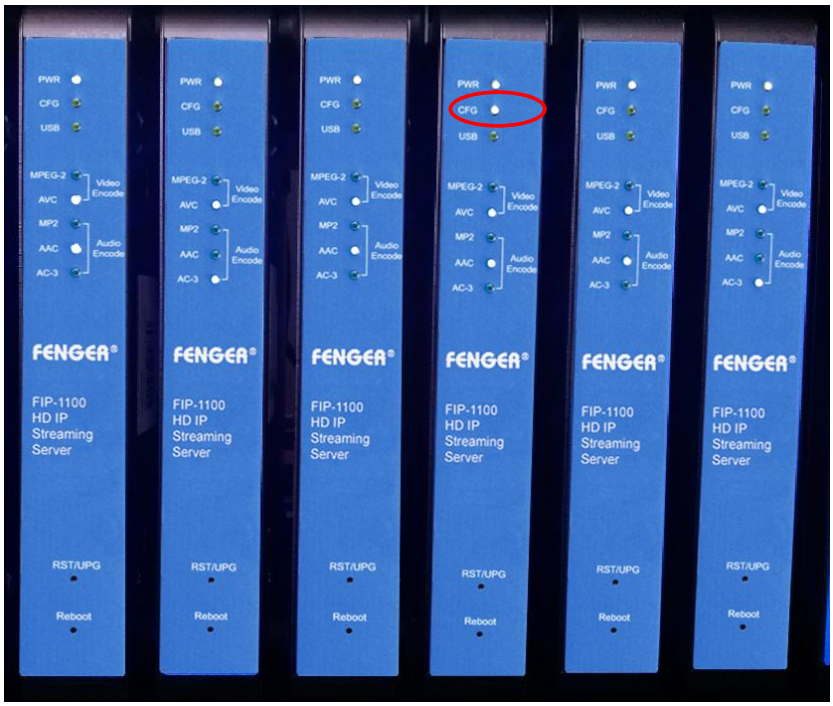
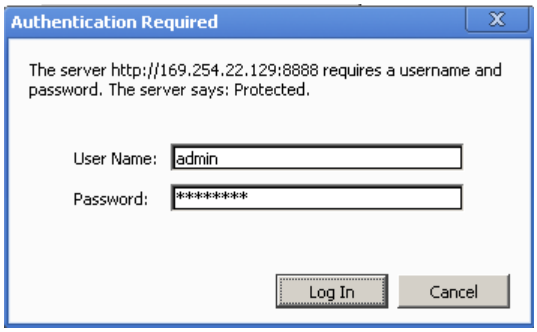
On the Welcome Screen, we have added a tool to help the installer locate a unit in a rack or headend. Press the LED ON button (shown below). This will cause the CFG LED light to flash continuously for the installer to identify and locate the HDIP. To turn off, simply press the LED tool again.

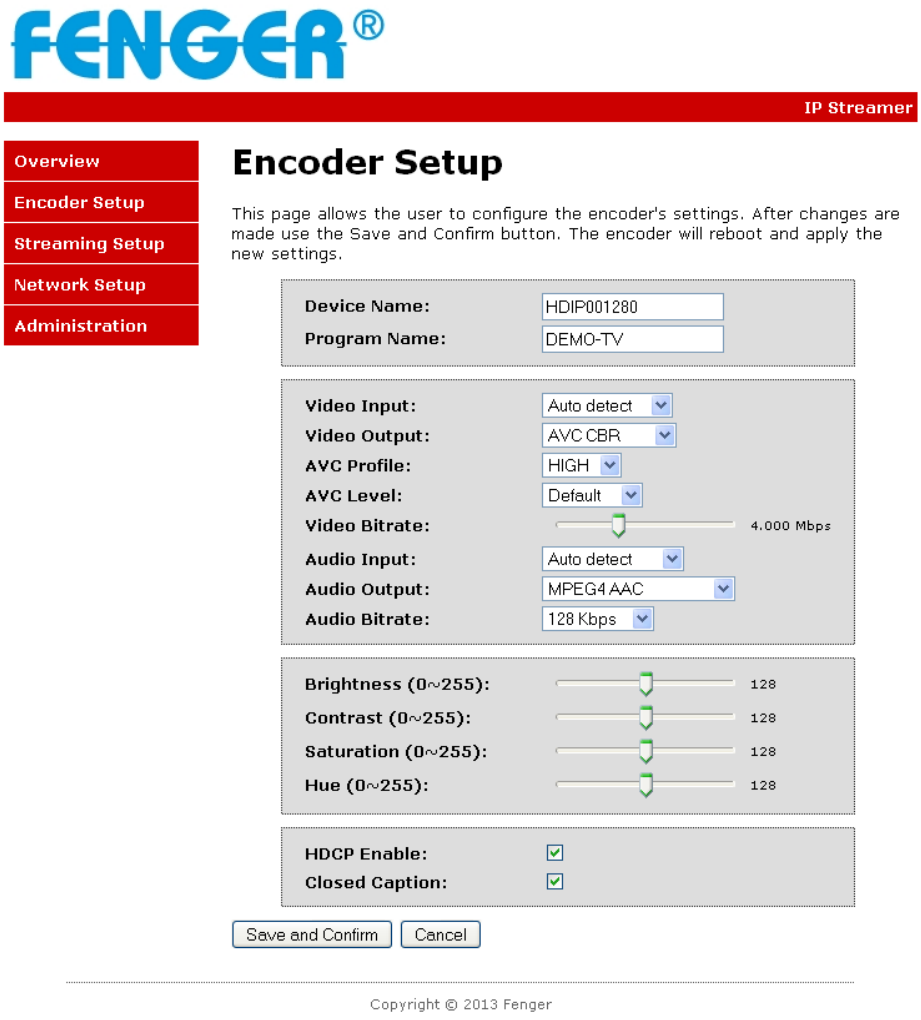


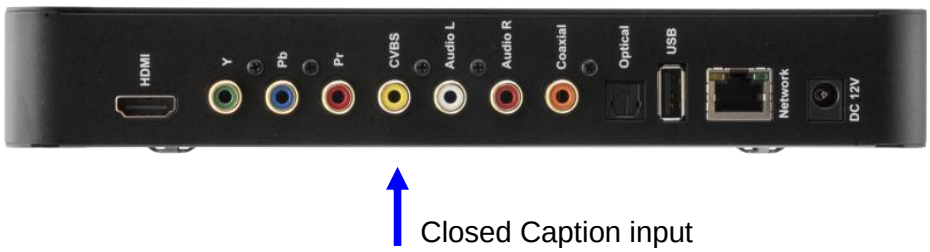



**Encoder Setup:** **User Name: admin** **Default Password: Admin123**

Once the Welcome Page is displayed select the Encoder Setup tab and the below Login “Authentication Required” screen will be presented. Enter the User Name and Password then click Login.



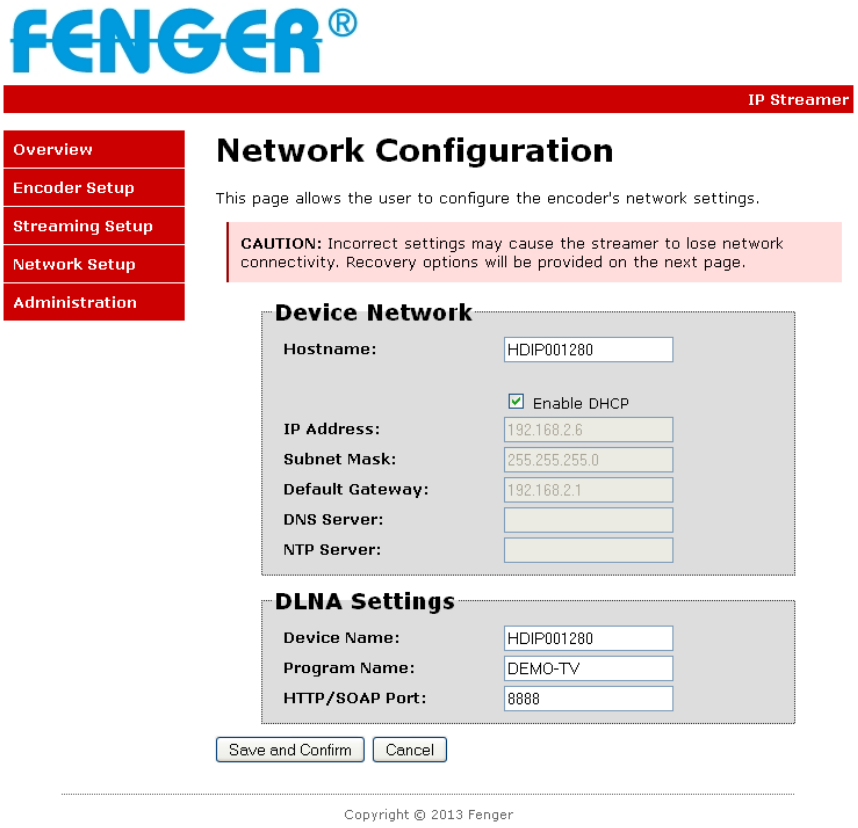





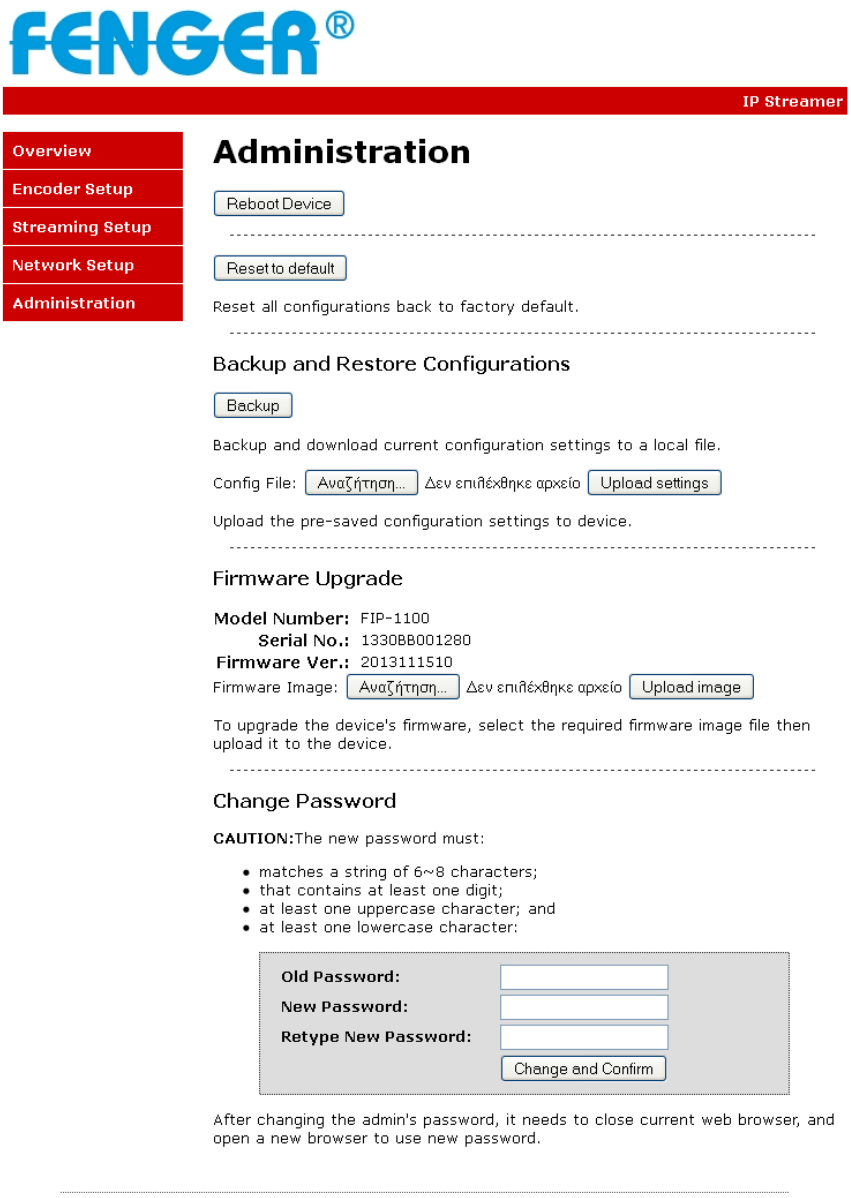

Enable Closed Caption:

1. Connect Video source to HDMI or YPbPr port.
2. Connect Video with supporting Closed Caption source to CVBS port.
3. A supporting Closed Caption Player/TV must be used for this function.

Network Configuration:



Administration:




**Saving your configuration files:**

We highly recommend you save your encoder configuration files. Simply click the **"Backup"** button and the config. files will be saved to your computer.

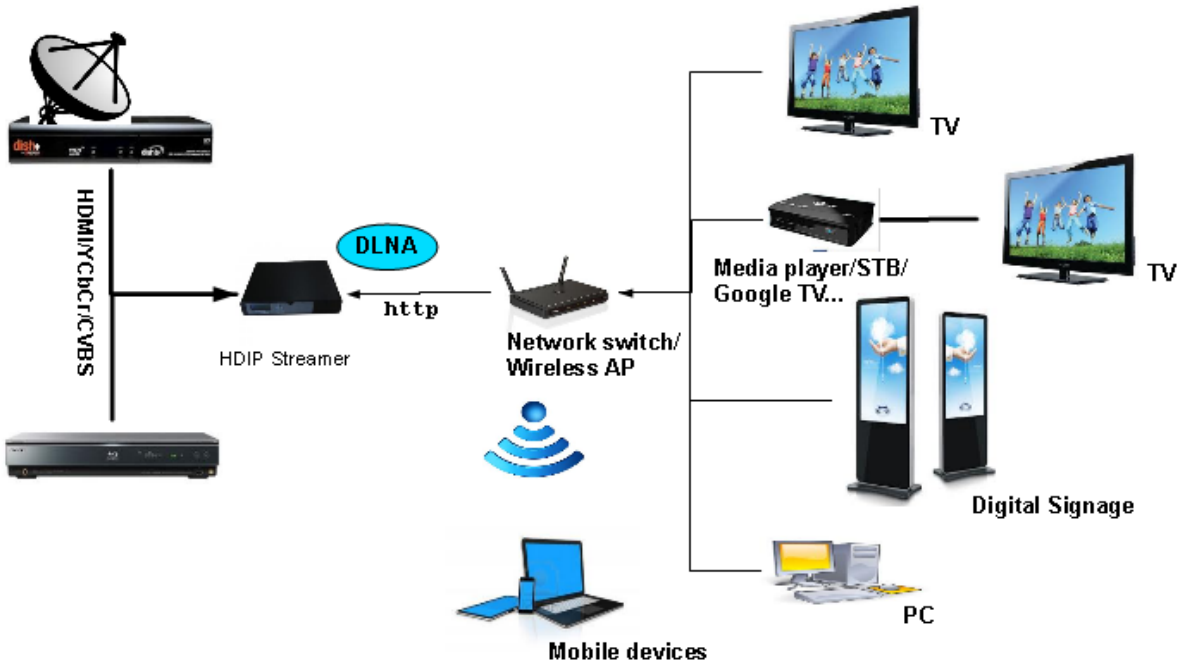
To upload a configuration file- simply click **"Choose File"** then locate the file you want to upload. Click "**Upload Settings**" to install the configuration files. This function is helpful to the installer when installing a large number of encoders in a single system.

We highly recommend saving the settings of your encoder.

A "**config.cfg"** file will be created. Locate the file My Computer> C Directory > Documents and Settings> User>My Documents>Downloads>config.cfg.

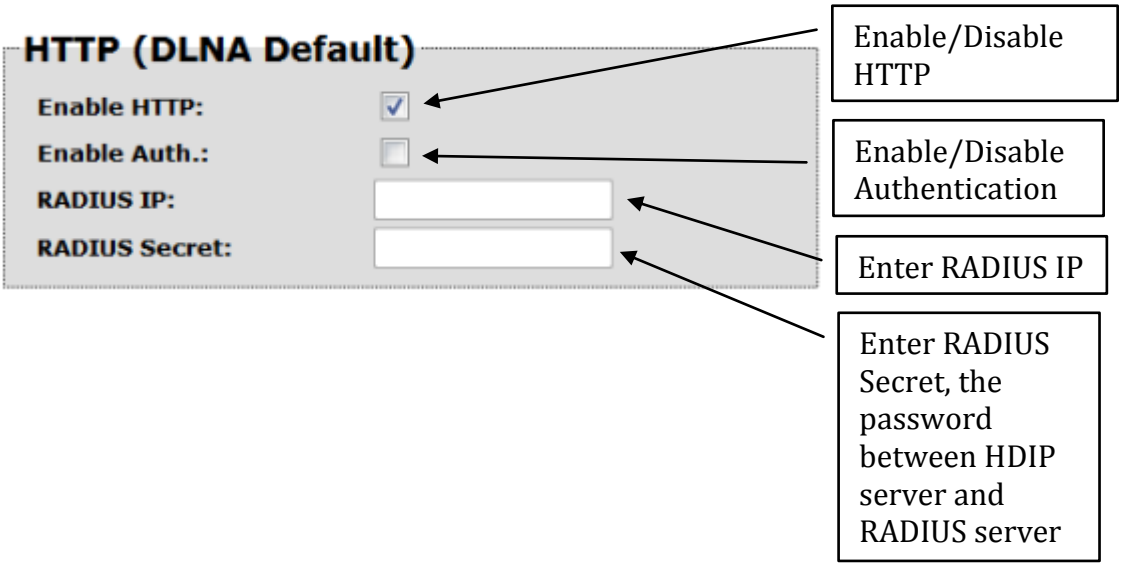
## Streaming methods:

### Case 1: DLNA

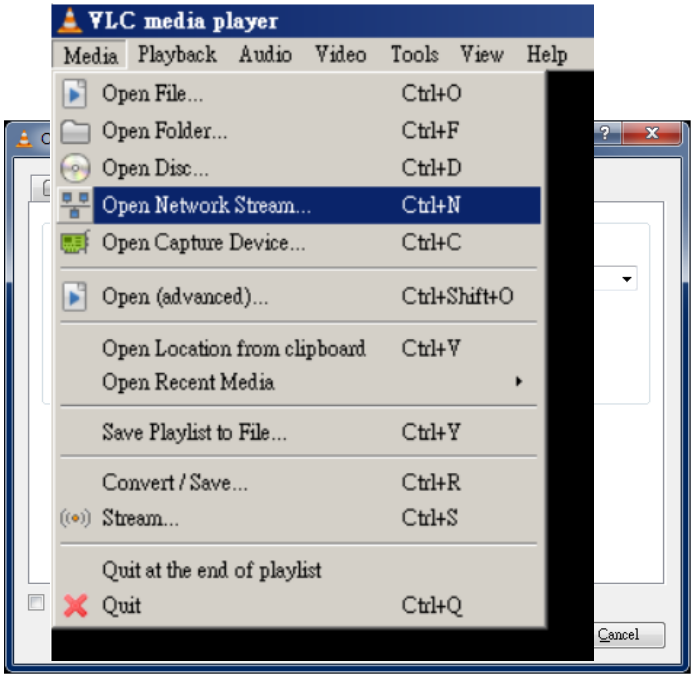



ex. VLC media player
http://@192.168.2.6:8888/VideoInput/play.ts

**Streaming Setup Example**:



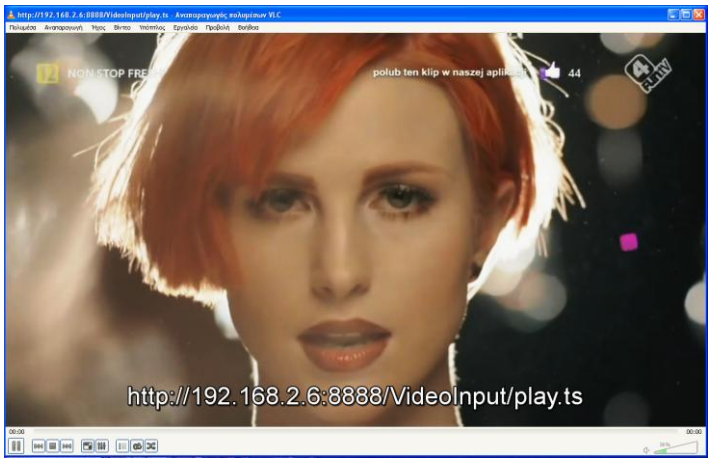
Using VLC media player, select Media ==> Open Network Stream...



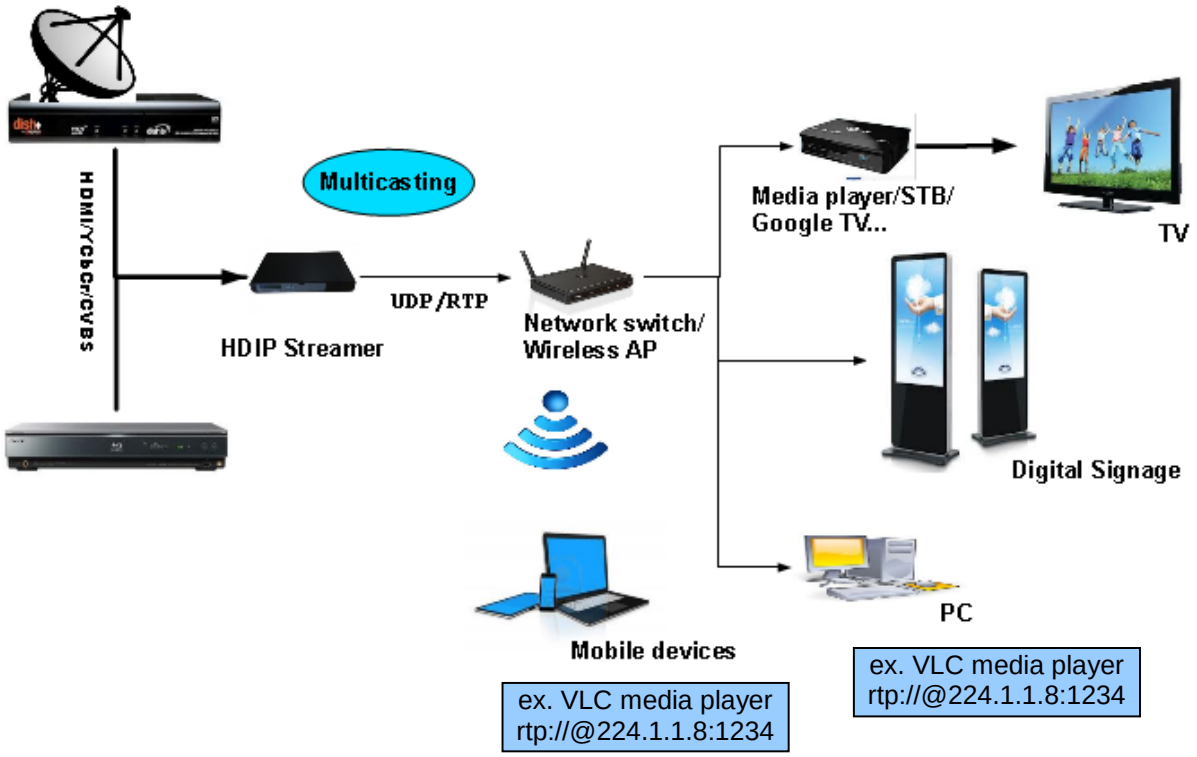

On the “Network Protocol” key in the Output IP address and Output Port as following example,

ex. http://192.168.2.6:8888/VideoInput/play.ts

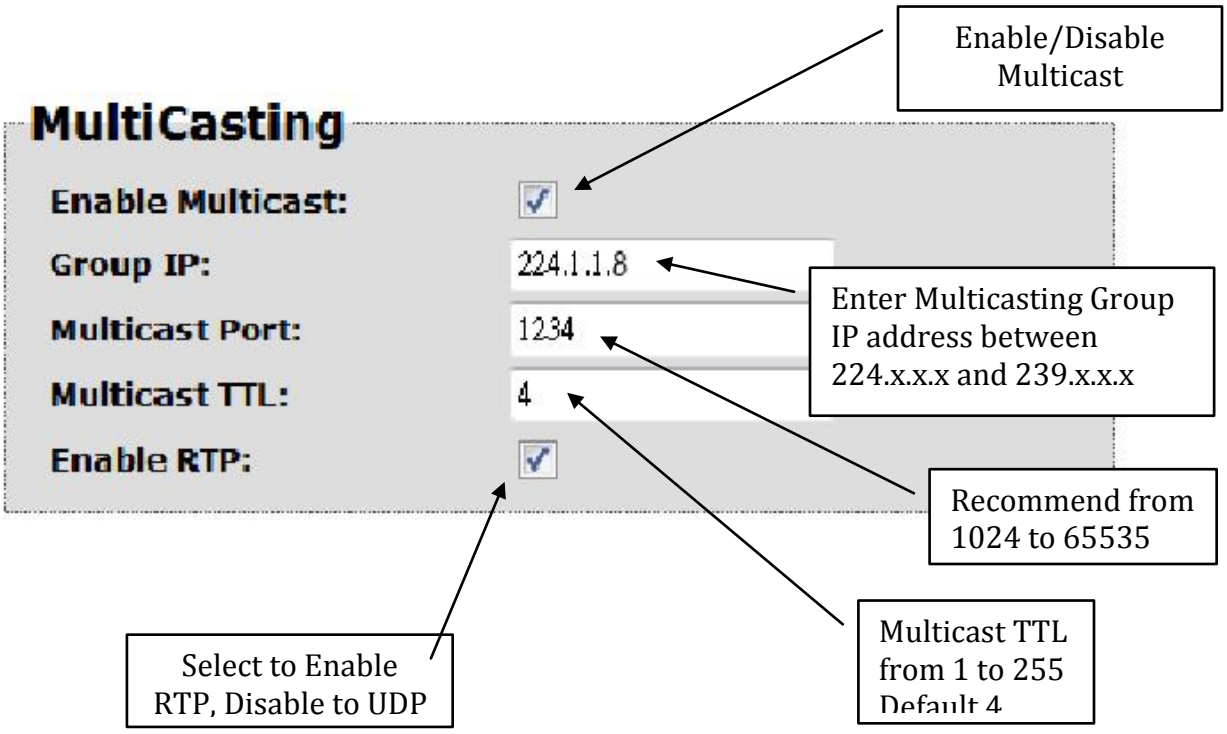
Press Play button to view the video.



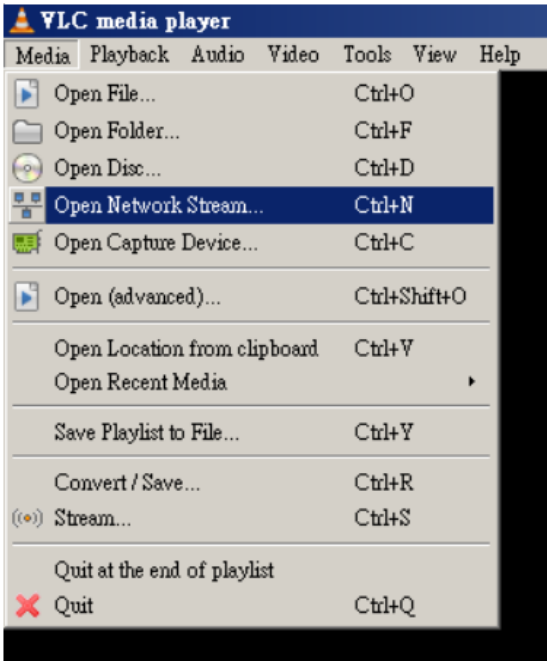
## Case 2: UDP/RTP Multicasting




**Streaming Setup Example**:



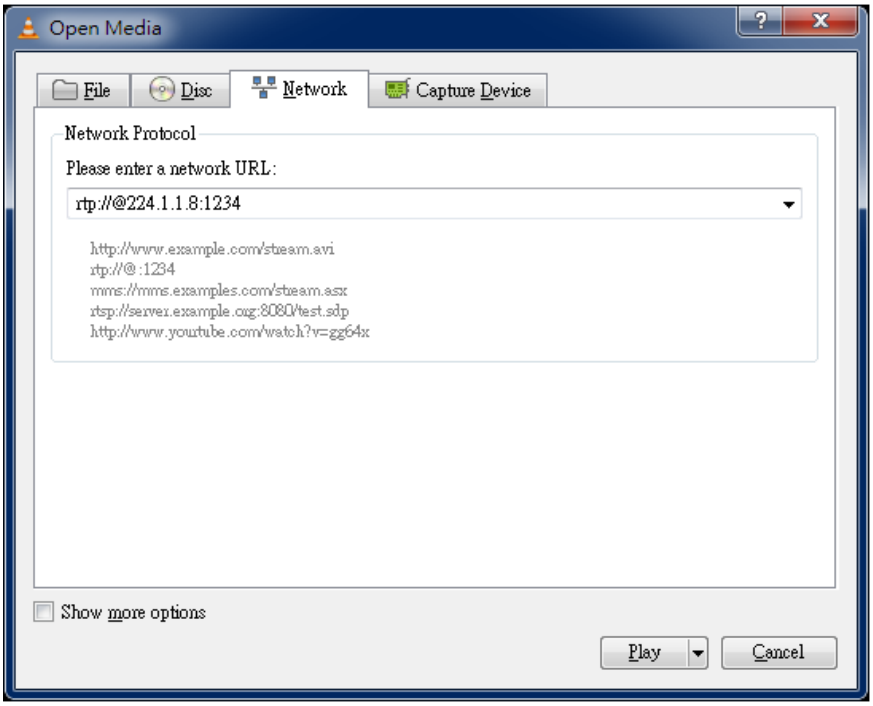
Using VLC media player, select Media ==> Open Network Stream...



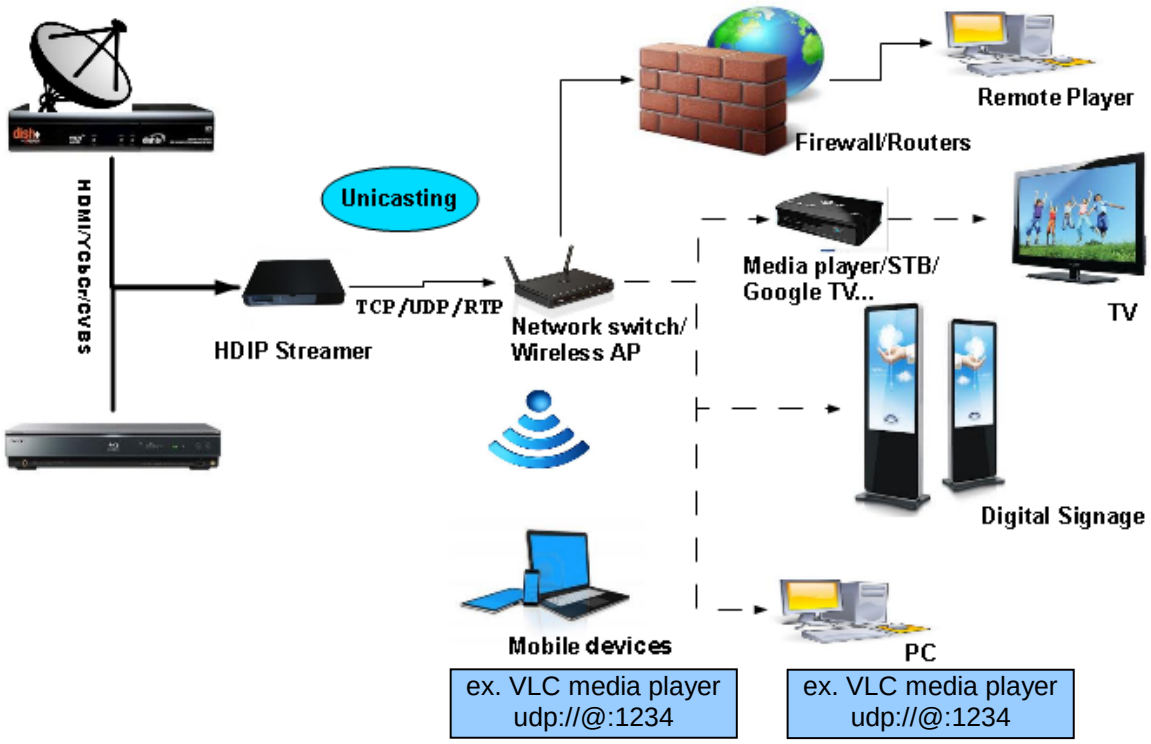

On the “Network Protocol” key in the Output IP address and Output Port as following example,

ex. rtp://@224.1.1.8:1234

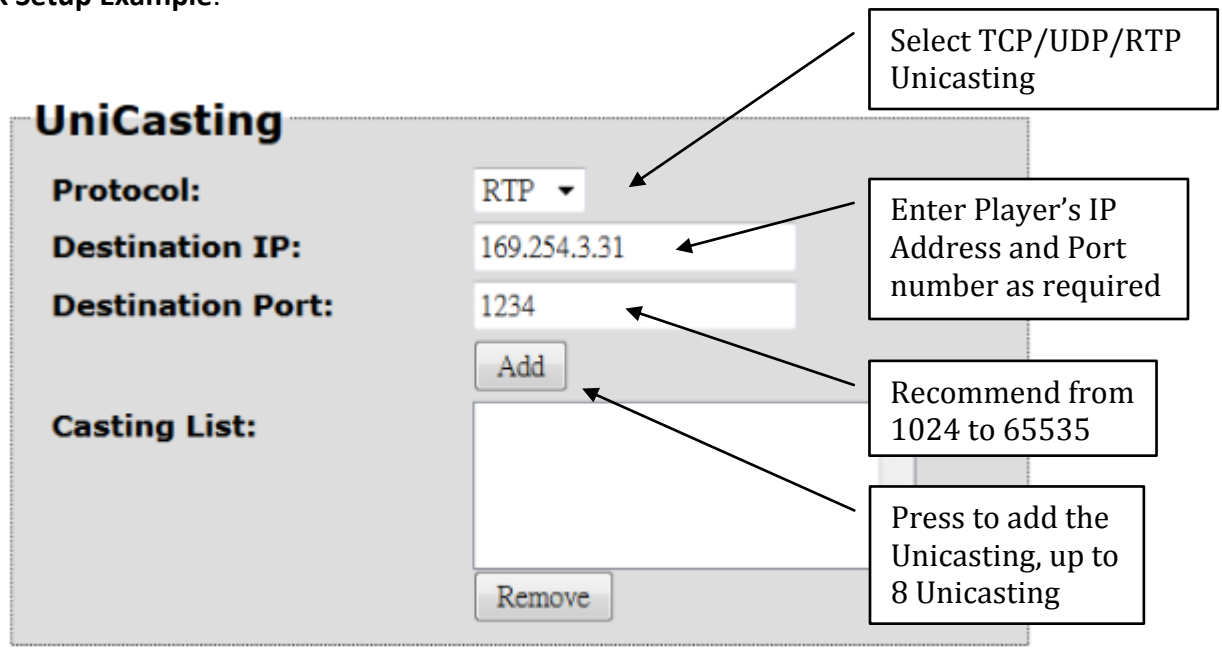
Press Play button to view the video.



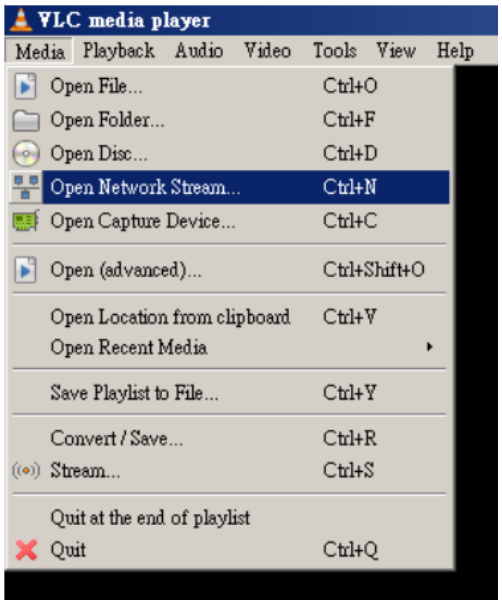
## Case 3: TCP/UDP/RTP Unicasting




**Network Setup Example**:



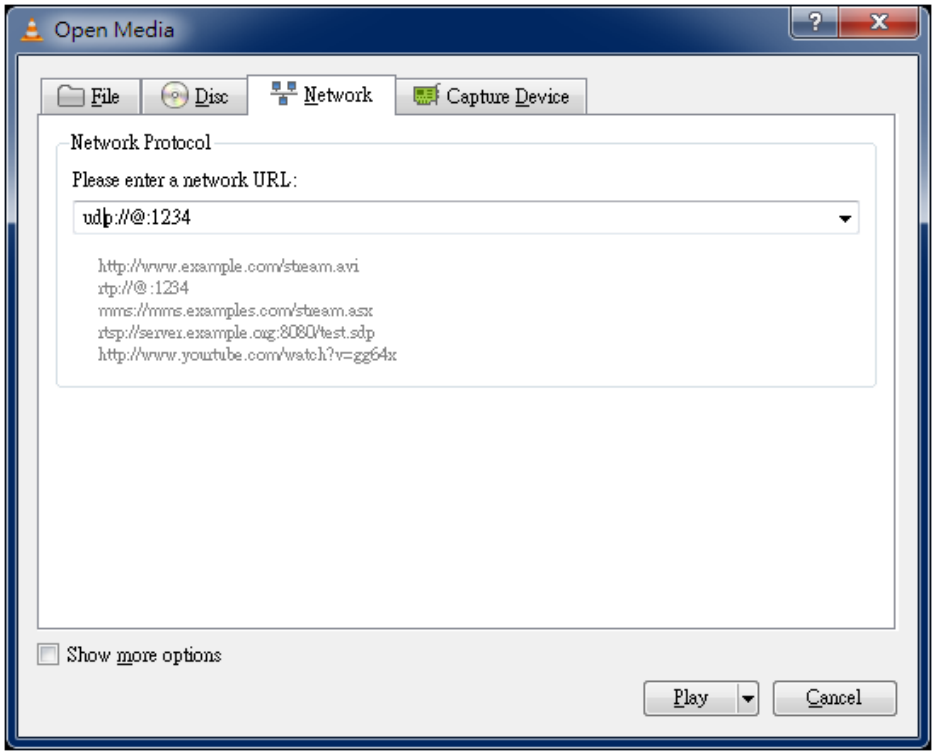
Using VLC media player, select Media ==> Open Network Stream...




On the “Network Protocol” key in Output Port as following example,

ex. udp://@1234

Press Play button to view the video.



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# FIP-1100 Streaming Server Notes

**PRODUCT NOTES**:

| ITEM | VALUE |
|---|---|
| USER NAME / PASSWORD | |
| SERIAL NUMBER | |
| INSTALLATION DATE | |
| PURCHASE DATE | |
| DEVICE NAME | |
| FIRMWARE VERSION | |
| STREAMING METHOD | |
| | |
| | |

## DECLARATION OF CONFORMITY

FENGER® confirms that the product FIP-1100 (HD IP Streaming Server) conforms to relevant EEC harmonized standards and consequently can carry CE-mark.

Relevant harmonized standards:
EN 55013:2001+A1:2003+A2:2006 Class B
EN 55020:2007+A11:2011
EN 60065:2002

CE