

User Manual

Wireless Video & Audio Encoder/Extender

Model: HEV-10W

FCC Caution:

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note: 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.

FCC RF Radiation Exposure Statement:

1. This Transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
2. This equipment complies with RF radiation exposure limits set forth for an uncontrolled environment.
3. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

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1. Features

The HEV-10W is a compact, yet professional H.265/H.264 streaming encoder that supports a maximum of 2160p60 input and can stream it at HD 1080p with ultra-low encoding latency. Supports both wired connection and wireless connection mode. It features a local HDMI loop out that a monitor can be looped out through the encoder so that it can still display the video on the monitor in real-time while encoding it. The HDMI loop output supports maximum at up to 2160p60 for any 4K monitors or displays with no latency. With built-in high quality scaling technology, the HEV-10W can also down-converts 4K/UHD signals to HD resolution for loop out to HD monitors and displays.

- Ultra-compact Size.
- Supports H.265/HEVC and H.264/AVC codecs.
- Supports HDMI loop out at a maximum of 2160p60 with no latency.
- Supports Maximum video input up to 2160p60.
- Stream maximum at up to HD 1080p30.
- Powered by USB. No AC power adapter needed.
- Add logo or text to customize output display.
- Stable stream delivery with low encoding latency.
- Energy-Efficient. Ultra-low power consumption of only 3W.
- Supports both wired connection and wireless connection mode.
- Supports multiple streaming protocols, including RTMP, RTMPS, RTSP, RTP, TS over TCP, TS over UDP, Multicast and Unicast.

2. Technical Specifications

General

Power supply	5V/1A (USB-Powered)
Power Consumption	3W
Operating Temperature	-10°~55°C (14°F ~149°F)
Storage Temperature	-20°~85°C(-4°F ~185°F)
Operating humidity	10%- 90%RH (Non-condensing)
Weight	0.096KG (0.21lb)
Dimension	110mm (L)×60mm(D)×22mm (H)

Video

Video Input	HDMI 2.0 (support HDCP1.4/2.2)
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Loop Output	HDMI 2.0
Supported Video Input Resolution	4096×2160P@60/30Hz, 3840×2160P@60/30Hz, 1920×1080P@60/50/30Hz, 1920×1080i@60/50/30Hz, 1280×720P@60/50/30Hz
Supported Video Loop Out Resolution	4096×2160P@60/30Hz, 3840×2160P@60/30Hz, 1920×1080P@60/50/30Hz, 1920×1080i@60/50/30Hz, 1280×720P@60/50/30Hz
Video Codec	H.264/AVC & H.265/HEVC
Supported Encoding Output Resolution	1080p@30Hz, 720p@60Hz, 960×720@60Hz, 960×540@60Hz, 640×480@60Hz, 360×200@60Hz
Bitrate	128kbps~16Mbps
Bitrate Control	CBR/VBR/AVBR/FixQP

Audio

Audio Input	HDMI
Audio Codec	G.711u, AAC
Bitrate	32Kbps~256Kbps

System

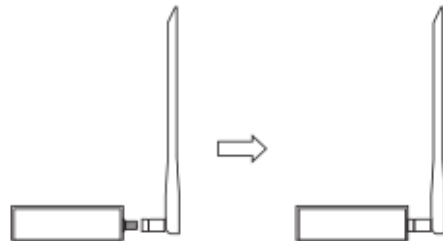
Video Transport Protocols	RTMP, RTMPS, RTSP, RTP, TS over TCP, TS over UDP
Broadcast Mode	Multicast/ Unicast
Network Protocols	Static IP/ DHCP
Wireless Standard	802.11 a/n/ac 5G 802.11 b/g/n 2.4G
Control Method	Login-protected Web UI Control
Factory Default	Web UI: Username: admin Password: admin
	IP Address: 192.168.1.251 (Wired) 192.168.2.252 (Wireless in AP Mode)

Note: Specifications are subject to change without notice.

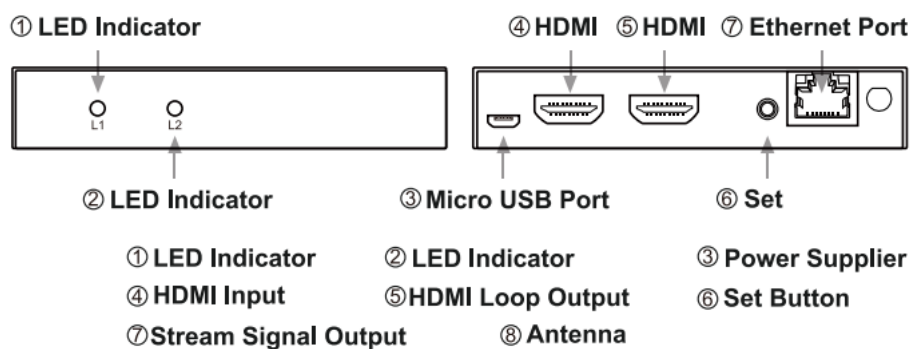
3. Package Contents

- 1× HEV-10W Video Encoder
- 1× Antenna
- 1× Micro USB Power Cable
- 1× User Manual

4. Hardware Description



HEV-10W comes with an antenna. Please install the antenna on the antenna interface and tighten it before you use the wireless connection.



4.1 Indicator Light

Front Panel Indicators

	L1	L2
Power On	Red light keeps on	Green light keeps on
In AP Mode	Orange light flashes slowly	Green light keeps on
Connection with Router in Client Mode	Green light keeps on	Green light keeps on
Failed Connection with Router in Client Mode	Red light keeps on	Green light keeps on

RTSP Streaming	Green light keeps on	Green light keeps on
Attempt to RTMP Streaming	Green light keeps on	Green light flashes slowly
Successful RTMP Streaming	Green light keeps on	Green light flashes quickly
WiFi Off	Off	Green light keeps on
Reset/ Reboot	Red light and green light flash alternately	Red light and green light flash alternately

Network Port Indicators

	Green Light	Orange Light
Ethernet Cable Connected	Keeps on	/
Controlling the Web UI	Keeps on	Flashes slowly
Streaming	Keeps on	Flashes quickly

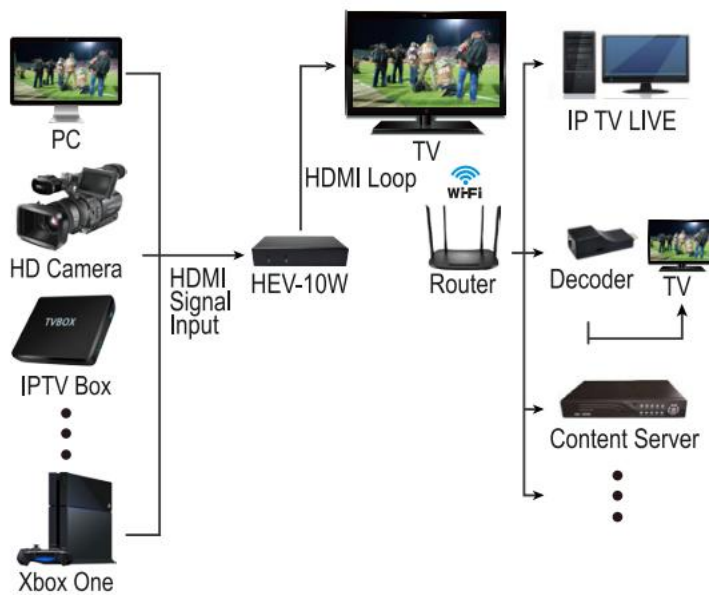
4.2 Configuration Button

One Button to Start and Stop Streaming: Click the Set button on the rear panel to start a live, and click the Set button again to stop the live streaming.

WiFi Working Mode Switch: Hold down the Set button for about 3s to switch between the WiFi working mode between AP and Client. The L1 orange light flashes slowly and L2 green light keeps on indicate that the device is in AP mode; while the L1 green light and L2 green light keep on means Client mode.

Factory Reset: Press and hold the Set button on the rear panel for about 15s till the red light and green light flash alternately, then the HEV-10W will restore the factory settings. All parameters will become the factory default parameters. The default IP address of the HEV-10W is 192.168.1.251 (Wired) and 192.168.2.252 (Wireless in AP Mode).

5. Typical Application




6. Connection Configuration

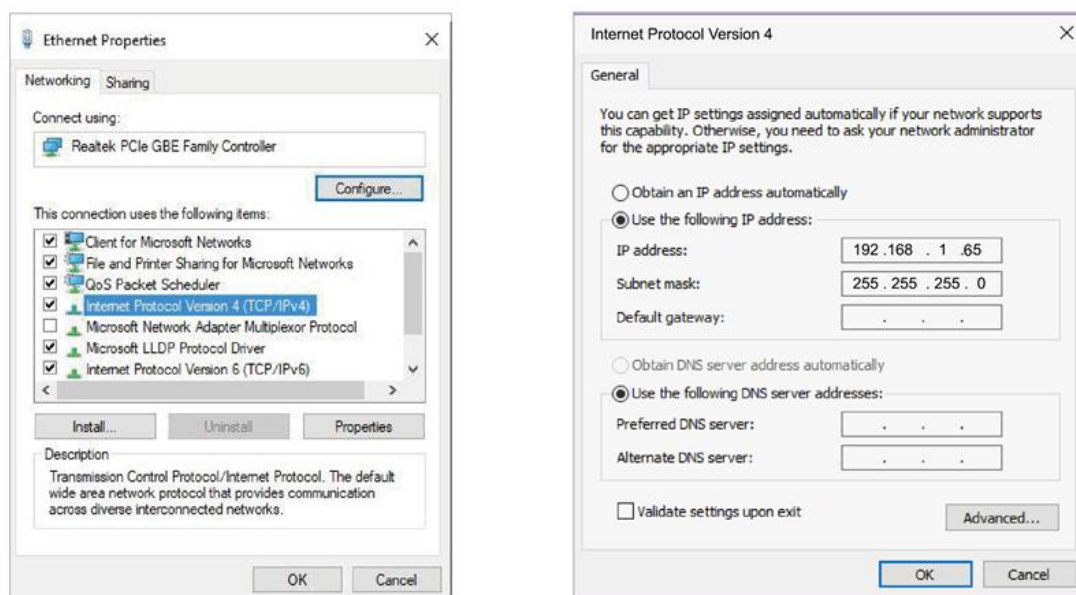
HEV-10W supports both wired connection and wireless connection. Please note that the IP of wired connection and wireless connection cannot be in the same network segment. The default IP address of the HEV-10W is 192.168.1.251 (Wired) and 192.168.2.252 (Wireless in AP Mode). If you modify the IP address, please pay attention not to set them in the same network segment.

6.1 Wired Connection

6.1.1 Change the IP Address of PC

The default IP address of the HEV-10W over wired connection is 192.168.1.251. In order to connect to HEV-10W, please change the IP Address of PC to the same network segment as the encoder. The specific instructions are as follows.

- On a Windows PC: Press the +R on your keyboard.
- Enter “control netconnections” in the run box and press “Enter”.
- You should see at least two types of network connections: Ethernet and WI-FI. Double-click the active network connection.
- Select “Properties” and double click “Internet Protocol Version 4 (TCP/IPv4)” .
- Select **Use the following IP address** option and enter the **IP address** with 192.168.1.xxx (0-255 except 251) and **Subnet mask** 255.255.255.0. Press “OK” twice to save the configuration.

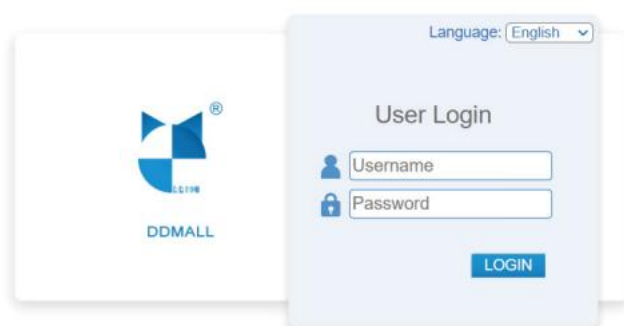


Note: Your computer's IP must be 192.168.1.xxx for connecting with Encoder. "xxx" can be any number ranging from 0 to 255 except 251. Please make sure HEV-10W Encoder should be in the same Network environment as your LAN IP.

6.1.2 Login for Configuration

Enter "192.168.1.251" in your browser to open the HEV-10W's Web administrator page. Login with the default user name and password as "admin". The default language for web control is English, and other languages can be supported at the same time, please choose according to your needs.

192.168.1.251



* user name: admin * password: admin

6.2 Wireless Connection

HEV-10W has two working modes on wireless connection, which are AP Mode (Access Point) and Client Mode. For the first use, you need to use a mobile device to connect and access HEV-10W in AP mode. You can add wireless router information to HEV-10W, and then switch into Client Mode, HEV-10W can connect to the wireless

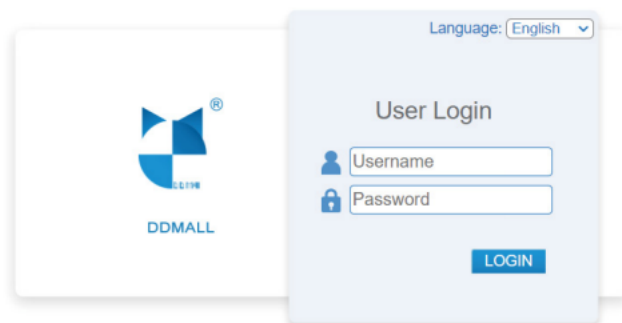
router and perform video transmission. Please find the specific instructions below.

Step 1: Open your wireless networking utility on your laptop or mobile devices to search SSID called “HEV-10W” and access to it by the password “12345678”. This step is only required in AP WiFi mode.

Step 2: Then open a web browser and enter the IP address for HEV-10W wireless network connection. In AP mode, the default IP address is “192.168.2.252”.

Step 3: Login to the interface with the default user name and password as “admin”.

192.168.2.252



* user name: admin * password: admin

***User name: admin *Password: admin**

Step 4: Navigate to Network Configuration interface, and choose the WiFi Mode as Client under Wireless. Then enter or select an existing router’s SSID for HEV-10W to connect to. Select the router you want to connect to in the "Available WIFI Networks" list, if it does not appear in the list, please press the "Refresh" button. If the SSID of your router is not visible, please fill it in manually.

Note: After you click the “Refresh” button, the encoder will disconnect from your control device and search for the surrounding WIFI. Please wait for about 10s. When the search is successful, you need to use your control device to connect to the SSID of encoder again and refresh the web page.

Step 5: Set IP Mode. You can enable either DHCP or Static. Note that this is the IP address in Client mode, when the encoder works in Client mode, please enter this address to login to the Web UI. It is recommended to enable DHCP, the router will automatically assign an IP Address for your HEV-10W; Or you can select Static IP, please note that the static address and the router connected to the encoder should be in the same network segment. Click “Apply” and the encoder will switch to Client mode automatically. L1(green) and L2(green) are both keeps on when HEV-10W is successfully connected to the network.

Step 6: Open your wireless networking utility on your laptop or mobile devices to search SSID of the router that connects to the encoder and access to it. Then open a web browser and enter the Client IP address (the static address that you have set or the dynamic IP address that the router assigns to the HEV-10W). Login to the interface with the default user name and password as “admin”.

Note: If the IP address of the Client mode is set to dynamic DHCP, you need to check what IP address the router assigned to the encoder. Two ways are as below.

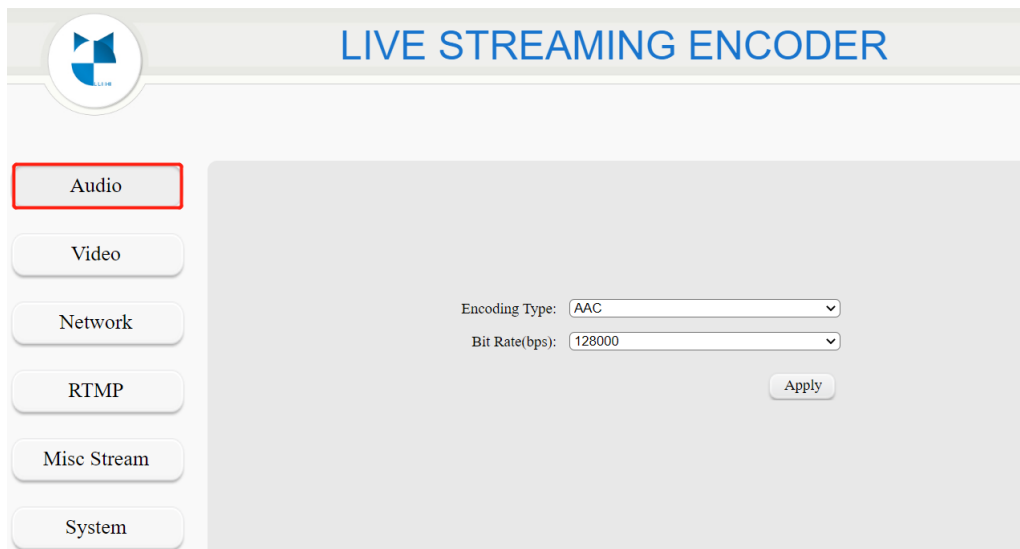
A. Hold down the Set button about 3s to let the encoder switch back to AP mode, use a mobile device to search SSID called “HEV-10W” and access to it, then access the encoder's webpage, navigate to the Network Configuration interface and choose the WiFi Mode as Client under Wireless, then check what IP the encoder is assigned to in the Network interface.

B. Use the device to access the management interface of the router, find the encoder in the client list of the management interface, and see what IP address the encoder is assigned to.

7.Encoding Configuration

7.1 Audio configuration

Step: Click “Audio” → configure your settings → click “Apply”.



The screenshot shows the 'LIVE STREAMING ENCODER' interface. On the left, there is a vertical menu with buttons for 'Audio', 'Video', 'Network', 'RTMP', 'Misc Stream', and 'System'. The 'Audio' button is highlighted with a red border. The main area on the right is titled 'Audio' and contains two dropdown menus: 'Encoding Type' set to 'AAC' and 'Bit Rate(bps)' set to '128000'. An 'Apply' button is located at the bottom right of the main area.

Encoding Type: To set audio coding/ live stream type as AAC or G.711u format. Bit rate can only be adjusted in AAC format, while G711u format only supports default parameter 64000bps which cannot be modified.

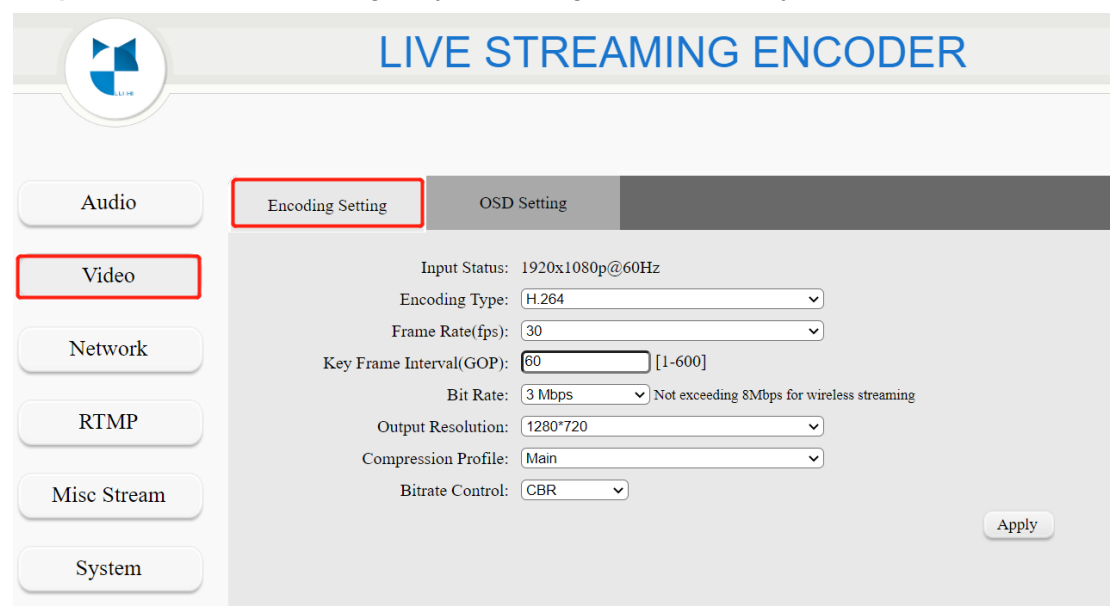
Note: HEV-10W only supports AAC audio encoding type for live stream.

Bit Rate: Allows you to select different bit rates ranging from 32000bps to 256000bps according to your practical application.

7.2 Video Configuration

7.2.1 Encoding Setting

Step: Click “Video” → configure your settings → click “Apply”.



The screenshot shows the 'LIVE STREAMING ENCODER' interface. On the left, there is a vertical menu with buttons for 'Audio', 'Video', 'Network', 'RTMP', 'Misc Stream', and 'System'. The 'Video' button is highlighted with a red border. The main area on the right is titled 'Video' and contains several settings: 'Input Status: 1920x1080p@60Hz', 'Encoding Type: H.264', 'Frame Rate(fps): 30', 'Key Frame Interval(GOP): 60 [1-600]', 'Bit Rate: 3 Mbps Not exceeding 8Mbps for wireless streaming', 'Output Resolution: 1280*720', 'Compression Profile: Main', and 'Bitrate Control: CBR'. An 'Apply' button is located at the bottom right of the main area.

Input Status: Display the resolution, sampling rate, and other information of the current HDMI input video in real-time.

Encoding Type: Select either H.265 or H.264 compression formats.

Frame Rates: Adjusts the number of frames between full picture updates.

Key Frame Interval (GOP): It is used to modify the keyframe interval. Generally, we recommend setting the Key Frame Interval (GOP) to twice the Frame Rate (FPS) value.

Bit Rate: Allows you to select or enter different bit rates from 128kbps to 16Mbps. Lower bit rates require less bandwidth and may allow for a more stable stream while higher bit rates offer better video quality, but require more network bandwidth. It should be noted that if you use the wireless method for streaming, the maximum bit rate only supports 8M.

Output Resolution: To set the output resolution of video encoding/ live streaming.

Compression Profile: Select the video compression curve mode. There are three types of video compression curves: BaseLine, Main, and High.

Bitrate Control: Select the mode to control the bit rate. There are four modes: VBR, CBR, AVBR, and FixQP. The default CBR mode is recommended.

7.2.2 OSD Setting

OSD settings provide two Text OSD settings and a Picture OSD setting.

Step: Click “Video” → “OSD Setting” → Configure your settings → Click “Apply”.

Text Settings

LIVE STREAMING ENCODER

Audio

Video

Network

RTMP

Misc Stream

System

Encoding Setting

OSD Setting

TEXT1: Disabled

Content: Title Up to 80 characters

Location X: 10 [0-1920]

Location Y: 10 [0-1080]

Font Size: 36 [8-72]

Font Color: orange

Alpha: 128 [0-128]

Apply

TEXT2: Disabled

Content: Subtitle Up to 80 characters

Location X: 40 [0-1920]

Location Y: 120 [0-1080]

Text: Enabled or disable to show text on your video stream.

Content: Enter your desired title text here [0-80].

Location X: Adjust Left and Right location of the text [0-1920].

Location Y: Adjust Up and Down location of the text [0-1080].

Font Size: Size of text [8-72].

Font Color: Color of the text.

Alpha: Opacity of the text [0-128].

Picture Settings

LIVE STREAMING ENCODER

Audio

Video

Network

RTMP

Misc Stream

System

Encoding Setting

OSD Setting

Font Size: 22 [8-72]

Font Color: blue

Alpha: 128 [0-128]

Apply

Picture: Enabled

Location X: 1600 [0-1920]

Location Y: 10 [0-1080]

Alpha: 128 [0-128]

Transparent Color: red

Upload File: Choose File OSD-red.bmp

Apply

* Only .bmp file with maximum size of 1MB is allowed.

Picture: Enabled/ Disabled to show the logo on your screen.

Location X: Adjust Left and Right position of the picture [0-1920].

Location Y: Adjust Up and Down position of the picture [0-1080].

Alpha: Opacity of the picture.

Transparent Color: In this section, users can select the corresponding color, once you set a color to be the transparent one, any region of the image in that color will be transparent.

File Upload: Please note that only supports 16-bit, 24-bit, and 32-bit BMP files and the size needs to be less than 1M.

7.3 Network Configuration

7.3.1 Network of Wired Connection

IP Mode:

- **Dynamic (DHCP)** – The connected router generates an IP address for the encoder. If you set it to DHCP, please log in to the router to get the IP address that it assigns to the HEV-10W.
- **Static** – Manually enter the IP address value for HEV-10W.
- **DNS:** Domain Name System. When performing RTMP live streaming, filling in the correct DNS can make the live streaming stable, usually, we set it to 8.8.8.8.

The screenshot shows the 'LIVE STREAMING ENCODER' web interface. On the left is a sidebar with buttons for 'Audio', 'Video', 'Network' (which is highlighted), 'RTMP', 'Misc Stream', and 'System'. The main area has tabs for 'Wired' and 'Wireless'. Under the 'Wired' tab, the 'IP Mode' is set to 'Static'. Below this, there are input fields for 'IP Address' (192.168.1.251), 'Subnet Mask' (255.255.255.0), 'Gateway' (192.168.1.1), and 'DNS' (8.8.8.8). An 'Apply' button is located at the bottom right of the configuration area.

7.3.2 Network of Wireless Connection

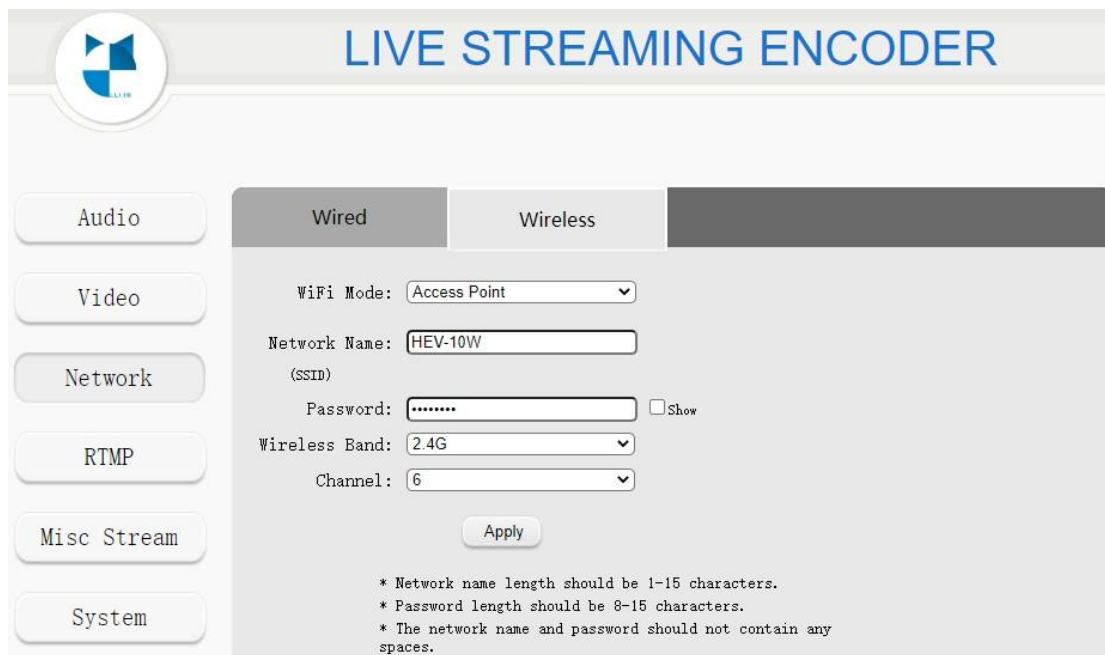
→ **WiFi Mode:** Select “**Access Point**” mode.

Network Name (SSID): The SSID name of Network Name of the encoder in AP mode can be customized and modified. The default network name is HEV-10W.

Password: The default password is 12345678 in AP mode. You can also change this password.

Wireless Band: Select either 2.4G or 5G.

Channel: Select the WiFi signal channel.



The screenshot shows the 'LIVE STREAMING ENCODER' web interface. On the left is a sidebar with buttons for 'Audio', 'Video', 'Network', 'RTMP', 'Misc Stream', and 'System'. The 'Network' button is selected. The main area has two tabs: 'Wired' and 'Wireless'. The 'Wireless' tab is active, showing the following configuration options:

- WiFi Mode:** A dropdown menu set to 'Access Point'.
- Network Name (SSID):** A text input field containing 'HEV-10W'.
- Password:** A password input field with masked characters (dots) and a 'Show' checkbox.
- Wireless Band:** A dropdown menu set to '2.4G'.
- Channel:** A dropdown menu set to '6'.

Below these fields is an 'Apply' button. At the bottom, there are three asterisked notes:

- * Network name length should be 1-15 characters.
- * Password length should be 8-15 characters.
- * The network name and password should not contain any spaces.

→ **WiFi Mode:** Select “**Client**” mode.

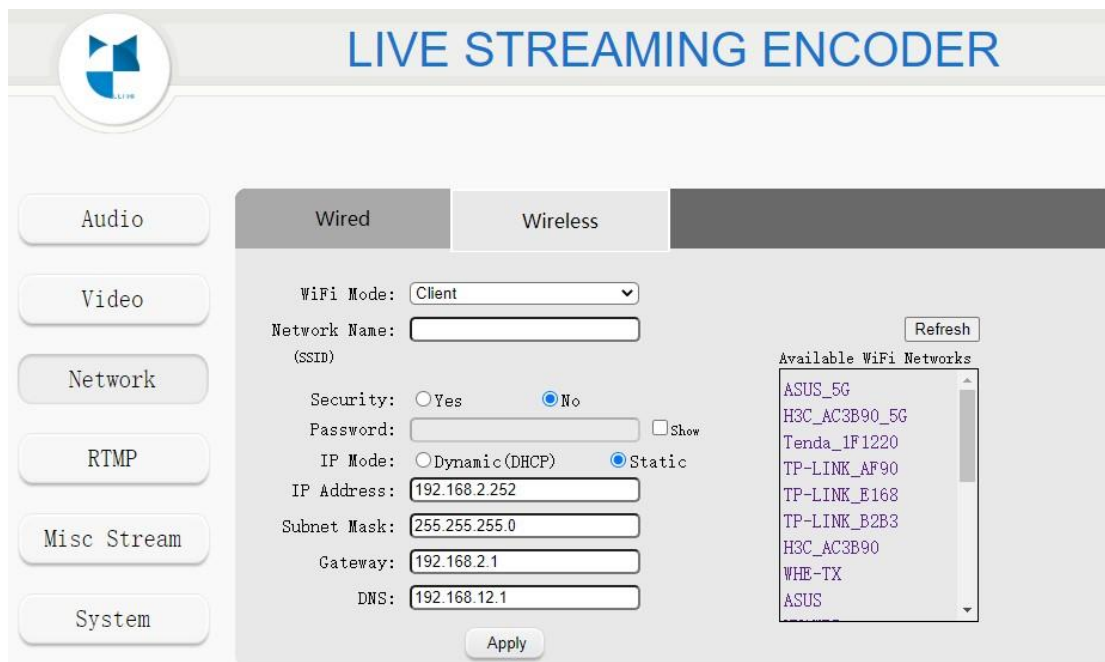
Network Name (SSID): This field allows you to enter or select an existing router's SSID for HEV-10W to connect to. Select the router you want to connect to in the "Available WIFI Networks" list, if it does not appear in the list, please press the "Refresh" button. If the SSID of your router is not visible, please fill it in manually.

Note: After you click the “Refresh” button, the encoder will disconnect from your control device and search for the surrounding WIFI. Please wait for about 10s. When the search is successful, you need to use your control device to connect to the SSID of HEV-10W again and refresh the web page.

IP Mode

- **Dynamic (DHCP)** – The connected router generates an IP address for the encoder. If you set it to DHCP, please login to the router to get the IP address that it assigns to the HEV-10W.
- **Static** – Manually enter the IP address value for HEV-10W and your device in

Client mode.



LIVE STREAMING ENCODER

Audio
Video
Network
RTMP
Misc Stream
System

Wired Wireless

WiFi Mode: Client

Network Name: (SSID)

Security: ☐ Yes ☒ No

Password: ☐ Show

IP Mode: ☐ Dynamic (DHCP) ☒ Static

IP Address: 192.168.2.252

Subnet Mask: 255.255.255.0

Gateway: 192.168.2.1

DNS: 192.168.12.1

Refresh

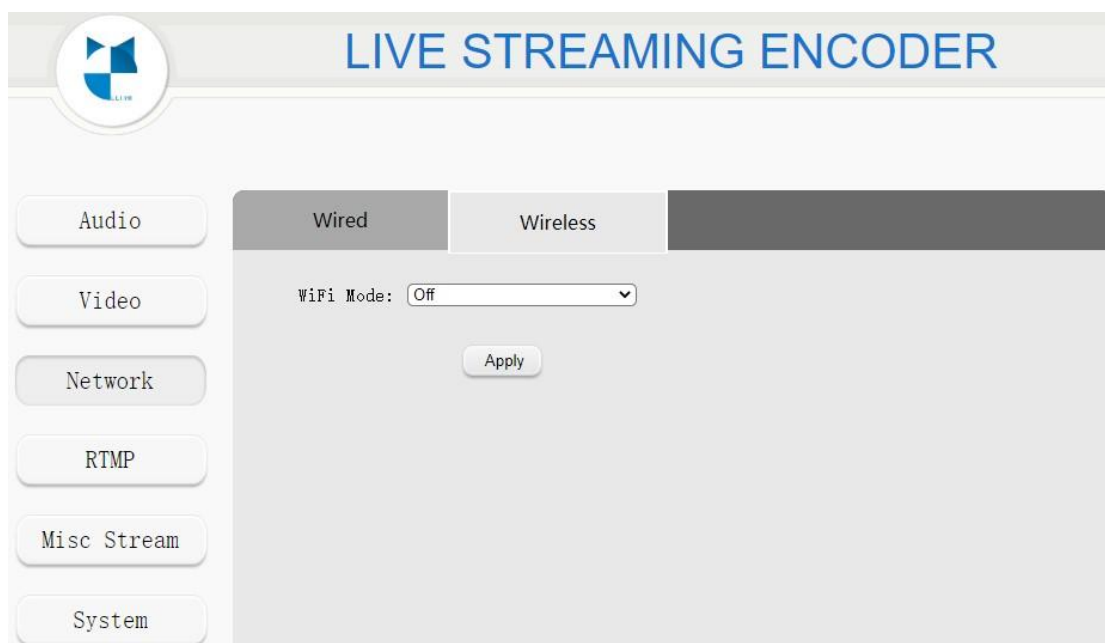
Available WiFi Networks

- ASUS_5G
- H3C_AC3B90_5G
- Tenda_1F1220
- TP-LINK_AF90
- TP-LINK_E168
- TP-LINK_B2B3
- H3C_AC3B90
- WHE-TX
- ASUS

Apply

→ **WiFi Mode:** Select “Off”.

Click Apply and the the encoder will be disconnected from the network. If you want to connect to wireless networks again, please hold down the button about 3s to enter the AP mode to turn on the WiFi connection. After it switches to the AP mode, you can press the button for 3s again to switch to Client Mode.



LIVE STREAMING ENCODER

Audio
Video
Network
RTMP
Misc Stream
System

Wired Wireless

WiFi Mode: Off

Apply

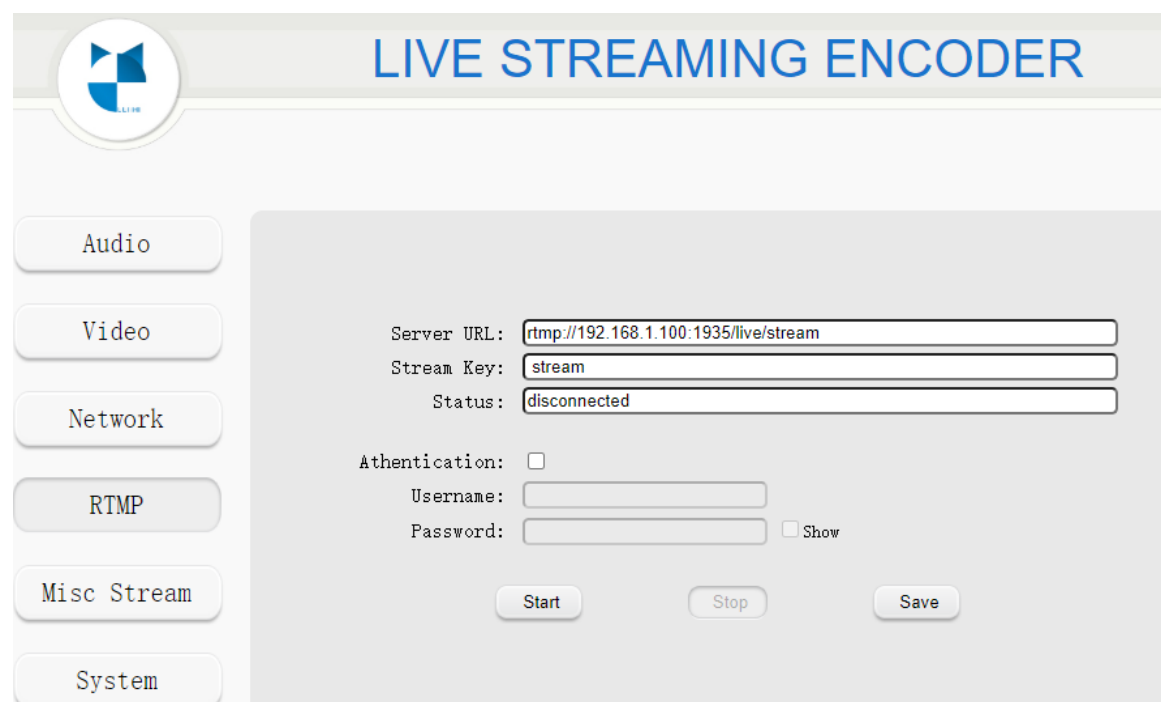
7.3.3 Considerations of Simultaneous Use of Wired and Wireless

HEV-10W supports both wired connection and wireless connection mode. Need to pay attention to the following.

- If your HEV-10W is connected to a router via wired and wireless at the same time, you can access the encoder via wired IP and wireless IP at the same time. Note that the wired IP and wireless IP cannot be set exactly the same.
- If your HEV-10W is wired to a router and wirelessly connected to another router, and the wired IP and wireless IP are on the same network segment, then you cannot access the encoder through wired IP and wireless IP at the same time. Only one of them can be accessed. If you connect to the wired first, you can only use the wired. At this time, if you want to change to wireless, you must first unplug the network cable, then connect to the wireless and use it. If you connect to wireless first, you can only use wireless. At this time, if you want to change to wired, you must first set wireless to off, then connect the network cable and use it.
- If your HEV-10W is wired to a router and wirelessly connected to another router, and the wired IP and wireless IP are not on the same network segment, then you can access the encoder via wired IP and wireless IP at the same time.

7.4 RTMP Configuration

RTMP is supported by most video streaming platforms, but you must first obtain a URL and stream key/name from the service you choose to stream to. Log into your account's settings and retrieve the URL and stream key/name. Please navigate to **8.1 YouTube Live** and **8.2 Facebook Live** to see the typical applications.



The screenshot displays the 'LIVE STREAMING ENCODER' web interface. On the left, a vertical sidebar contains navigation buttons: 'Audio', 'Video', 'Network', 'RTMP' (which is highlighted), 'Misc Stream', and 'System'. The main content area is titled 'LIVE STREAMING ENCODER' in large blue letters. Below the title, there are input fields for 'Server URL' (containing 'rtmp://192.168.1.100:1935/live/stream'), 'Stream Key' (containing 'stream'), and 'Status' (displaying 'disconnected'). Below these fields, there is an 'Authentication' section with an unchecked checkbox, and fields for 'Username' and 'Password' (with a 'Show' checkbox next to the password field). At the bottom of the main area, there are three buttons: 'Start', 'Stop', and 'Save'.

Steps: Enter the full RTMP URL and stream name/key in HEV-10W Encoder RTMP Interface, and click "Start" to live. When you need to stop your live steaming, click "Stop" in this page. And you can click" Save" to save your settings.

Server URL: To fill in the RTMP stream address of live stream platform. Each live stream platform has different and unique RTMP push stream address.

Stream Key: To fill the stream name/key of live stream platform. When the anchor opens live streaming, the platform will generate unique keys.


Status: It displays the connection status of the device and the live stream platform. There are four status: connecting, connected, disconnecting and disconnected. Only the status column is displayed as "connected" after clicking "Start" can you live streaming.

Authentication: If you use a platform that requires authentication, please tick authentication and fill in the authentication information provided by the platform in the setting column of the encoder.

Note: Before modifying the RTMP parameters, please ensure that the status column is displayed as "disconnected" so that the parameters can be modified.

7.5 Misc Stream

Misc Stream provides HEV-10W media stream address information. Decoding terminal equipment or decoding software can play HEV-10W videos through streaming media addresses. HEV-10W provides wired and wireless URLs. Please choose according to your connection method. The content described below will be explained with wired URL, and the use of wireless URL is the same.



LIVE STREAMING ENCODER

Audio

Video

Network

RTMP

Misc Stream

System

☒ RTSP
☐ Transport Stream

URL1 Port:

Wired URL1:

Wireless URL1:

URL2 (TS) Port:

Wired URL2(TS):

Wireless URL2(TS):

Multicast:

Multicast Interface:

Multicast IP:

Multicast Port: [2000-65531]

TTL: [0-255]

Protocol:

Destination IP:

Port: [1-65535]

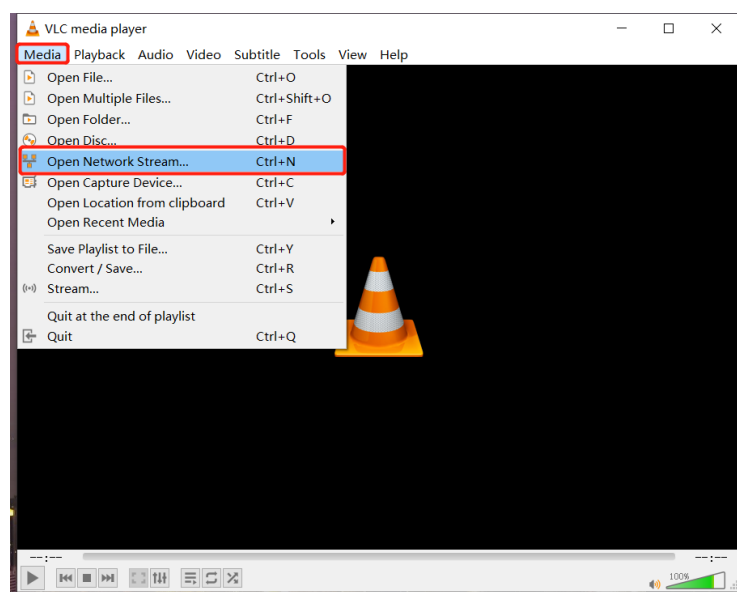
TTL: [0-255]

Multicast Interface:

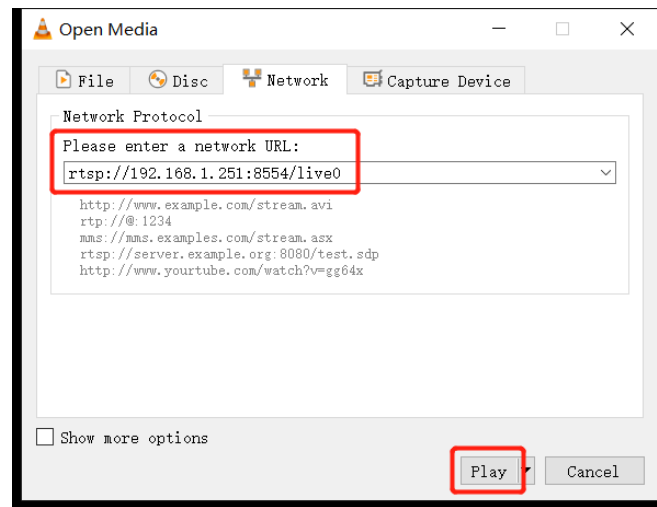
* In transport stream mode, the device sends video/audio to a specified unicast or multicast address.

7.5.1 RTSP Unicast

The factory default of the HEV-10W is RTSP unicast mode. Decoding software or equipment in the local area network can directly play the HEV-10W video stream through URL1 or URL2. The URL1 and URL2 ports can be customized. If you need to change, just enter the URL Port value (range 1-65535) and click Apply. After the changes is completed, the URL address will be automatically changed accordingly. Generally recommended Use the default 8554 and 554 ports. Take VLC player software as an example to explain how to play the HEV-10W video. Select “Media” at the top left of the VLC software and click “Open network stream”.




In the pop-up window, select "Network", fill in the URL and click "Play" to play the video stream. URL fill in URL1 or URL2 in HEV-10W is OK.



7.5.2 RTSP Multicast

RTSP unicast mode outputs up to 8 video streams, and multiple video streams will share the HEV-10W encoding capability. The multicast mode supports a maximum of 200 video stream outputs and can maintain each video stream for transmission at a maximum bit rate of 16M (The highest bit rate of wireless streaming is 8M). First, you need to make sure that the router or switch you use supports the multicast mode. Set "Multicast" to "Enabled" in the HEV-10W webpage. Set the multicast interface to wired (if you use a wireless connection, please set it to wireless), fill in "Multicast IP", the range of Multicast IP is 224.0.0.0 ~ 239.255.255.255, and then Fill in "Multicast Port" and "TTL", and click "Apply".



LIVE STREAMING ENCODER

Audio

Video

Network

RTMP

Misc Stream

System

☒ RTSP
☐ Transport Stream

URL1 Port:

Wired URL1:

Wireless URL1:

URL2 (TS) Port:

Wired URL2(TS):

Wireless URL2(TS):

Multicast:

Multicast Interface:

Multicast IP:

Multicast Port: [2000-65531]

TTL: [0-255]

Protocol:

Destination IP:

Port: [1-65535]

TTL: [0-255]


Multicast Interface:

* In transport stream mode, the device sends video/audio to a specified unicast or multicast address.

After the setting is successful, multiple devices can use URL1 or URL2 to play the video stream. Note that when multiple devices are playing at the same time, it is best to uniformly select the URL1 or URL2 address for playback, and it is best not to mix the two at the same time.

7.5.3 UDP Unicast

In the webpage, select "Transport Stream", which allows HEV-10W to perform unicast or multicast transmission using the UDP protocol. In the UDP unicast mode, HEV-10W will always push the stream to a client with a specified IP. Except for this client, other clients cannot play the HEV-10W video stream. Enter Destination IP, enter the IP address of the specified client decoding device, and enter Port and TTL to start the UDP unicast mode.



LIVE STREAMING ENCODER

Audio

Video

Network

RTMP

Misc Stream

System

☐ RTSP
☒ Transport Stream

URL1 Port:

Wired URL1:

Wireless URL1:

URL2 (TS) Port:

Wired URL2(TS):

Wireless URL2(TS):

Multicast:

Multicast Interface:

Multicast IP:

Multicast Port: [2000-65531]

TTL: [0-255]

Protocol:

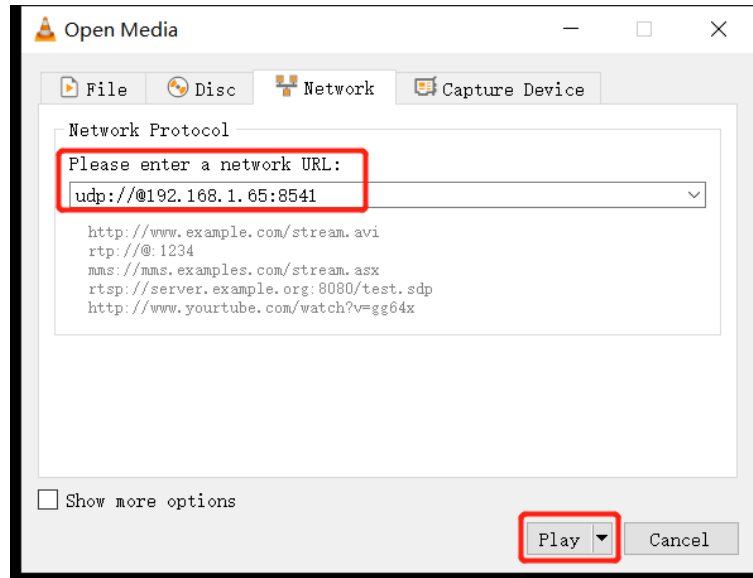
Destination IP:

Port: [1-65535]

TTL: [0-255]

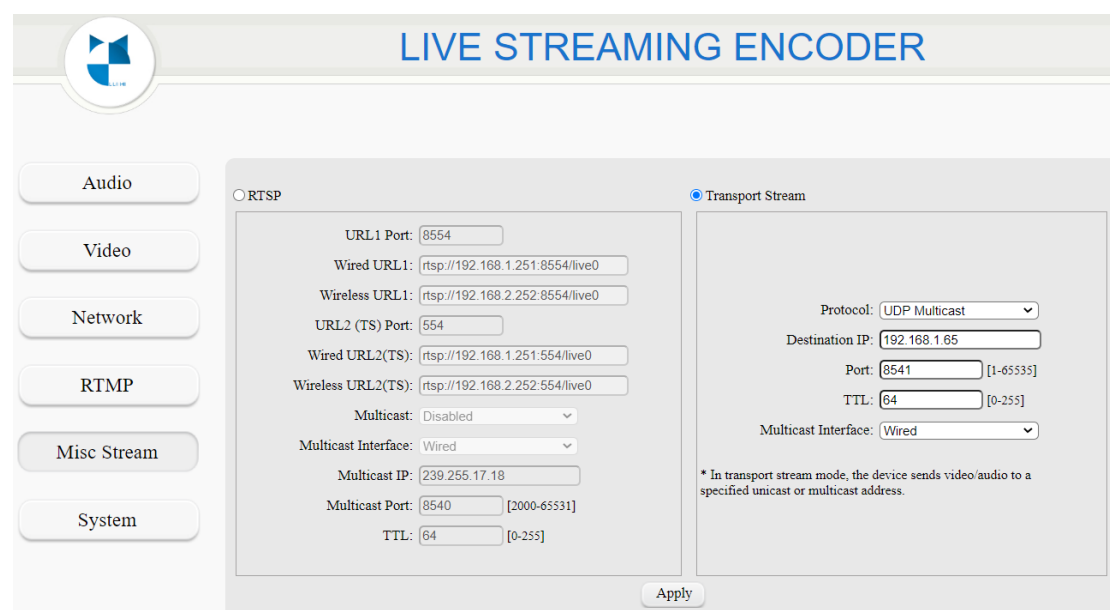
* In transport stream mode, the device sends video/audio to a specified unicast or multicast address.

After the setting, the HEV-10W video can only be played on the computer or decoding device with IP address "192.168.1.65", other devices cannot play it. Take VLC player as an example, enter the URL: **udp://@192.168.1.65: 8541**, where 192.168.1.65 is the "Destination IP" filled in the HEV-10W web page, and 8541 is the "Port" filled in the web page.



7.5.4 UDP Multicast

If you would like to transmit video streams to multiple client decoding devices using the UDP protocol, you will need to use the UDP multicast mode. As shown in Figure, Choose UDP multicast, "Destination IP" fills in the multicast address (the range is 224.0.0.0 ~ 239.255.255.255), fill in "Port" and "TTL", set the multicast interface to wired (if you use a wireless connection, please set it to wireless), click "Apply".

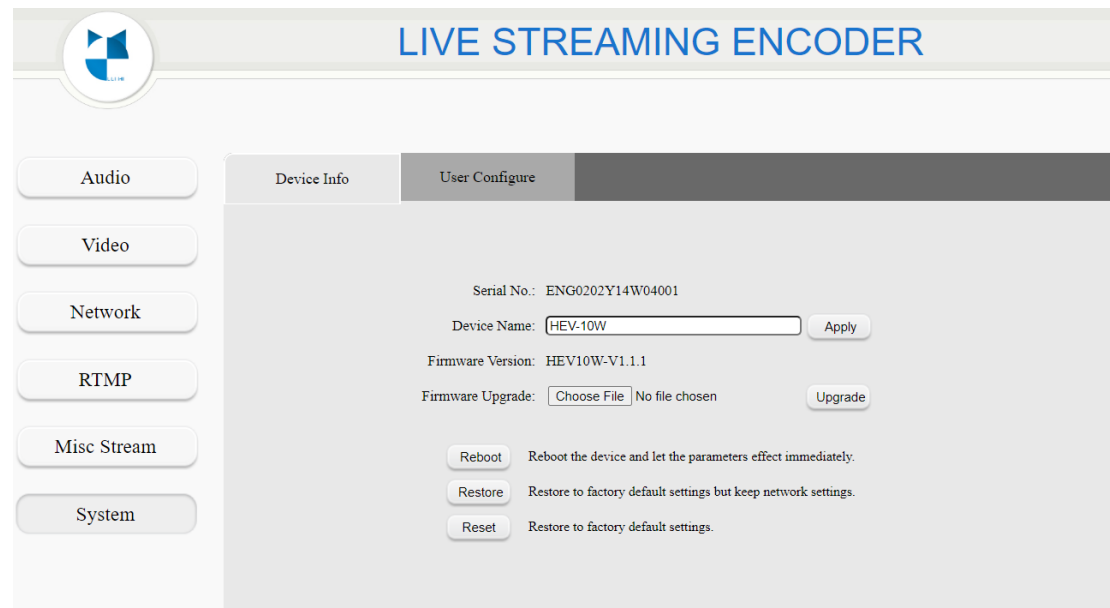


After a successful setting, multiple devices can use the URL: **udp://@239.255.17.19:8541** to play the HEV-10W video stream, of which 239.255.17.19 is the "Destination IP" filled in the HEV-10W webpage, 8541 "Port" filled in the HEV-10W website.

7.6 System

7.6.1 Device Information

This interface allows you to set your device name, upgrade the latest firmware, factory reset, and change password.



The screenshot displays the 'LIVE STREAMING ENCODER' web interface. On the left is a sidebar with navigation buttons: Audio, Video, Network, RTMP, Misc Stream, and System. The main content area has two tabs: 'Device Info' and 'User Configure'. The 'User Configure' tab is active, showing the following fields and buttons:

- Serial No.: ENG0202Y14W04001
- Device Name:
- Firmware Version: HEV10W-V1.1.1
- Firmware Upgrade: No file chosen
- Reboot the device and let the parameters effect immediately.
- Restore to factory default settings but keep network settings.
- Restore to factory default settings.

Device Name: You can change the device name of your encoder.

Firmware Upgrade: For the latest firmware, please visit the DDMALL forum at forum.ddmalltech.com.

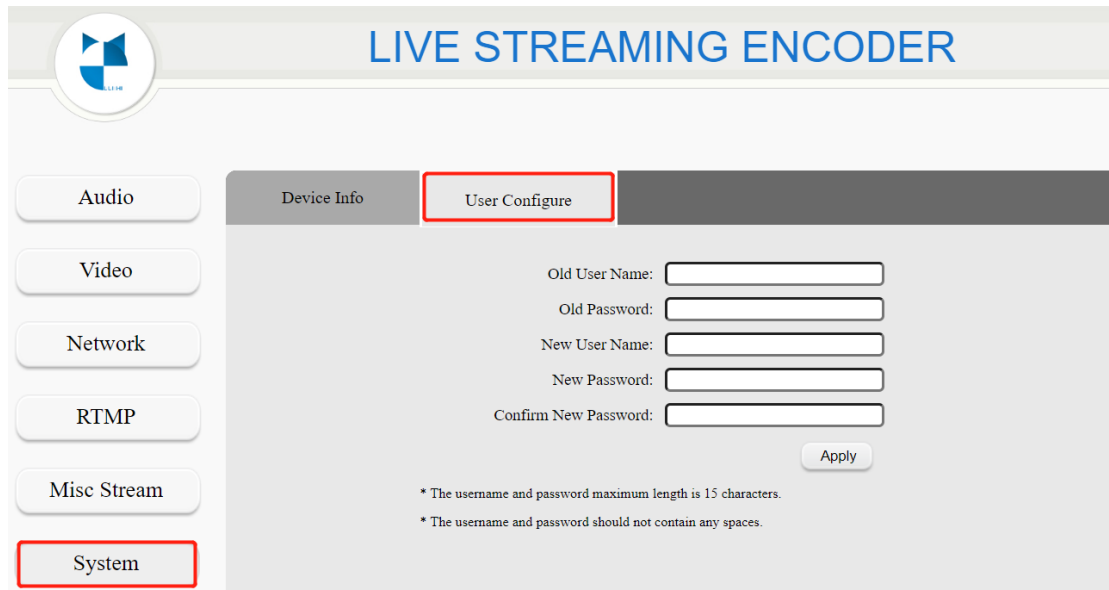
Reboot: Restart the device and let the parameters take effect immediately.

Restore: Restore to factory default settings, but retain the customer's network settings.

Reset: To restore all parameters to factory default settings. You can also press the Set button to restore the encoder (press the button for 15s till the indicator light flashes alternately).

7.6.2 Change Password

To change your password from the default value "admin", enter your desired password in the "New Password" field and click "Apply".



LIVE STREAMING ENCODER

Audio

Video

Network

RTMP

Misc Stream

System

Device Info

User Configure

Old User Name:

Old Password:

New User Name:

New Password:

Confirm New Password:

Apply

* The username and password maximum length is 15 characters.

* The username and password should not contain any spaces.

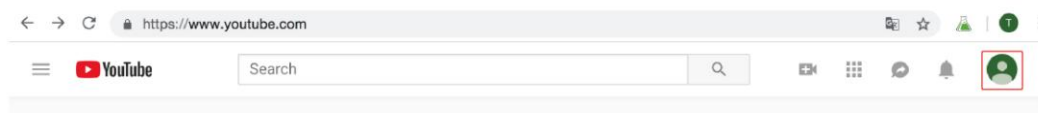
Note: It is important to remember your password after you changed it. If you changed a new one but you forget it, you can hold the Set button about 15s to restore value to factory settings so you can log in to WEB UI by the default one “admin”.

8 Live Stream Application

8.1 YouTube Live

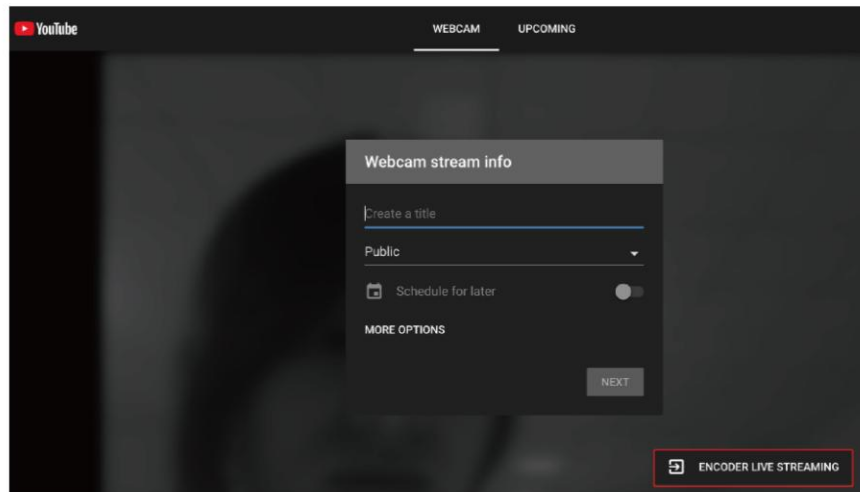
You may follow the steps below to stream your content to YouTube Live.

Step1. Login to YouTube Live and click at the image icon in the top right corner. As shown in Picture 1.



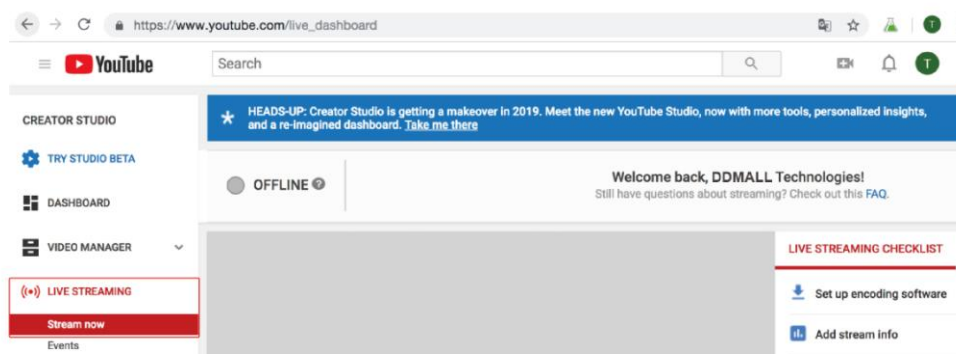
Picture 1

Step 2. Select “**ENCODER LIVE STREAMING**”. As shown in Picture 2.



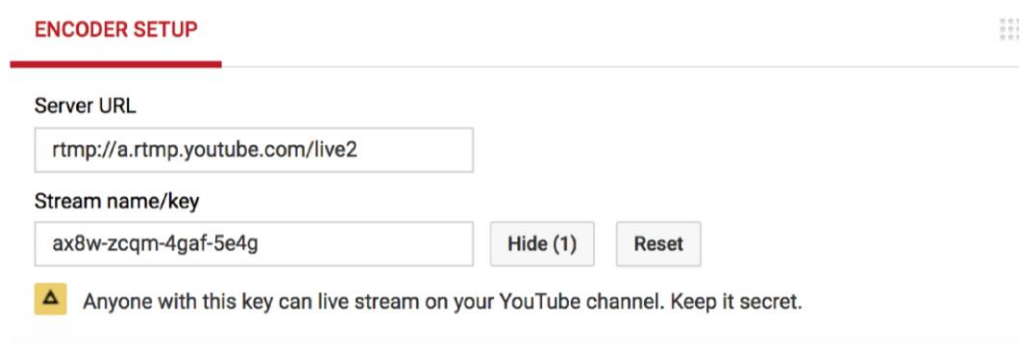
Picture 2

Step 3. Select “Live Streaming” and then click at “Stream now”. As shown in Picture 3.



Picture 3

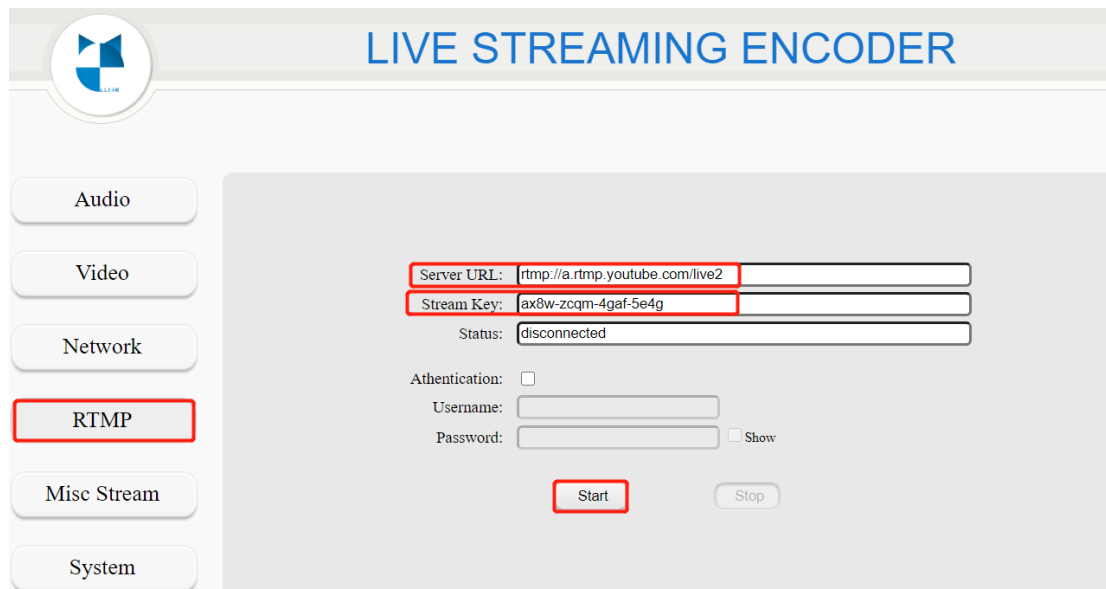
Step 4. Copy the Server URL and Stream name/ key of the **ENCODER SETUP** page. As shown in Picture 4.



Picture 4

Step 5. Paste the full Server URL and Stream name/ key on the Encoder RTMP Interface and then click at the **Start** button. As shown in Picture 5.

* Note that YouTube does not require authentication, so you will no need to enable the Authentication function. If the video live stream platform requires authentication (e.g. Dacast), please enable Authentication function and fill in the authentication information provided by the platform.



Picture 5

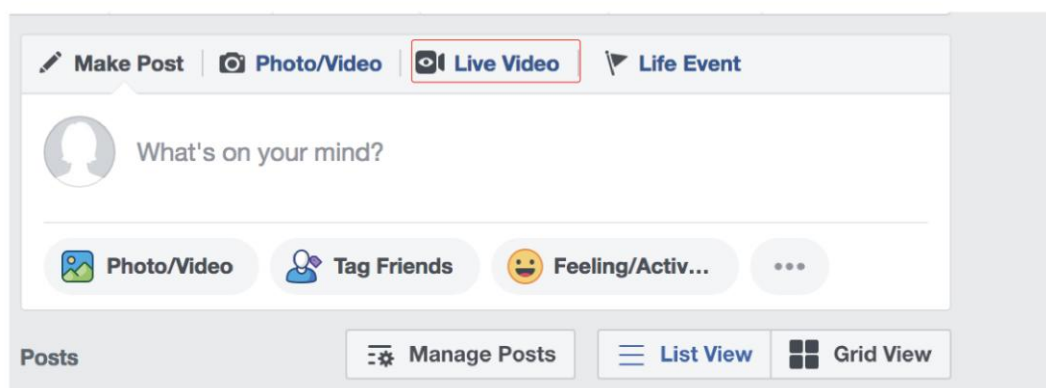
8.2 Facebook Live

Step 1. Login to Facebook Live to create a Live event. As shown in Picture 1.



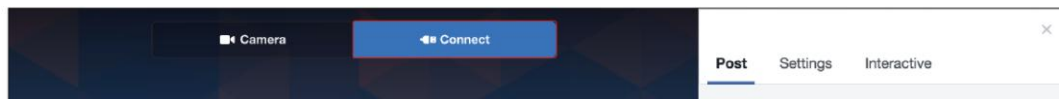
Picture 1

Step 2. Click at “Live Video” on the pop-up page. As shown in Picture 2.



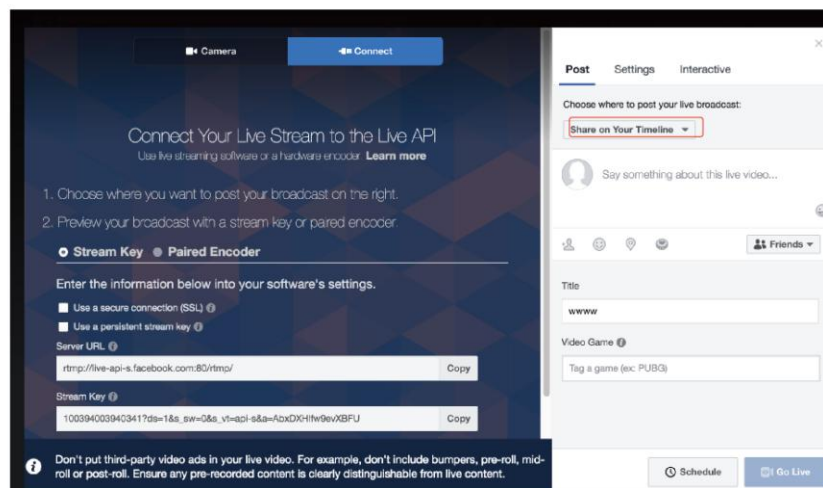
Picture 2

Step 3. Click at “Connect” on the pop-up web page. As shown in Picture 3.



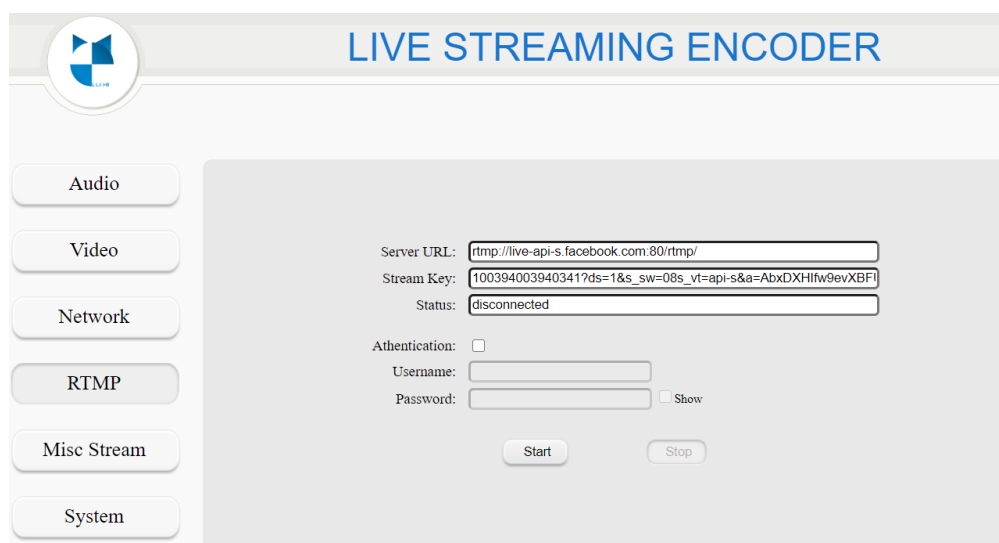
Picture 3

Step 4. Click “post” in the pop-up web page → click “Share in a Group” in the “Choose where to post your live broadcast” dialog box → click “Share on your Timeline”, you will get “Server URL” and “stream name/key”. As shown in Picture 4.



Picture 4

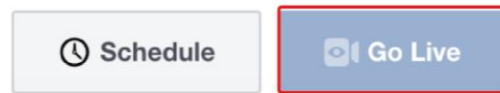
Step 5. Paste the full RTMP URL and Stream name/ key on the RTMP interface of the encoder, and click at the **Start** button to live in the HEV-10W webpage. As shown in Picture 5



Picture 5

Step 6. Click at the **Go Live** button to start live stream in the Facebook Live Web. As

shown in Picture 6.



Picture 6

9. Important Notes

- A.** Whatever you choose Static IP or DHCP mode, please make sure that the HEV-10W, router, and your devices are in the same network segment.
- B.** After setting a new static IP address, it will take effect immediately without restarting. From static IP to "DHCP" IP mode, you will need to restart the HEV-10W and enter the router to view the IP address assigned by the router to the HEV-10W. The DHCP server will allocate an IP address to the encoder automatically.
- C.** If you have set a new password but you forget it, you can press the button about 15s to restore to factory settings.
- D.** When using the multicast function, make sure that the connected router supports the multicast function. When using multicast, only one of wireless and wired can push the stream, you can choose in the multicast settings. When the wireless is in AP mode, the multicast function is not supported.
- E.** Please note that lower bitrates require less bandwidth and may allow for a more stable stream while higher bitrates offer better video quality, but require more network bandwidth. Wired streaming supports up to 16M bit rate, wireless streaming supports up to 8M. If you are connected to both wireless and wired at the same time, please choose one of the methods for streaming instead of using both methods.
- F.** Please set the Key Frame Interval (GOP) to always twice the Frame rate before starting live streaming. Please set the Bitrate Control to CBR for the best possible streaming experience.