

# INSTALLATION & CONFIGURATION MANUAL

## FIP-1100

### HD IP Streaming Server



**FENGER®**

TABLE OF CONTENTS

SAFETY PRECAUTIONS..... 3

PACKAGE CONTENTS ..... 3

PRODUCT DESCRIPTION..... 4

SPECIFICATIONS..... 5

UNPACKING and INSPECTION ..... 6

HARDWARE INSTALLATION and CONNECTIONS ..... 6

Front-Panel ..... 7

Procedure to connect to the Streaming Server via the Network port ..... 8

Streaming methods: ..... 17

Case 1: DLNA ..... 17

Case 2: UDP/RTP Multicasting..... 19

Case 3: TCP/UDP/RTP Unicasting..... 21

FIP-1100 Streaming Server Notes..... 23

DECLARATION OF CONFORMITY ..... 23

## 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 MPEG-4 AVC H.264, Main/High Profile
Audio Format	MPEG-1 Layer II (MP2) Advanced Audio Codec (AAC) AC-3 Passthrough
Video Resolution	480i, 480p, 576i, 576p, 720p, 1080i, 1080p
Video Bitrate	MPEG-2 HD: 10~20 Mbps MPEG-2 SD: 2~8 Mbps MPEG-4 AVC HD: 2~10 Mbps 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) UDP/RTP multicasting UDP/RTP unicast 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	0°C to +45°C
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

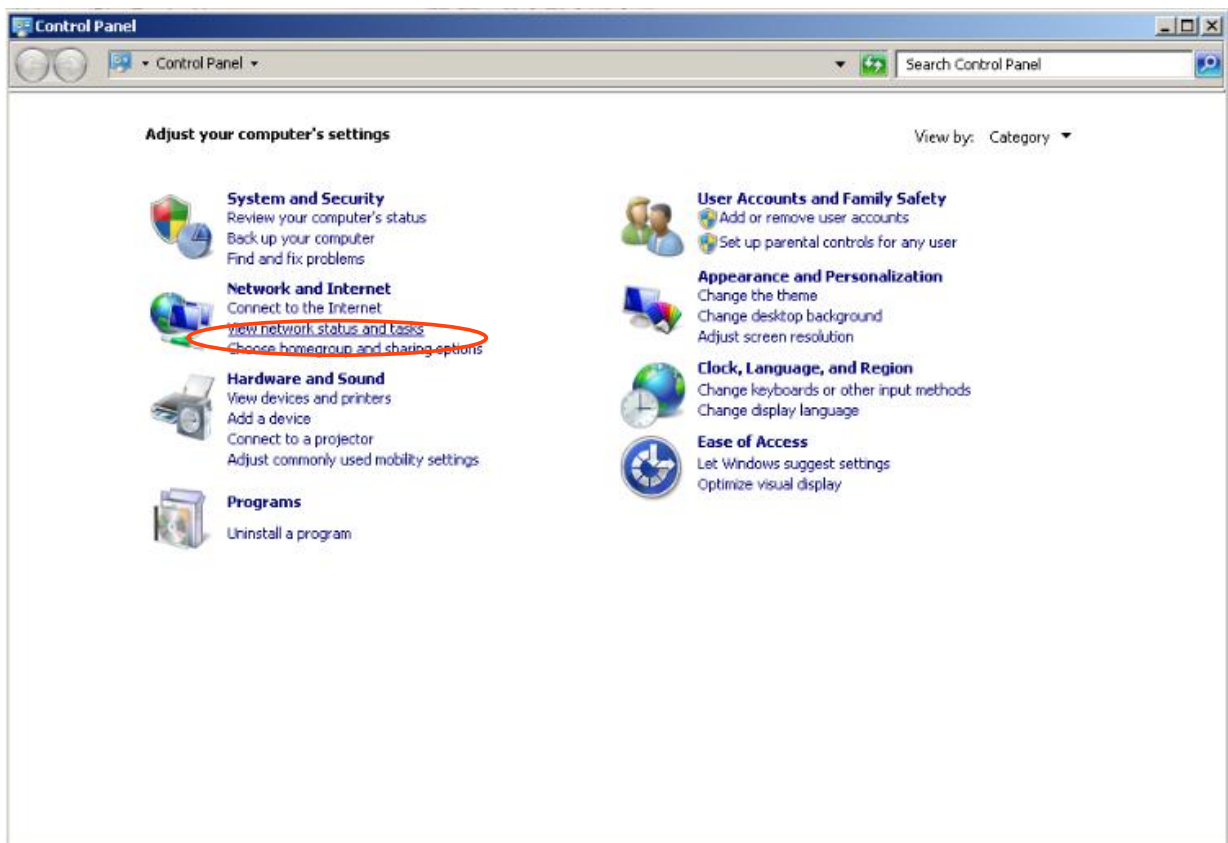
Buttons/LEDs	Description
Reboot button	Reboots the device (unsaved settings will be lost)
RST / UPG button	<p>To reset all the settings of the device to factory default:</p> <ol style="list-style-type: none"> <li>1. Press and hold the RST/UPG button and boot-up the device</li> <li>2. Hold the button until CFG led to flashes 10 times (about 10 seconds)</li> <li>3. After the CFG led stops flashing release the button</li> </ol> <p>To upgrade firmware using the USB port:</p> <ol style="list-style-type: none"> <li>1. Plug-in the USB drive with the upgraded firmware image ("hdip_upg.img")</li> <li>2. Press and hold the RST/UPG button and boot-up the device</li> <li>3. USB led will flash while copying the image from USB drive (about 3~5 seconds)</li> <li>4. Wait until the CFG led stop flashing</li> <li>5. Release the RST/CFG button and wait for the device to reboot and upgrade the firmware (about 1 minute)</li> </ol>
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

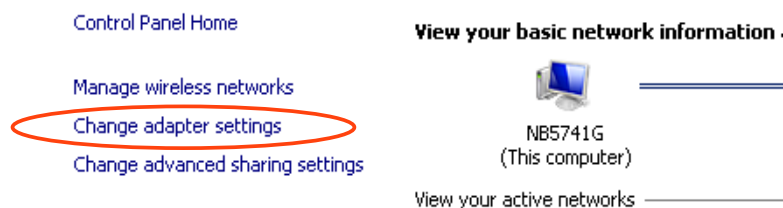
The following procedure will allow the installer to setup the Streaming Server via the GUI

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



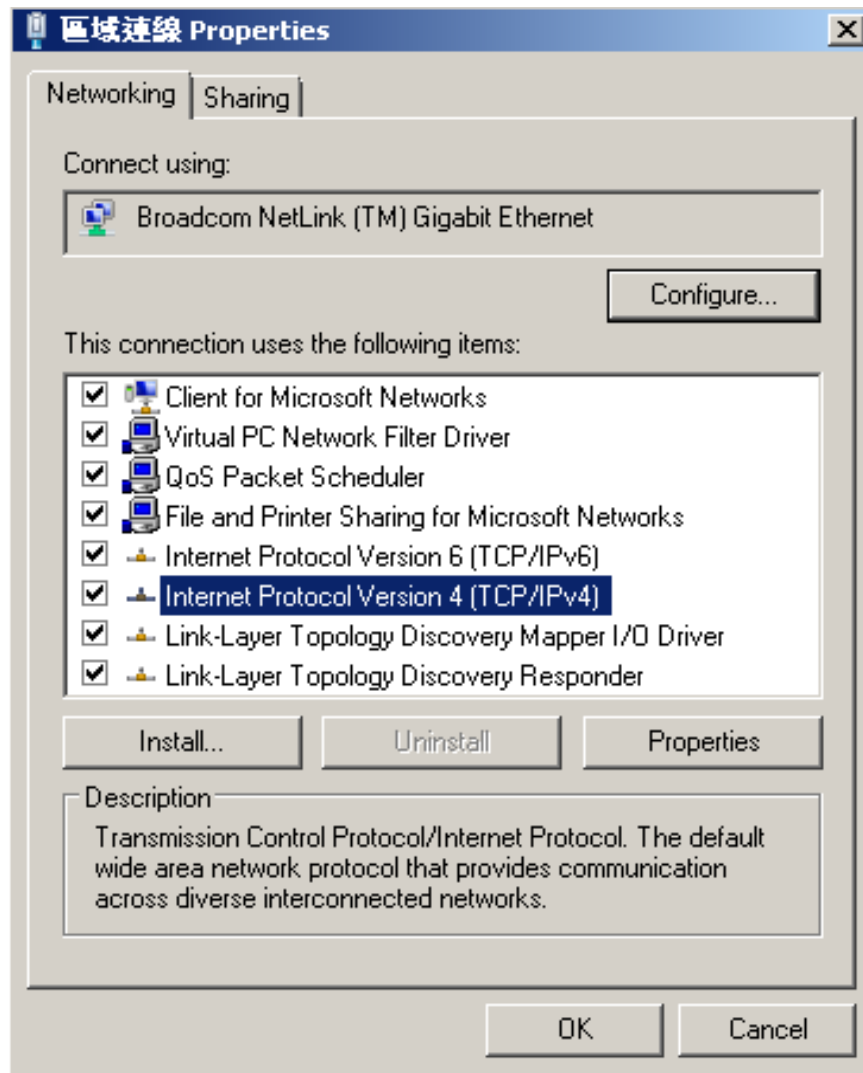


## FENGER

### 4. **Select** Local Area Connection Icon

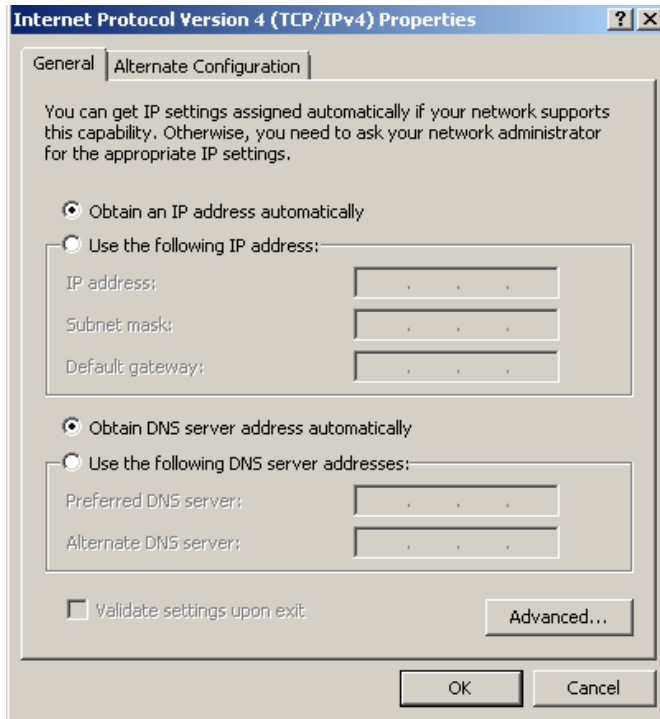
Then **Right Click** – **Select Properties**

Internet Protocol Version 4 (TCP/IPv4) Properties

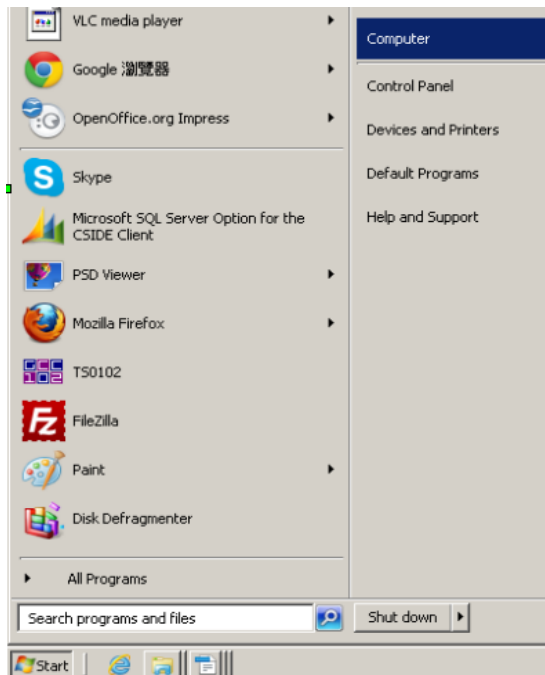


# FENGER

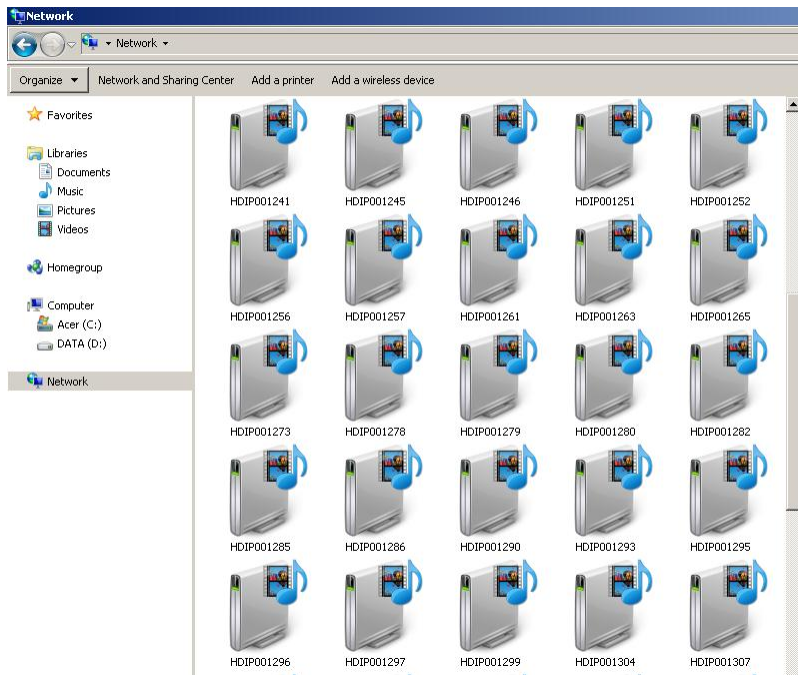
5. **Select** “Obtain an IP address automatically” & “Obtain DNS server address automatically”



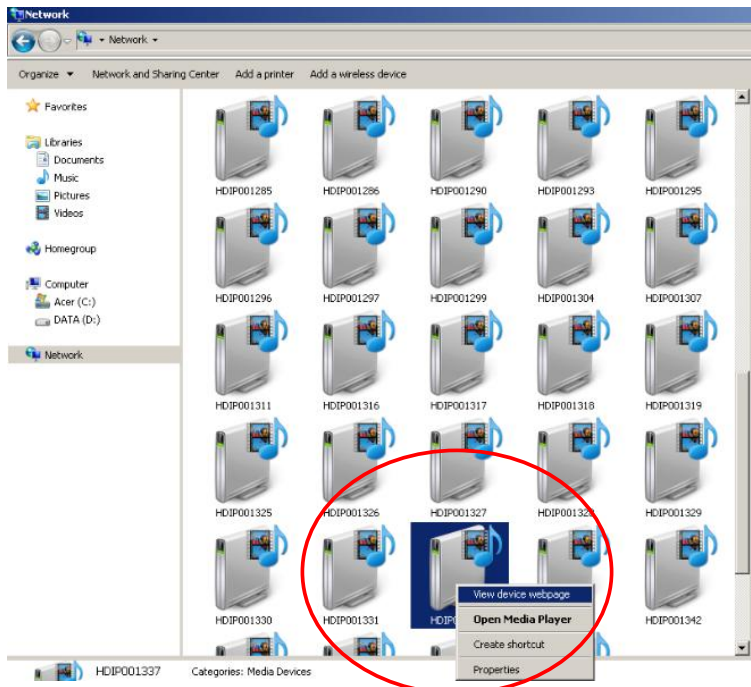
6. After setting the PC to obtain IP address & Obtain DNS server automatically  
**Select Start ==> Computer ==> Network**




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

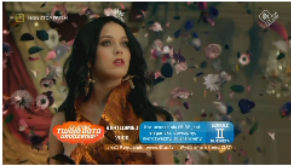


IP Streamer

- Overview
- Encoder Setup
- Streaming Setup
- Network Setup
- Administration

### Welcome! ●

**Device Name:** HDIP001280  
**Program Name:** DEMO-TV  
**Model Number:** FIP-1100  
**Serial Number:** 1330BB001280  
**Firmware Version:** 2013111510  
**Streaming:** [HTTP](#)



---

	Video	Audio
Input Source	HDMI / 1080i50	HDMI
Output Format	AVC CBR / 1080p25	MPEG-4 AAC
Output Bitrate	4.000 Mbps	128 Kbps
Actual Output	4.052 Mbps	
Encoder Status	OK	
Clients	1	

---

Copyright © 2013 Fenger

## FENGER

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.



**IP Streamer**

**Overview**

Encoder Setup


Streaming Setup

Network Setup

Administration

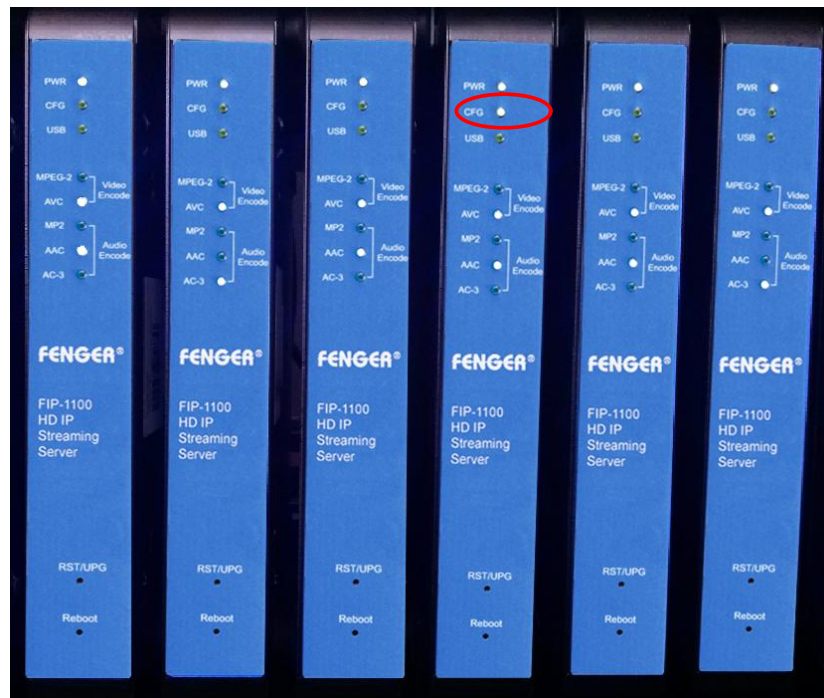
# Welcome!

Device Name: HDIP001280  
Program Name: DEMO-TV  
Model Number: FIP-1100  
Serial Number: 1330BB001280  
Firmware Version: 2013111510  
Streaming: [HTTP](#)



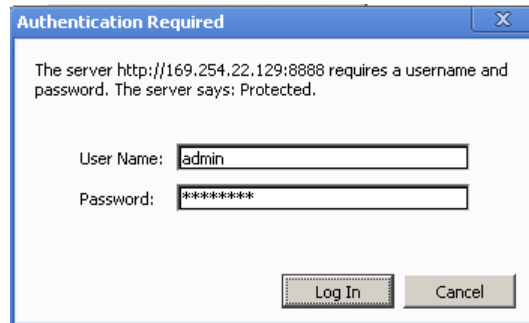
	Video	Audio
Input Source	HDMI / 1080i50	HDMI
Output Format	AVC CBR / 1080p25	MPEG-4 AAC
Output Bitrate	4.000 Mbps	128 Kbps
Actual Output	5.441 Mbps	
Encoder Status	OK	
Clients	1	

Copyright © 2013 Fenger



## 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.



The server http://169.254.22.129:8888 requires a username and password. The server says: Protected.

User Name:

Password:



IP Streamer

Overview

Encoder Setup

Streaming Setup

Network Setup

Administration

## Encoder Setup

This page allows the user to configure the encoder's settings. After changes are made use the Save and Confirm button. The encoder will reboot and apply the new settings.

Device Name:	<input type="text" value="HDIP001280"/>
Program Name:	<input type="text" value="DEMO-TV"/>

Video Input:	<input type="button" value="Auto detect"/>
Video Output:	<input type="button" value="AVC CBR"/>
AVC Profile:	<input type="button" value="HIGH"/>
AVC Level:	<input type="button" value="Default"/>
Video Bitrate:	<input type="range" value="4.000 Mbps"/>
Audio Input:	<input type="button" value="Auto detect"/>
Audio Output:	<input type="button" value="MPEG4 AAC"/>
Audio Bitrate:	<input type="button" value="128 Kbps"/>

Brightness (0~255):	<input type="range" value="128"/>
Contrast (0~255):	<input type="range" value="128"/>
Saturation (0~255):	<input type="range" value="128"/>
Hue (0~255):	<input type="range" value="128"/>

HDCP Enable:	<input checked="" type="checkbox"/>
Closed Caption:	<input checked="" type="checkbox"/>

Copyright © 2013 Fenger



Closed Caption input

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:



IP Streamer

- Overview
- Encoder Setup
- Streaming Setup
- Network Setup
- Administration

## Network Configuration

This page allows the user to configure the encoder's network settings.

**CAUTION:** Incorrect settings may cause the streamer to lose network connectivity. Recovery options will be provided on the next page.

### Device Network

Hostname:

☒ Enable DHCP

IP Address:

Subnet Mask:

Default Gateway:

DNS Server:

NTP Server:


### DLNA Settings

Device Name:

Program Name:

HTTP/SOAP Port:

Copyright © 2013 Fenger



IP Streamer

Overview  
Encoder Setup  
Streaming Setup  
Network Setup  
**Administration**

### Administration

---

Reset all configurations back to factory default.

---

#### Backup and Restore Configurations

Backup and download current configuration settings to a local file.

Config File:  Δεν επιλέχθηκε αρχείο

Upload the pre-saved configuration settings to device.

---

#### Firmware Upgrade

Model Number: FIP-1100  
Serial No.: 1330BB001280  
Firmware Ver.: 2013111510

Firmware Image:  Δεν επιλέχθηκε αρχείο

To upgrade the device's firmware, select the required firmware image file then upload it to the device.

---

#### Change Password

**CAUTION:** The new password must:

- matches a string of 6~8 characters;
- that contains at least one digit;
- at least one uppercase character; and
- at least one lowercase character:

Old Password:

New Password:

Retype New Password:

After changing the admin's password, it needs to close current web browser, and open a new browser to use new password.

### 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.

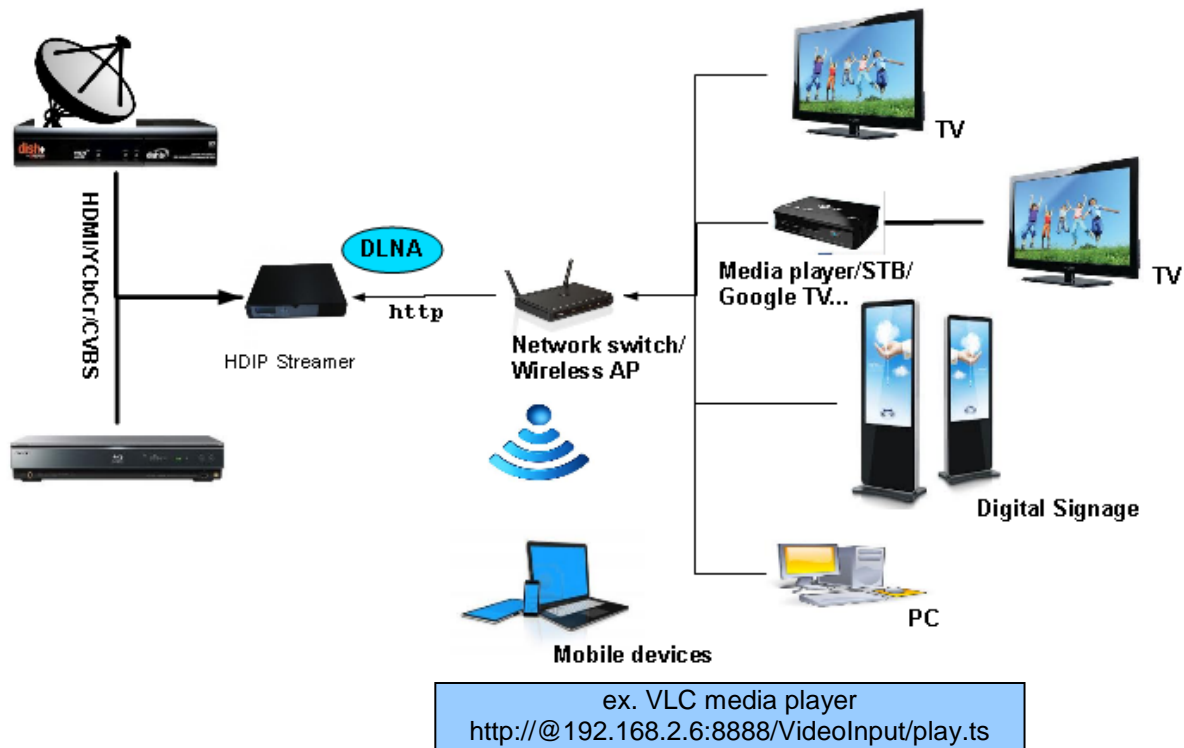
A **“config.cfg”** file will be created. Locate the file My Computer> C Directory > Documents and Settings> User>My Documents>Downloads>config.cfg.



# FENGER

## Streaming methods:

### Case 1: DLNA



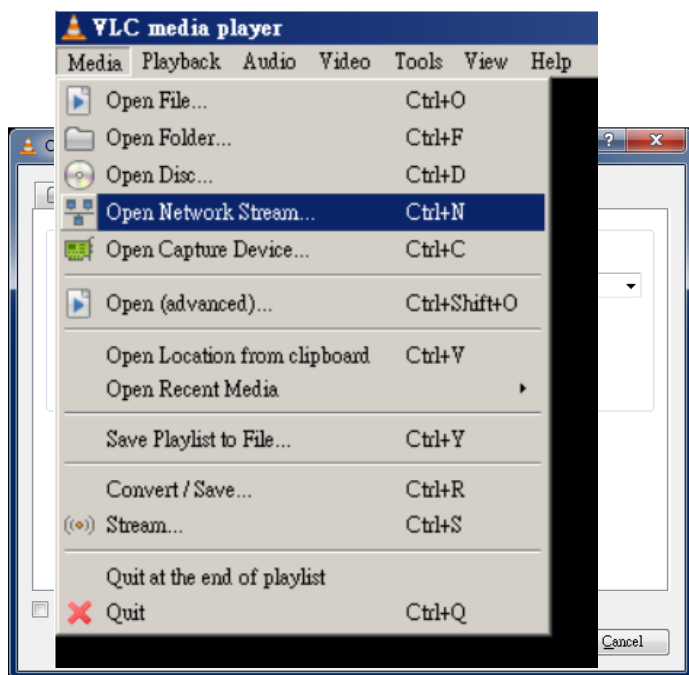
### Streaming Setup Example:

**HTTP (DLNA Default)**

Enable HTTP:	<input checked="" type="checkbox"/>	Enable/Disable HTTP
Enable Auth.:	<input type="checkbox"/>	Enable/Disable Authentication
RADIUS IP:	<input type="text"/>	Enter RADIUS IP
RADIUS Secret:	<input type="text"/>	Enter RADIUS Secret, the password between HDIP server and RADIUS server

## FENGER

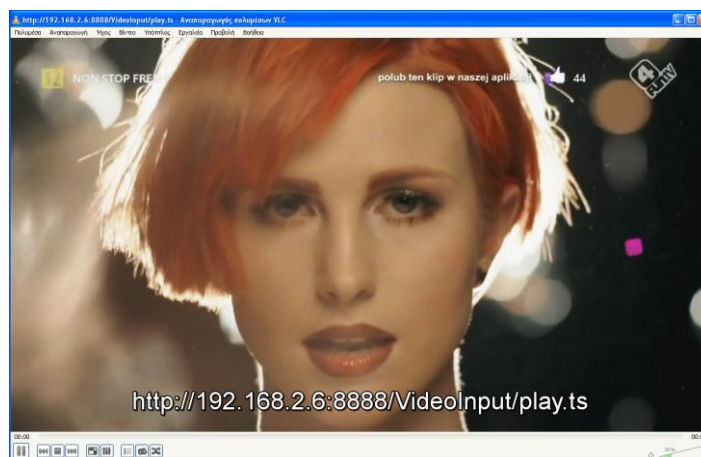
Using VLC media player, select Media ==> Open Network Stream...



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

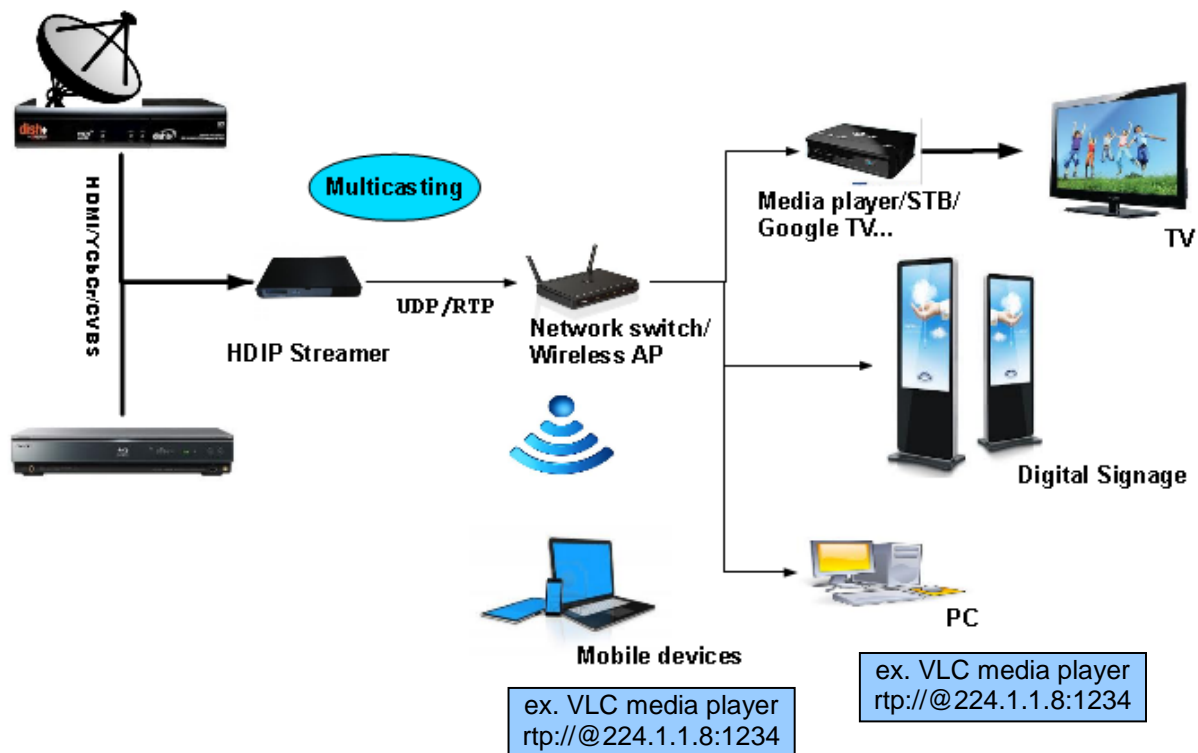
ex. <http://192.168.2.6:8888/VideoInput/play.ts>

Press Play button to view the video.



# FENGER

## Case 2: UDP/RTP Multicasting



### Streaming Setup Example:

**MultiCasting**

Enable Multicast: ☒

Group IP: 224.1.1.8

Multicast Port: 1234

Multicast TTL: 4

Enable RTP: ☒

Enable/Disable Multicast

Enter Multicasting Group IP address between 224.x.x.x and 239.x.x.x

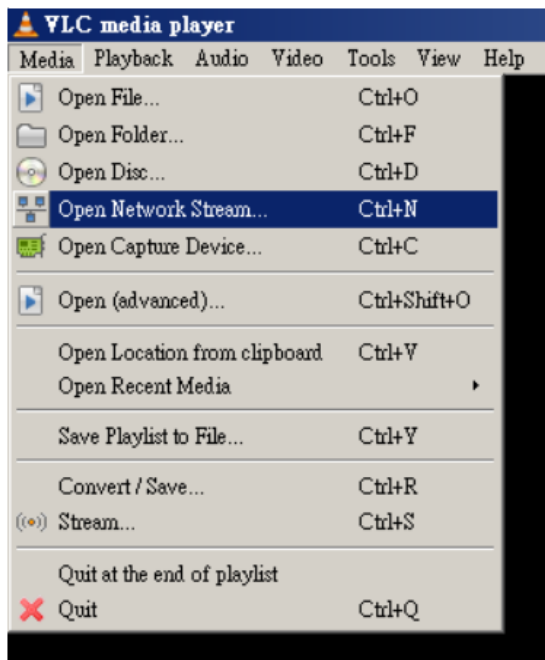
Recommend from 1024 to 65535

Multicast TTL from 1 to 255 Default 4

Select to Enable RTP, Disable to UDP

# FENGER

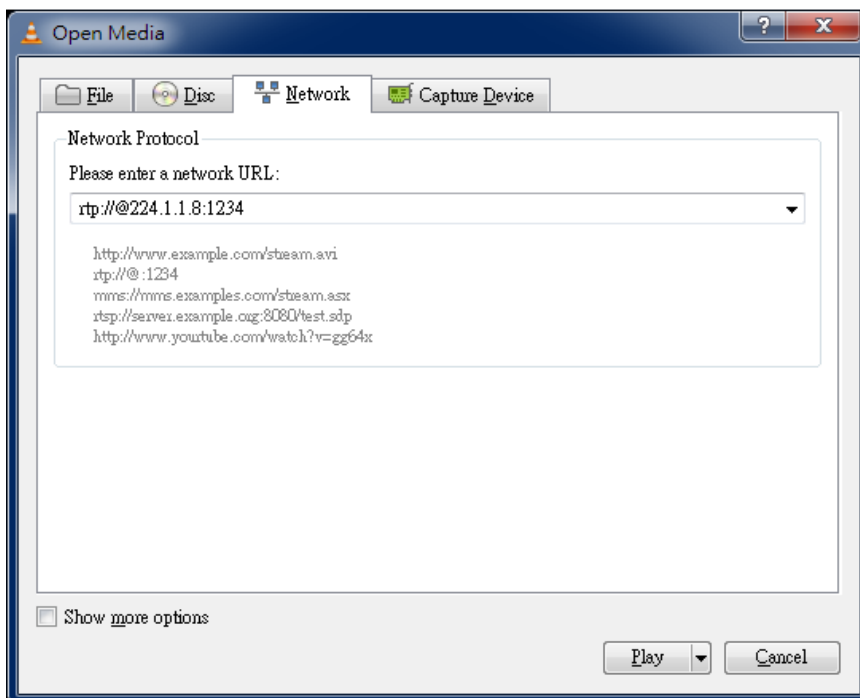
Using VLC media player, select Media ==> Open Network Stream...



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

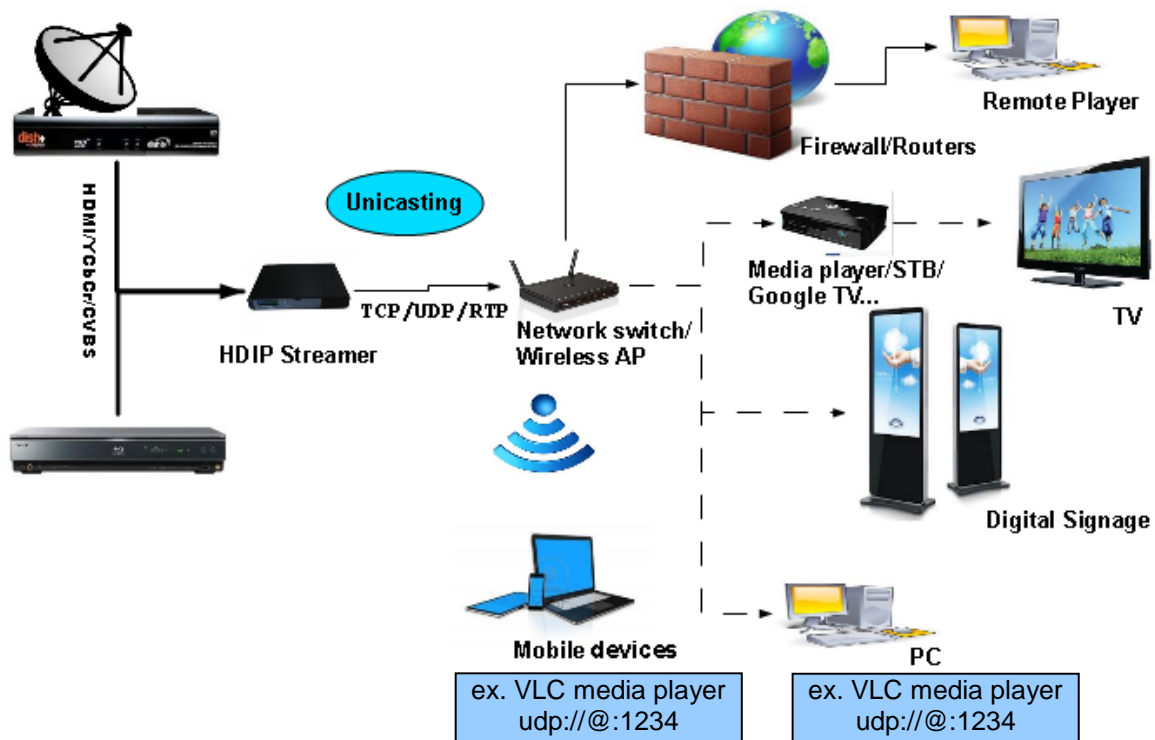
ex. `rtp://@224.1.1.8:1234`

Press Play button to view the video.



# FENGER

## Case 3: TCP/UDP/RTP Unicasting



### Network Setup Example:

**UniCasting**

**Protocol:** RTP

**Destination IP:** 169.254.3.31

**Destination Port:** 1234

**Casting List:**

**Select TCP/UDP/RTP Unicasting**

**Enter Player's IP Address and Port number as required**

**Recommend from 1024 to 65535**

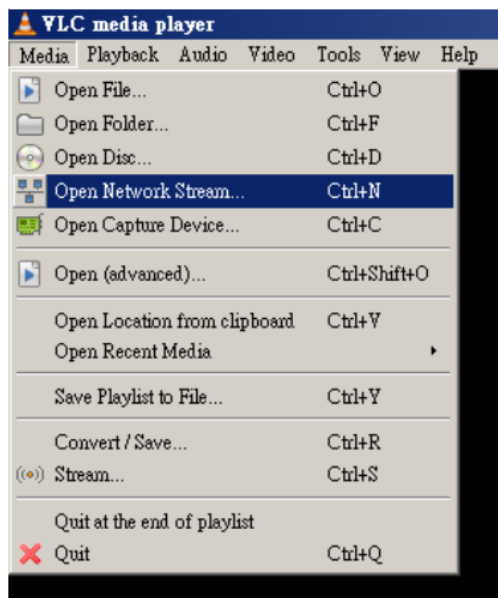
**Press to add the Unicasting, up to 8 Unicasting**

**Add**

**Remove**

# FENGER

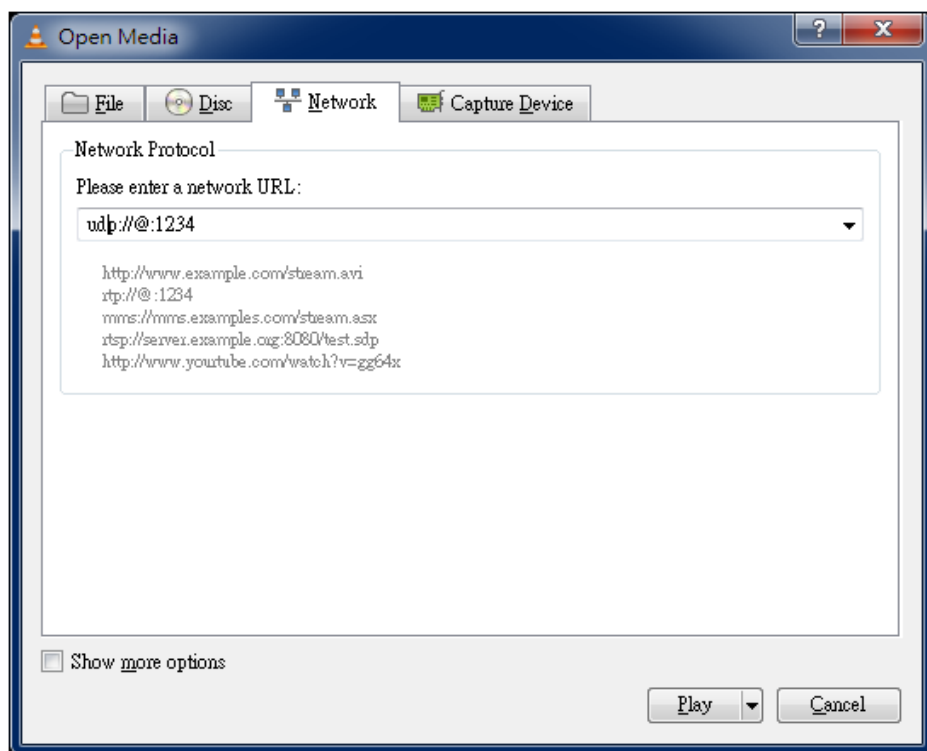
Using VLC media player, select Media ==> Open Network Stream...



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

ex. udp://@1234

Press Play button to view the video.



## 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

