

Preface

Thank you for your support of URayCoder video encoder and video decoder.

This quick user manual is for you to use the device quickly. If you need more information about video encoder, please refer to another detailed user manual.

This manual is universal. If you have purchased an encoder with other interfaces (such as SDI, VGA, etc), you can also use this manual.

If you need user manual in PDF format, you can open the USB flash drive to get it. By the way, the video guidance is also included in the USB flash drive.

Since it is a professional product, and Amazon customer service is not familiar with this product, if you encounter any technical problems when using the device, or encounter document requirements(such as new firmware, SDK, APP etc), please contact us via the following contact information, we will arrange professional engineers to provide you with technical service.

Email: linda@szuray.com

Skype: linda_go@yeah.net

Whatsapp: +86 135 9028 3020

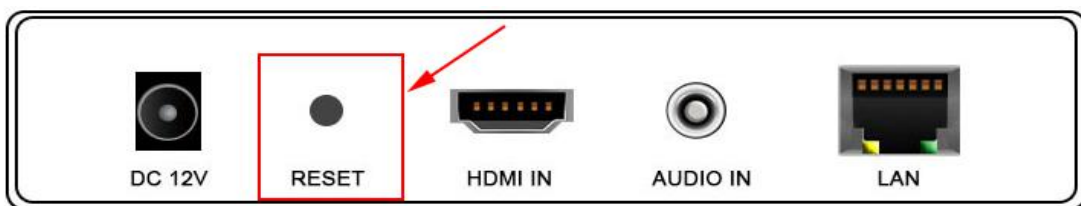
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1. Reset

There is a "RESET" hole on the front end of video encoder, which is used for conducting initialization reset to the encoder. After turning on the power of the device, insert a pin into the hole, then press the reset button and hold it down for about 8 seconds until you see all three indicator light(VIDEO, LAN, POWER) go out All parameters will be initialized.

- The default IP address is 192.168.1.168. The default login ID and password are "admin".
- You can try to reset the device if you encounter any problems while using the device.



2. Log in to the Control Panel

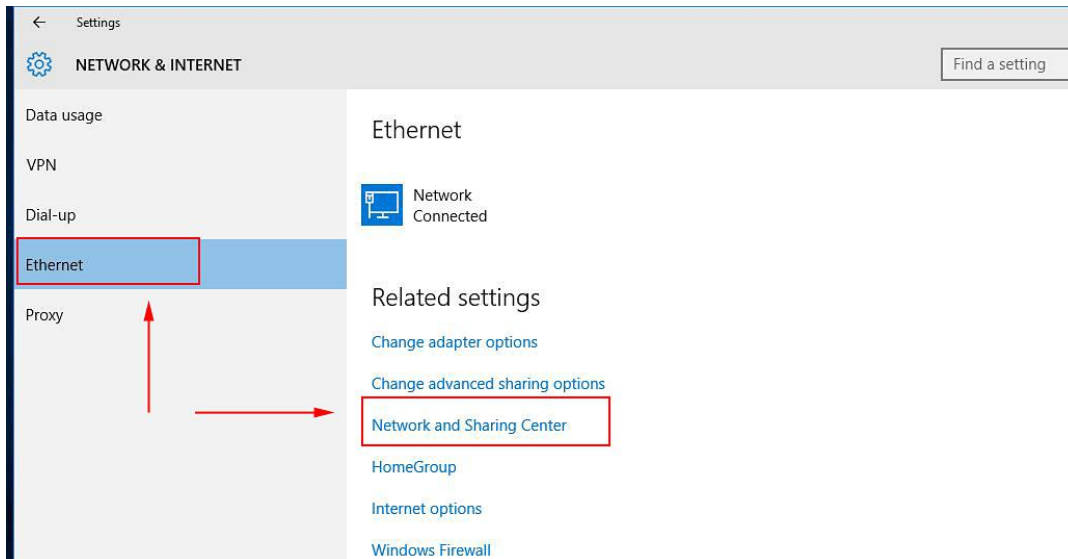
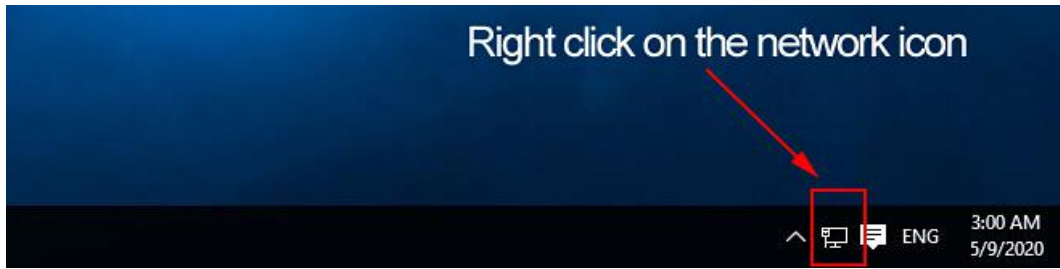
Logging in to the control panel of video encoder is the first step in using the device. Most customers cannot log in to the control panel of video encoder by entering 192.168.1.168 directly in the browser. The reason is that the IP address of video encoder(192.168.1.168) and the IP address of PC(or laptop) are not in the same network segment, so they cannot communicate with each other. In order to log in to the control panel of video encoder, we first need to change the IP address of PC(or laptop).

This is how to log in to the control panel. If you are using windows, please refer to chapter 2.1; if you are using MAC, please refer to chapter 2.2.

2.1 Windows Operating System

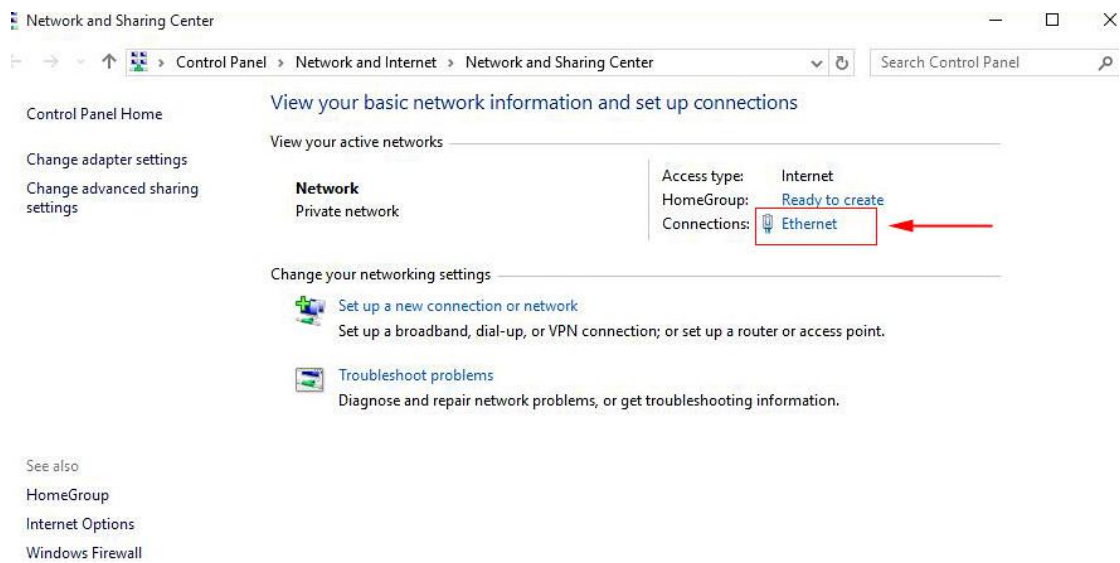
Step 1. Connect the video encoder to the router via an Ethernet cable

Step 2. Connect the PC(or laptop) to the same router via Ethernet cable or WIFI. Right click on the network icon to open <Network and Sharing Center>



Step 3. Click "Ethernet" or "WIFI"

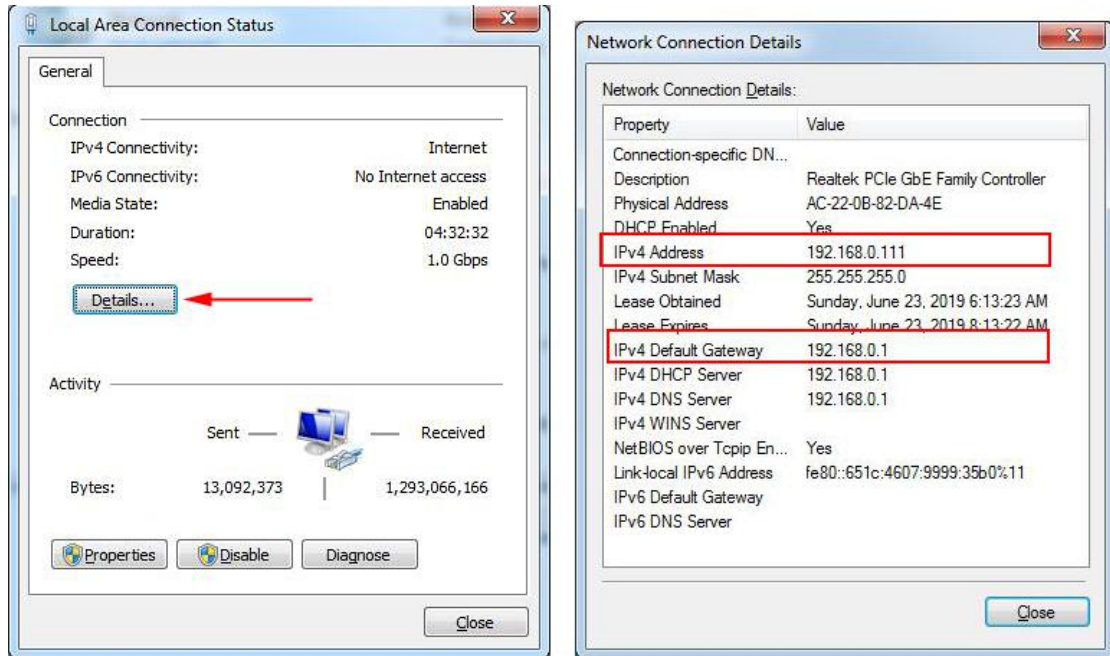
If you connect the PC(or laptop) to the router via WIFI, "WIFI" is displayed in here.



Step 4. Click "Details"

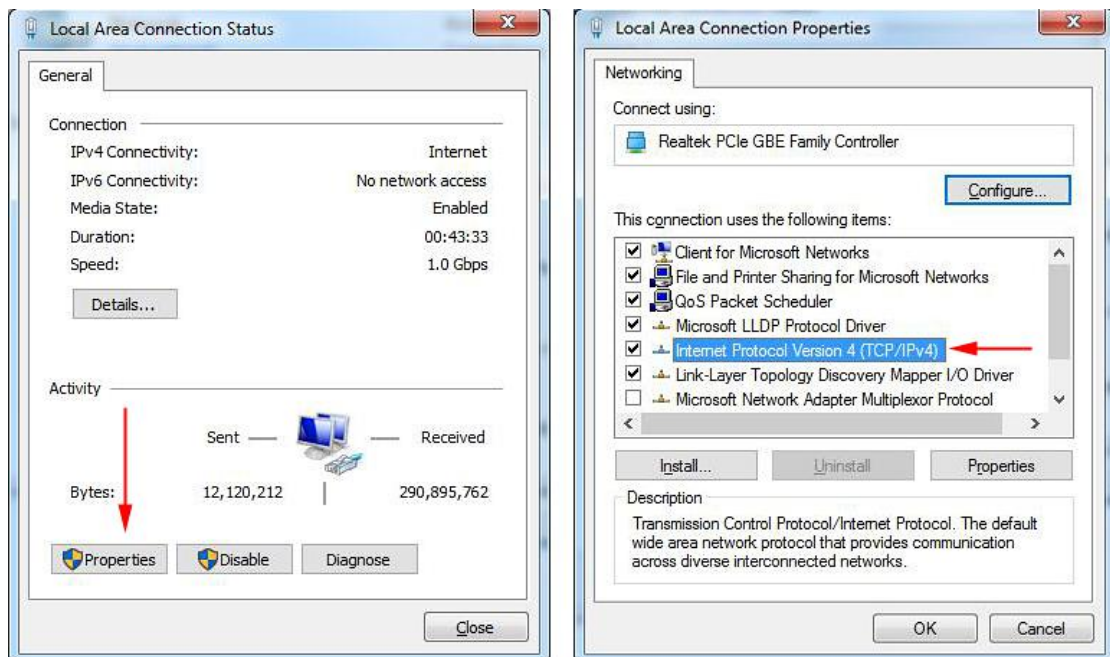
You can check the IP address and default gateway of the PC(or laptop) in <Network Connection Status>. For example, the IP address of my PC(or laptop) is 192.168.0.111, and the gateway of of my PC(laptop) is 192.168.0.1.

Remember the IP address and the gateway of your PC(laptop), it will be used in step 10.



Step 5. Click "Properties"

Step 6. Double-click "Internet Protocol Version 4(TCP /IPv4)"

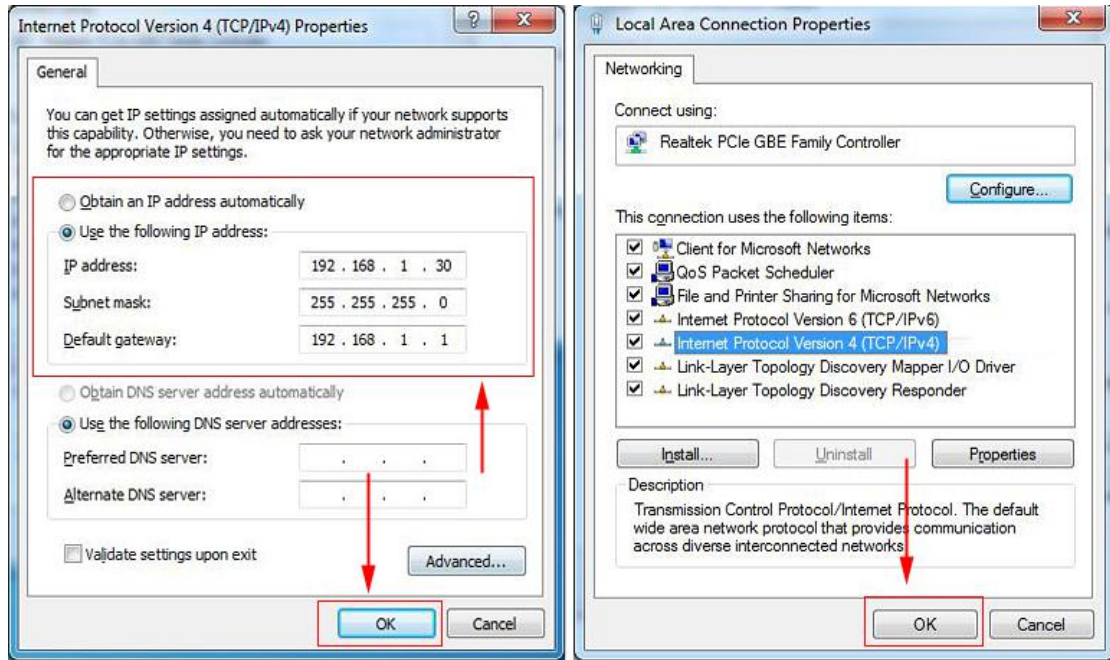


Step 7. Select "Use the following IP address"

Step 8. Change the IP address and default gateway of PC(laptop), and then click "OK"

You can set the IP address to 192.168.1.30 and the default gateway to 192.168.1.1.

In order for the IP settings to take effect, please remember to click "OK" in the window of <Local Area Connection Properties>.



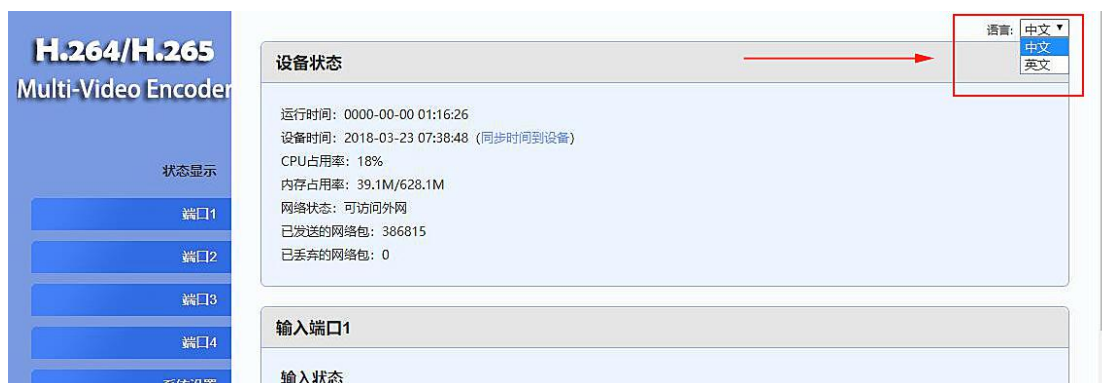
Step 9. Log in to the control panel of video encoder 192.168.1.168

The default ID and password are "admin".

If you cannot log in to the control panel, please reset the device. (Refer to chapter 1)



Usually, the language of the control panel is English. If Chinese is displayed, you can change the language in the upper right corner of control panel. Please select “英文”.

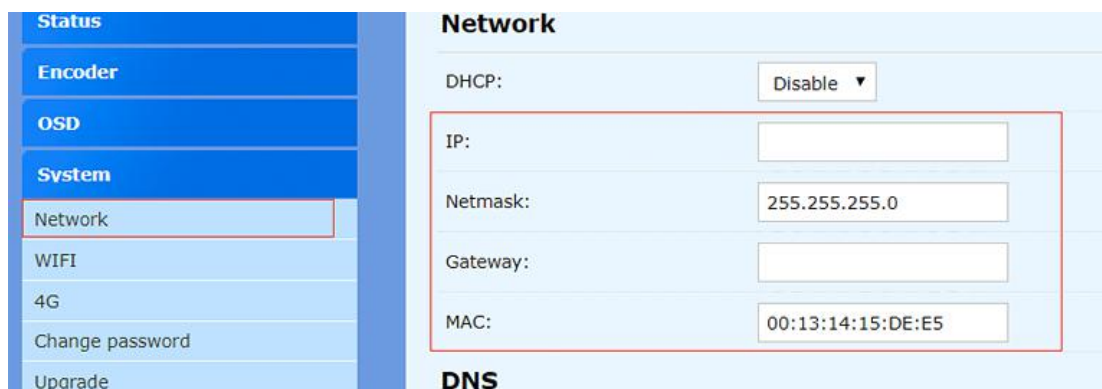


Now the video encoder can be used in local area network(LAN). In order to use it in a wide area network(WAN), we need to change the IP address of video encoder.

Step 10. Change the IP address and gateway of video encoder

In step 4, you already know the IP address and default gateway of the PC(or laptop). For example, the IP address of my PC(or laptop) is 192.168.0.111, and the gateway is 192.168.0.1. Therefore, I can change the IP address of the video encoder to 192.168.0.168(in order to avoid IP conflicts, please don't make the IP address of video encoder the same as the IP address of your PC), and change the default gateway to 192.168.0.1.

Since each PC(or laptop) has a different IP address, I can only use my computer IP as an example. Before changing the IP address and gateway of video encoder, please refer to the IP address and gateway of your computer(In Step 4). If you have any question, please contact us. We will arrange an engineer to help you set up.



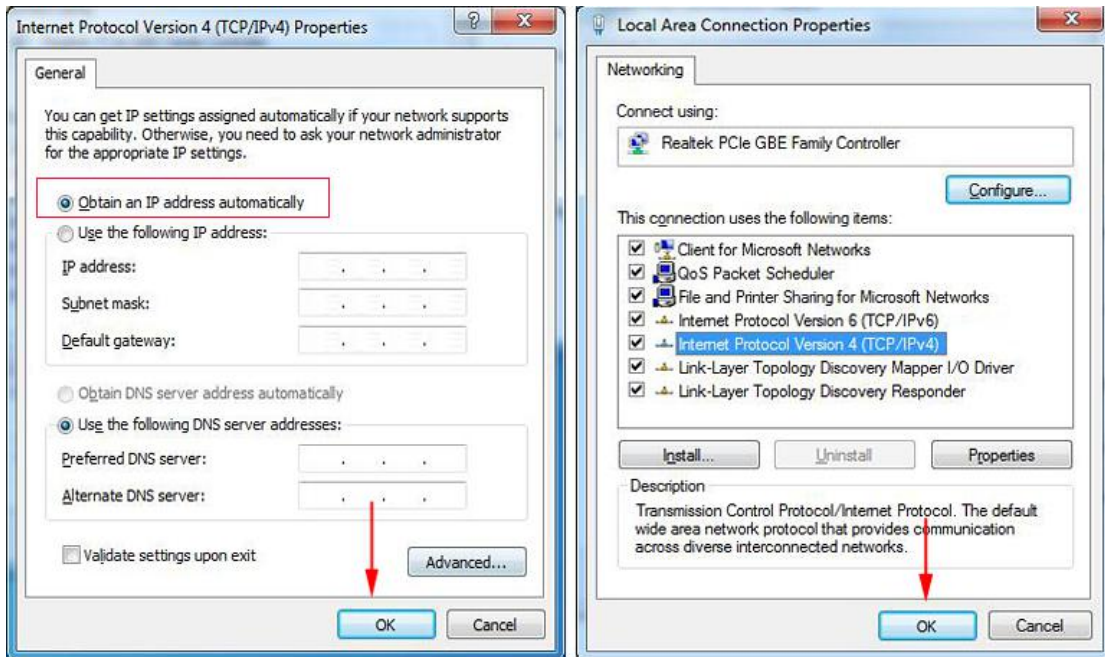
Step 11. Click "Reboot" to restart the video encoder



Step 12. Select "Obtain an IP address automatically", and then click "OK"

Please remember the new IP address of the video encoder.

In order for the IP settings to take effect, please remember to click "OK" in the window of <Local Area Connection Properties>.



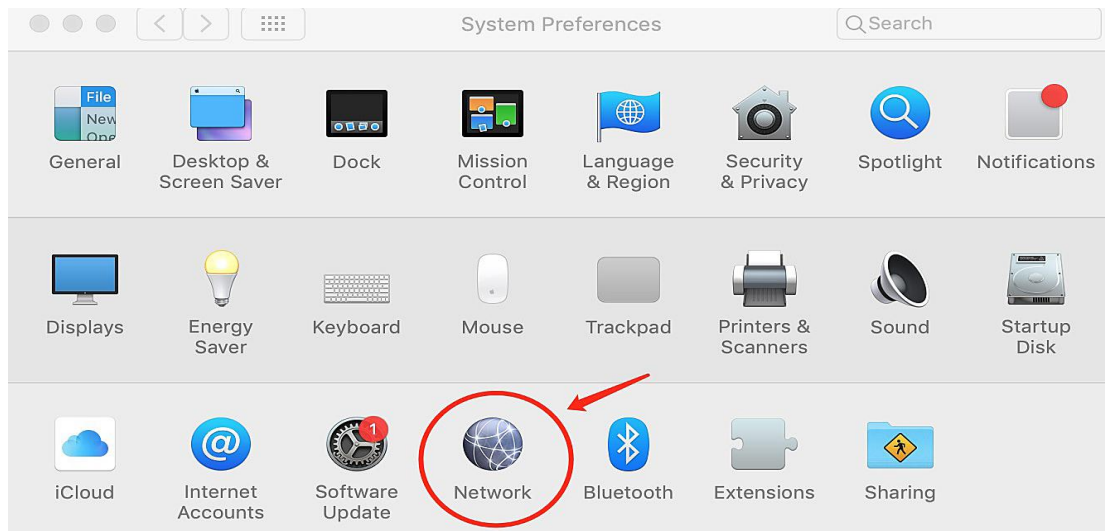
Step 13. Log in to the new IP address of video encoder

2.2 MAC Operating System

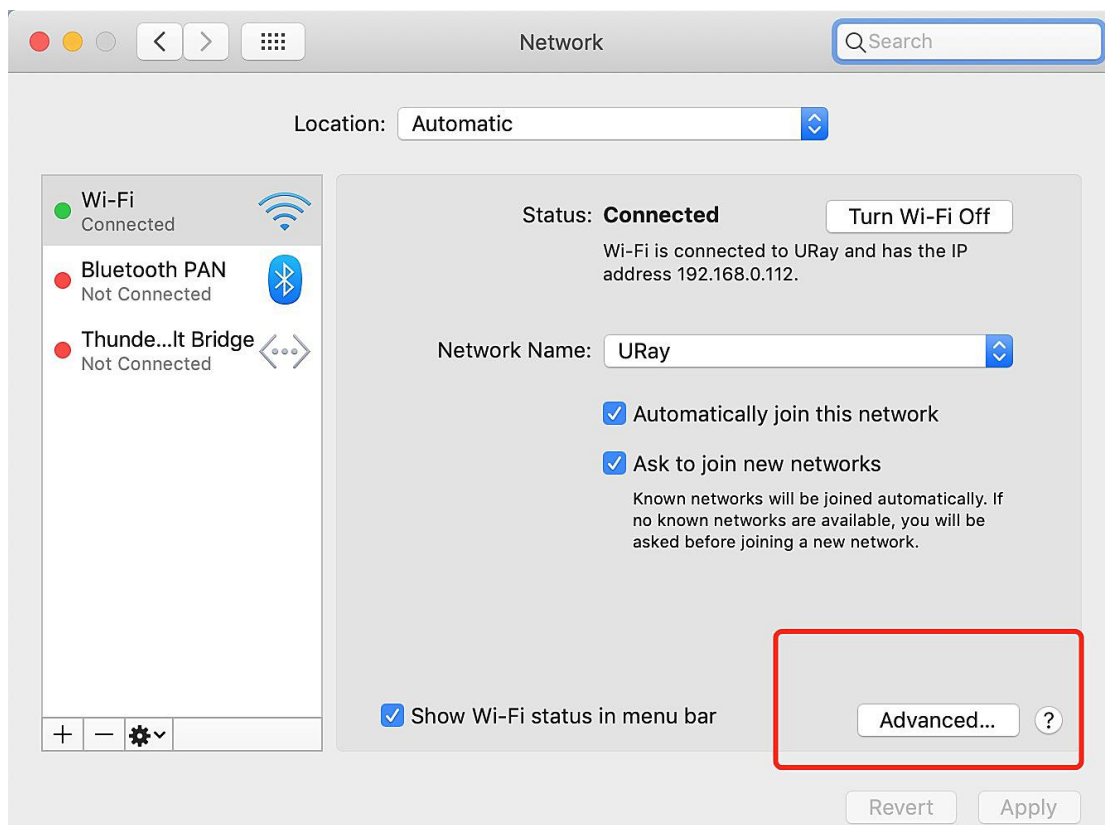
Step 1. Connect the video encoder to the router via an Ethernet cable

Step 2. Connect the MAC to the same router via WIFI. Open the window of <System Performance>

Step 3. Click "Network"



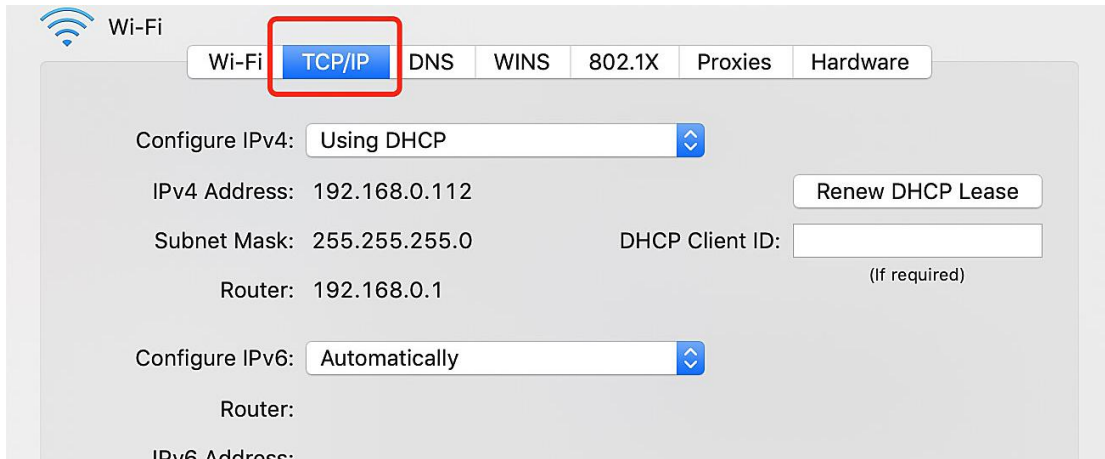
Step 4. Click "Advanced"



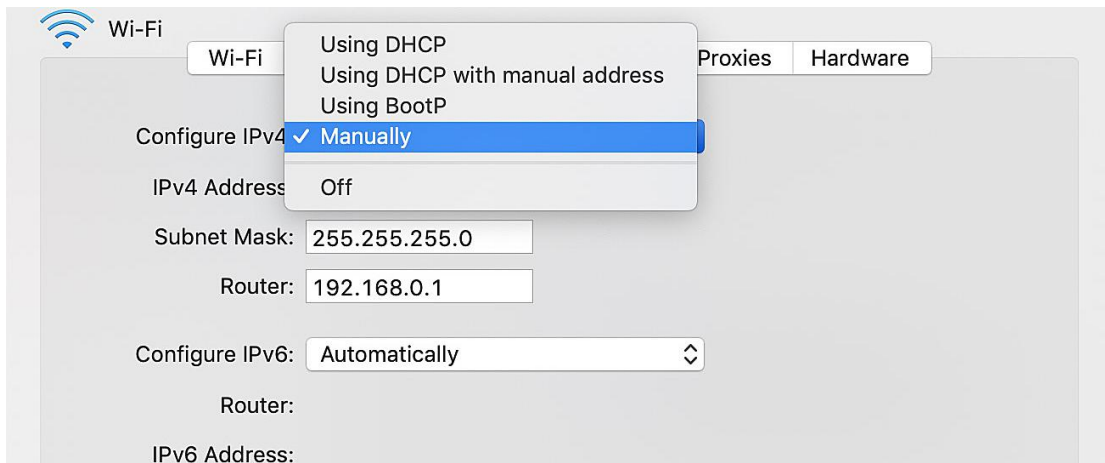
Step 5. Click "TCP /IP"

You can check the IP address and default gateway of the MAC here. For example, the IP address of my MAC is 192.168.0.112, and the gateway of my PC(laptop) is 192.168.0.1.

Remember the IP address and default gateway of your MAC, it will be used in step 10.

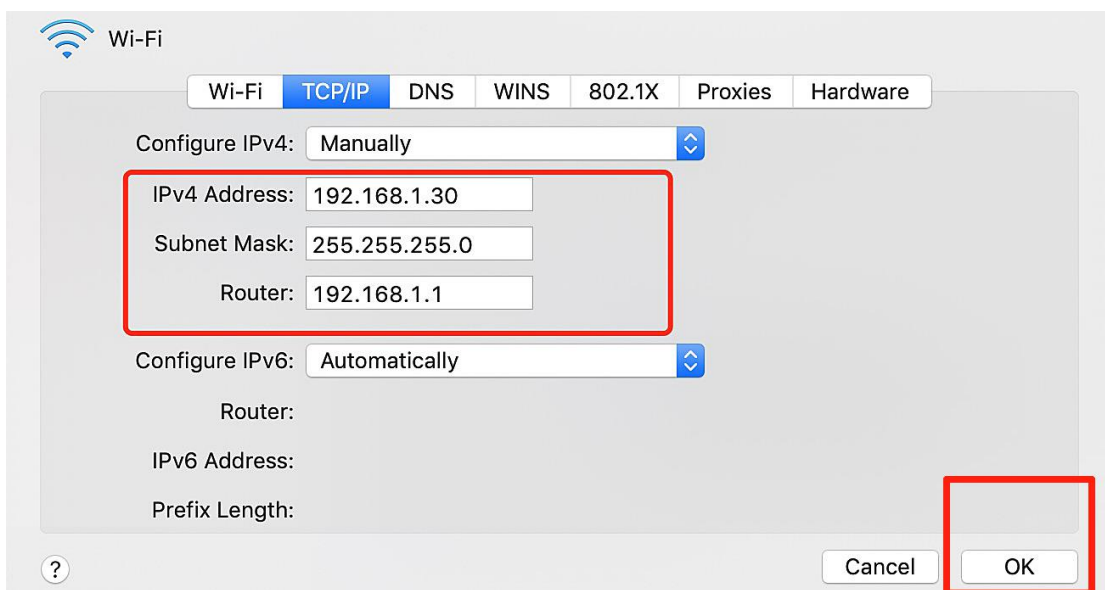


Step 6. Select "Manually" in the setting of "Configure IPV4"

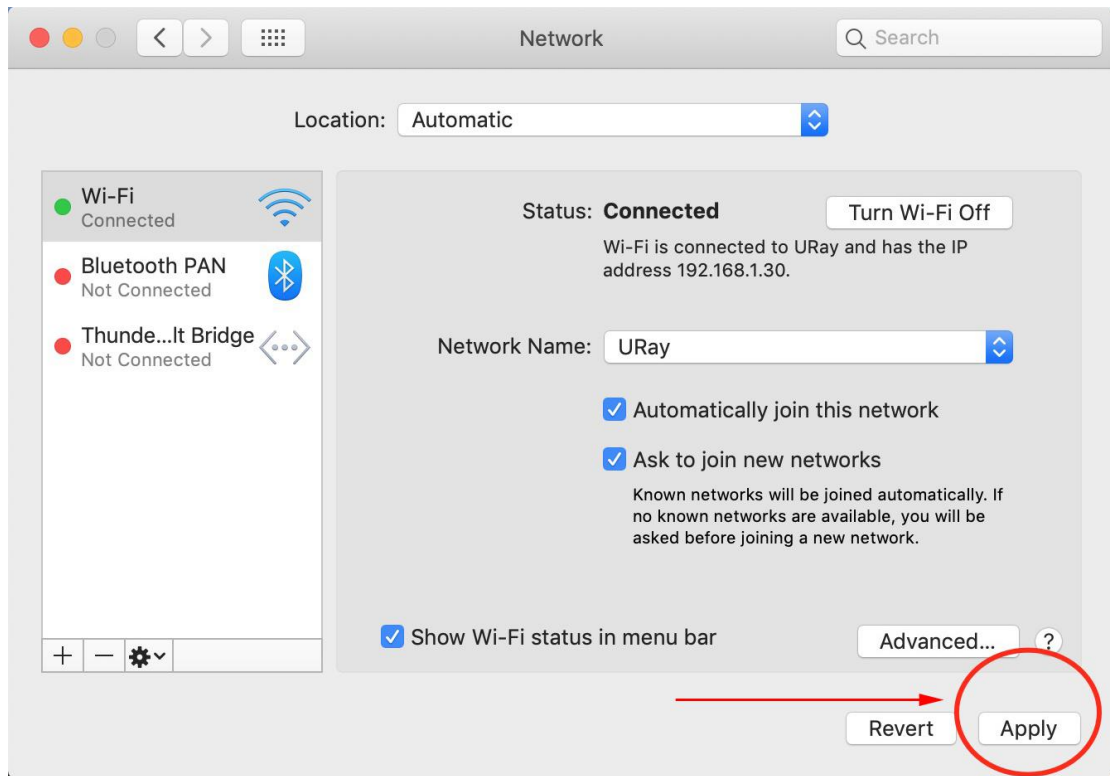


Step 7. Change the IP address of MAC, and click "OK".

You can set the IP address to 192.168.1.30 and the default gateway to 192.168.1.1.



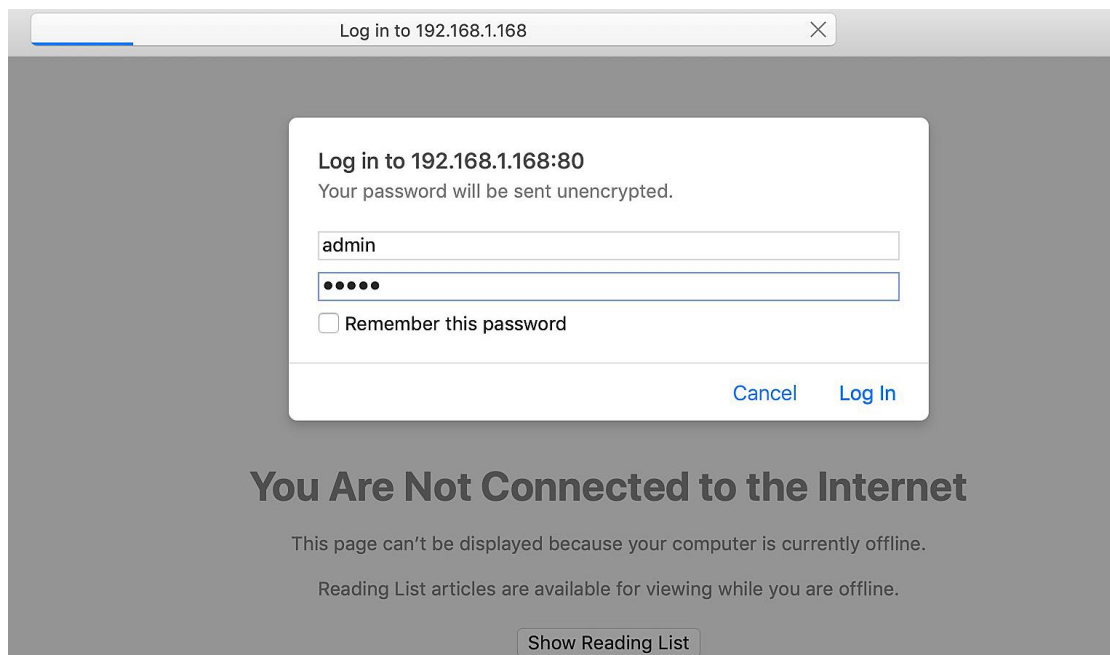
Step 8. Click “Apply” in the window of <Network>



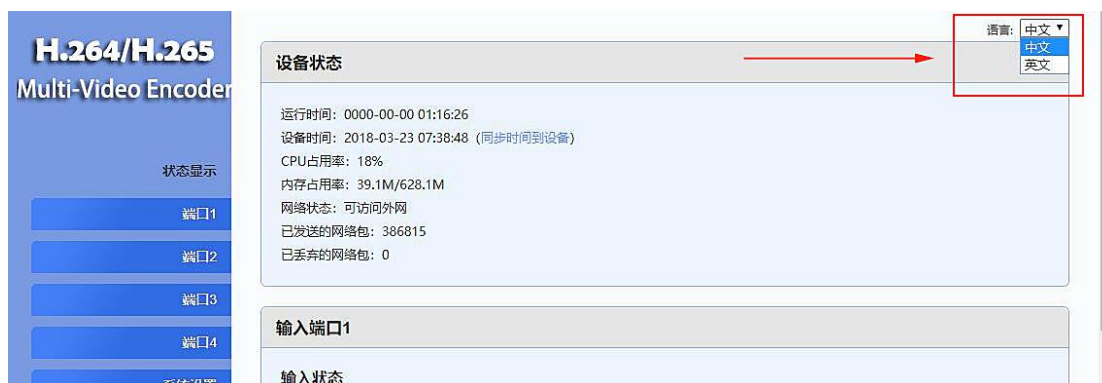
Step 9. Log in to the control panel of video encoder 192.168.1.168

The default ID and password is "admin".

If you cannot log in to the control panel, please reset the device. (Refer to chapter 1)



Usually, the language of the control panel is English. If Chinese is displayed, you can change the language in the upper right corner of control panel. Please select “英文”.



Now the video encoder can be used in local area network(LAN). In order to use it in a wide area network(WAN), we need to change the IP address of video encoder.

Step 10. Change the IP address and gateway of the video encoder

In step 5, you already know the IP address and default gateway of the MAC.

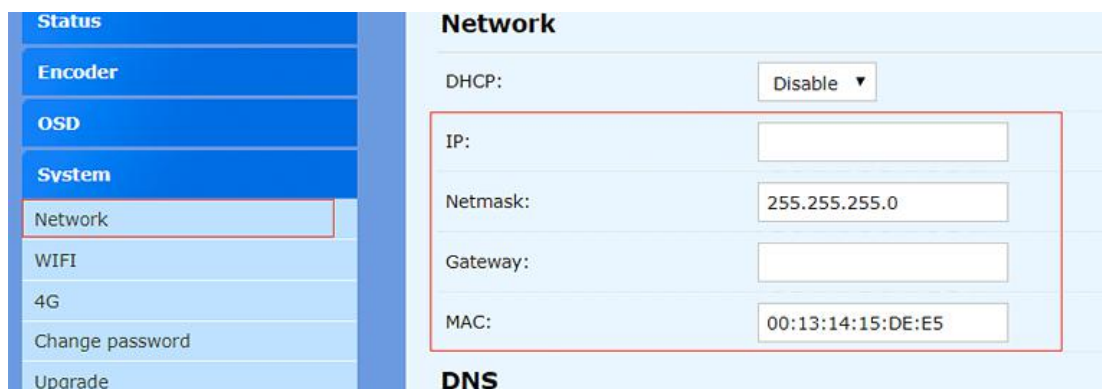
For example, the IP address of my MAC is 192.168.0.112, and the gateway is 192.168.0.1.

Therefore, I can change the IP address of the video encoder to 192.168.0.168(in order to avoid IP conflicts, please don't make the IP address of video encoder the same as the IP address of your MAC), and change the default gateway to 192.168.0.1.

Since each MAC has a different IP address, I can only use my MAC IP as an example.

Before changing the IP address and gateway of video encoder, please refer to the IP address and gateway of your MAC(In Step 5). If you have any question, please contact us.

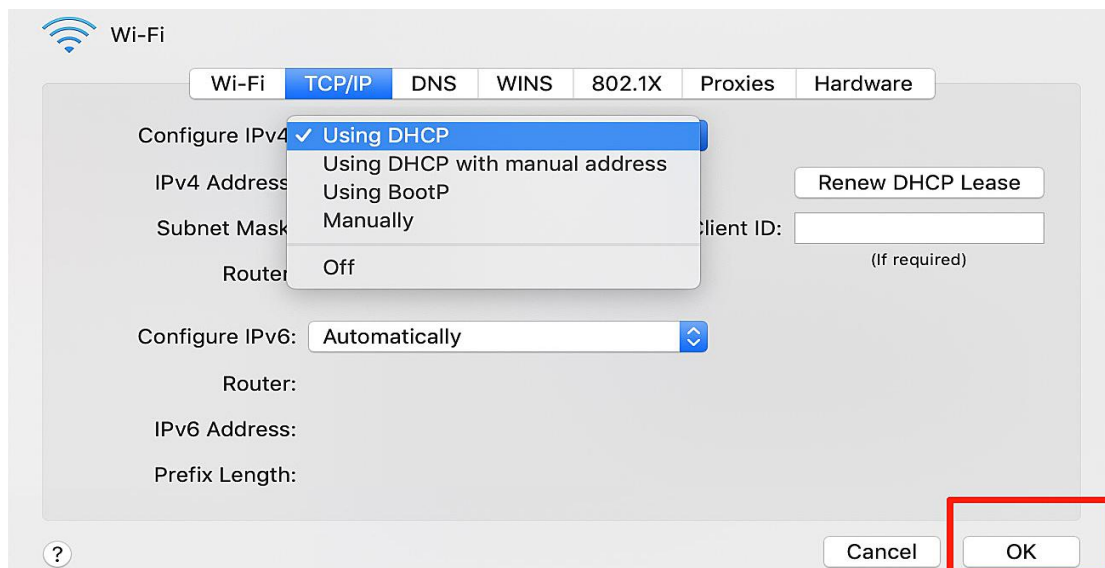
We will arrange an engineer to help you set up.



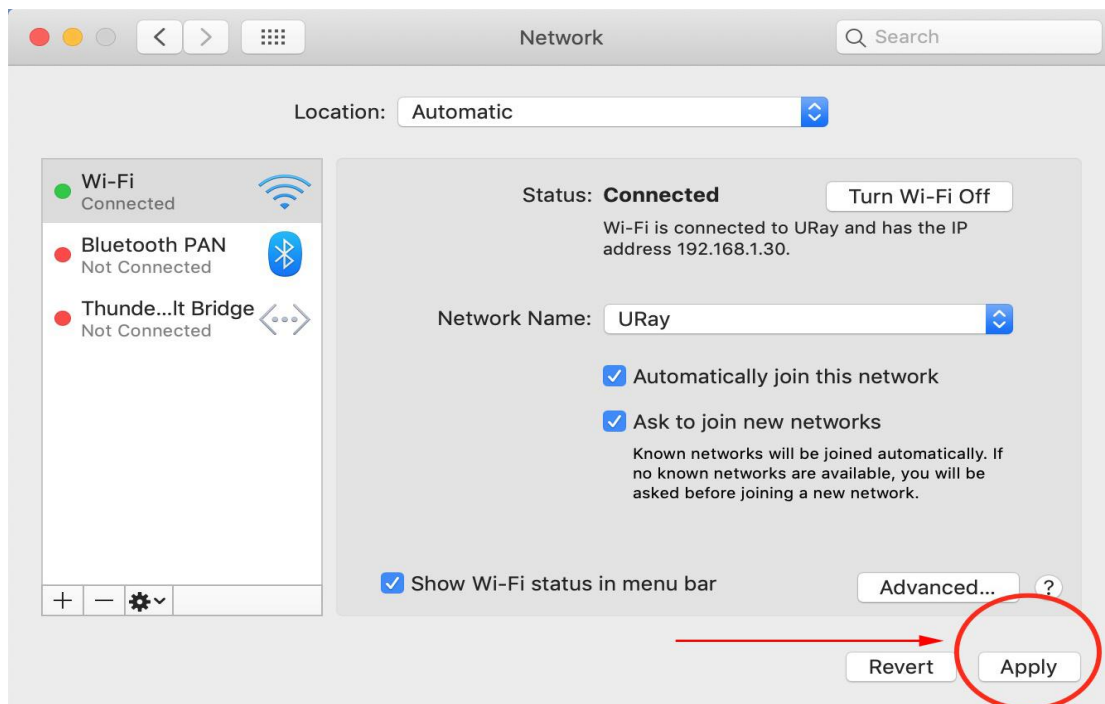
Step 11. Click "Reboot" to restart the video encoder



Step 12. Select "Using DHCP" in the setting of "Configure IPV4", and click "OK".



Step 13. Click "Apply" in the window of <Network>



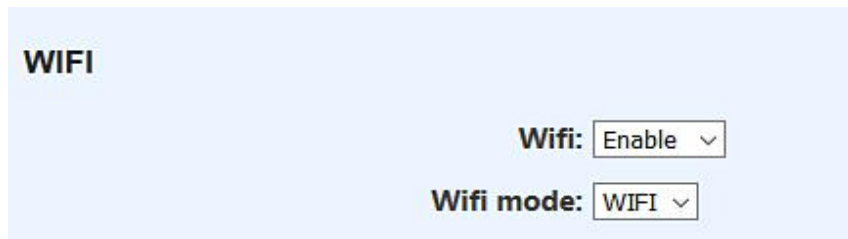
Step 14. Log in to the new IP address of video encoder

3. WIFI Connection

This chapter applies to all models with WIFI function. If your video encoder doesn't have WIFI function, you can ignore this chapter.

Step 1. Connect the WIFI antenna to the video encoder.

Step 2. Select "WIFI" in the "WIFI mode" setting, and then click "Apply".

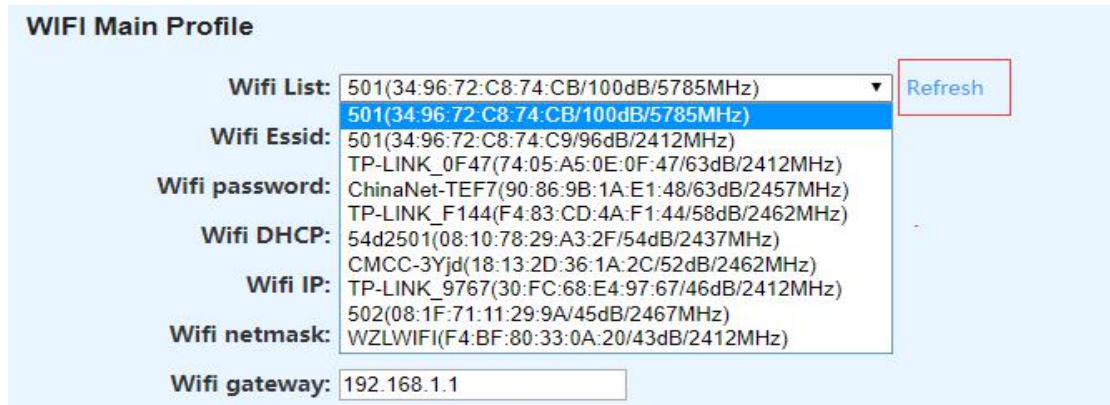


Step 3. Click "Reboot" to restart the video encoder.



Step 4. Select a WIFI in the "WIFI List". You need to choose the WIFI which is sent from the router to which the encoder is connected, so that the laptop or Mac can access WIFI IP of the encoder.

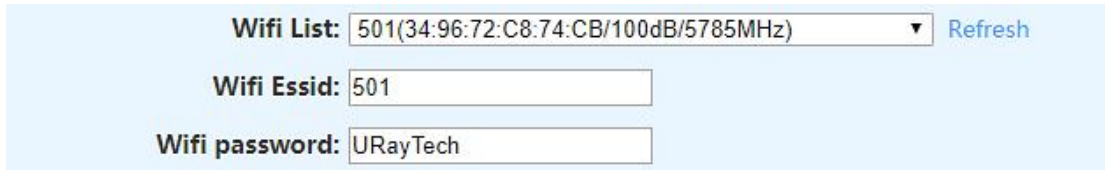
If there is no WIFI list, please click "Refresh" or restart the encoder again.



Step 5. Enter the name and password of the WIFI in “WIFI Essid” and “WIFI Password”.

WIFI Essid: The name of the WIFI selected in the WIFI list.

WIFI Password: The password of the WIFI selected in the WIFI list.



Step 6. Change the IP and gateway of the video encoder, remember the WIFI IP.

Before changing the IP address, Please refer to the IP of the laptop or Mac. You can refer to step 10 in chapter 2.1 or 2.2.



Step 7. Click “Apply”.

Step 8. Click "Reboot" to restart the video encoder



Step 9. Log in to the WIFI IP of video encoder.

If you can log in to the WIFI IP, it means that the WIFI connection is successful, and the WIFI status will be displayed as “COMPLETED”.

If you cannot log in to the the WIFI IP, please log in to the Ethernet port IP, and check whether the WIFI password is correct, or whether the IP of the video encoder and the IP of PC(or laptop) are on the same network segment.

If you have trouble setting up a wireless network, please contact us. We will arrange an engineer to help you set up.

WIFI Status

WIFI: COMPLETED

WIFI SSID: 501

WIFI IP: 192.168.0.166

WIFI MAC: 74:EE:2A:5D:B0:AE

WIFI Level: 100%

WIFI Freq: 5.785 GHz

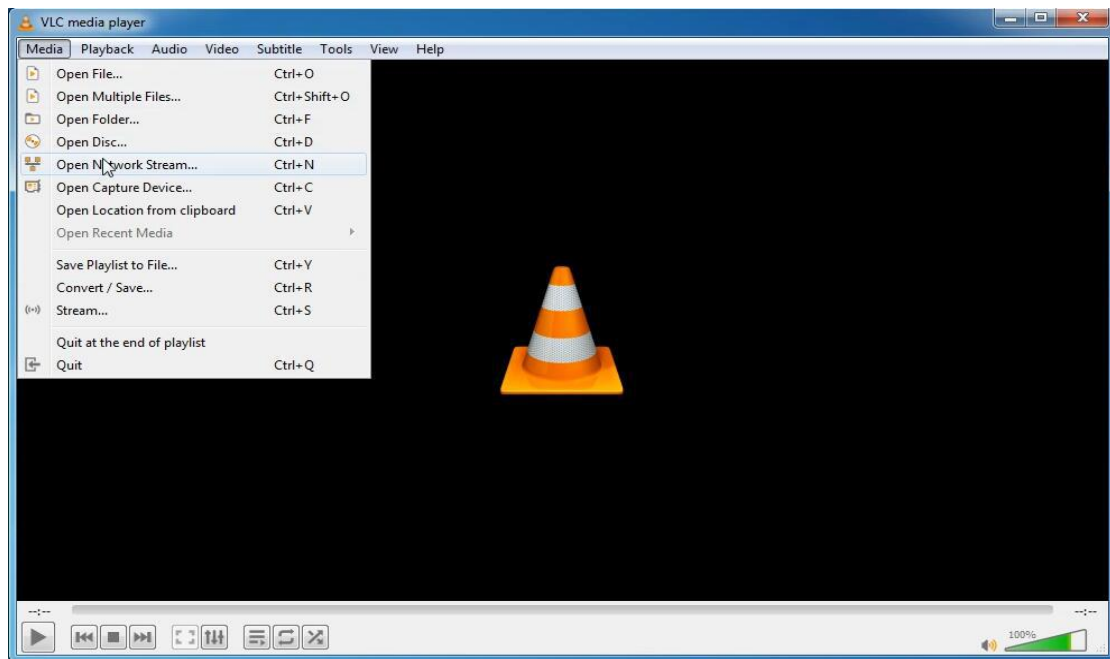
WIFI Max Bit Rate: 270 Mb/s

4. Preview Video Stream

You can download the VLC software in Google and then use VLC to preview video stream.

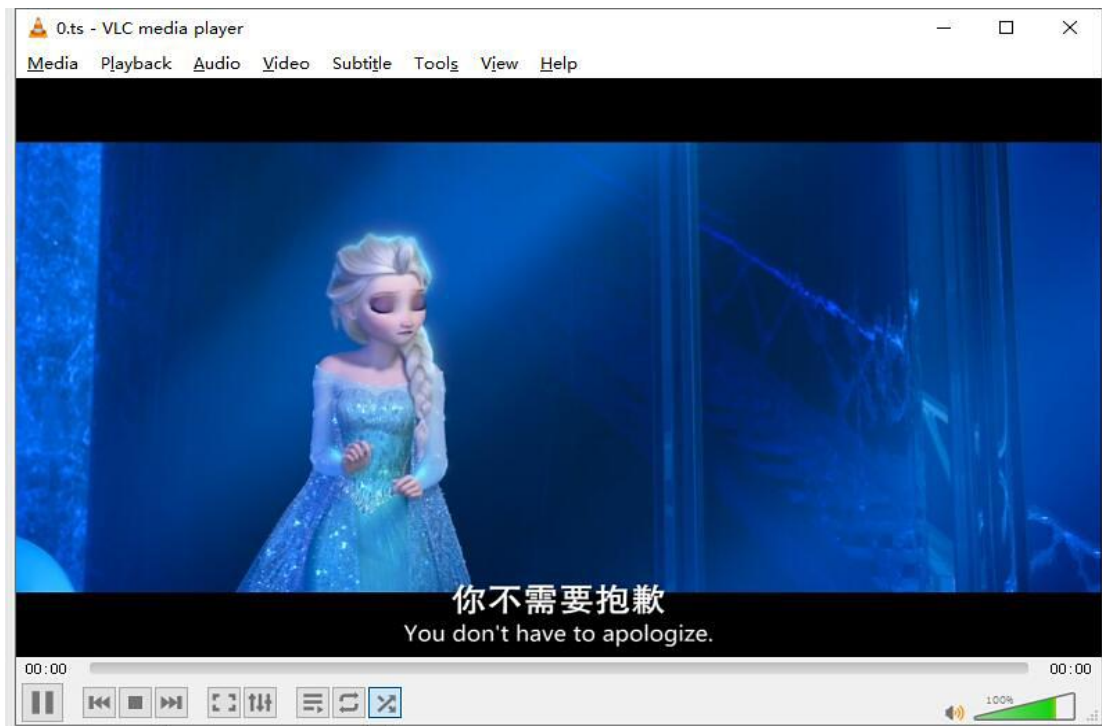
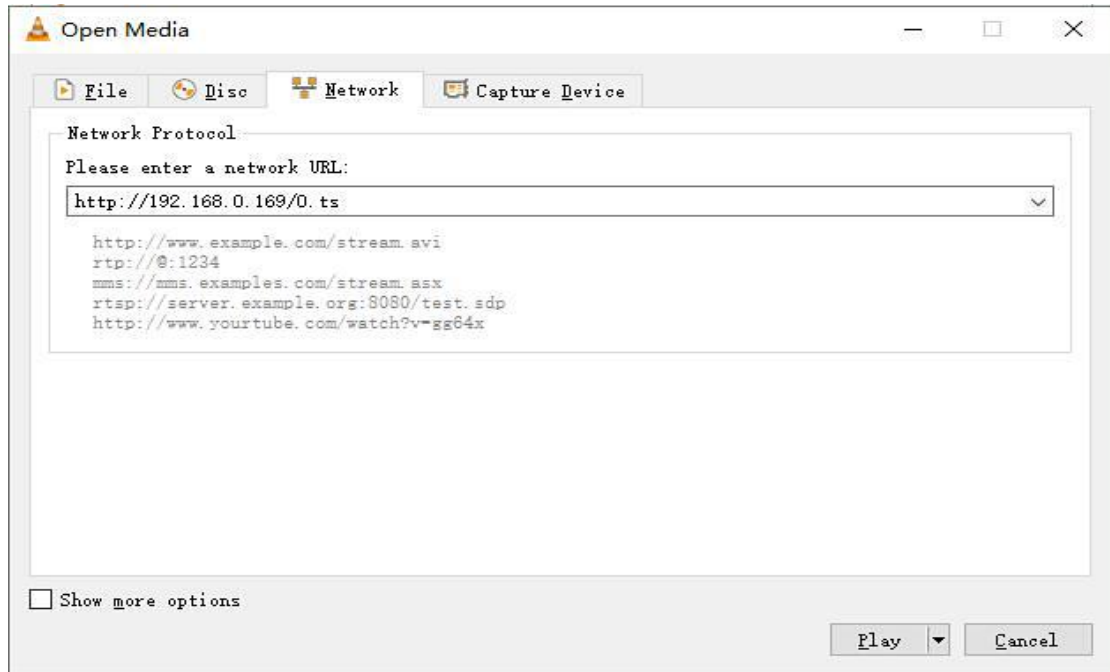
This is how to preview video stream.

Step 1: Open VLC media player, click “Media”, and then click “Open Network Stream”.



Step 2: Enter the URL of video stream and click “Play”.

TS URL:	http://192.168.0.169/0.ts
HLS URL:	http://192.168.0.169/0.m3u8
FLV URL:	http://192.168.0.169/0.flv
RTSP URL:	rtsp://192.168.0.169/0
RTMP URL(Not Connected):	rtmp://192.168.1.50/live/0
Multicast URL:	udp://@238.0.0.1:1234



Currently, you can only preview the URL of video streaming in local area network(LAN), because 192.168.1.168 is the IP address of local area network. If you want to preview the URL of video stream in wide area network(WAN), please refer to Chapter 7.

5. Adjust Output Video Audio Quality

Adjust the video audio quality of the output stream by setting the following parameters.

- **Bitrate:** You can adjust the bitrate of the video stream from 32 to 32000. If the bitrate value is set too high and the network bandwidth(upload bandwidth) is not insufficient, the output video will play not smoothly; if the bitrate value is set too low, the image quality of the output video will be poor.

For 1080p output resolution, the bitrate can be adjusted in the range of 3000 to 5000.

For 720p output resolution, the bitrate can be adjusted in the range of 1500 to 3000.

For 576p output resolution, the bitrate can be adjusted in the range of 800 to 1500.

Bitrate(kbit): [32-32000]

- **Encoded Size:** You can adjust the resolution of the video stream up to 1920x1080P. The resolution of the output video cannot exceed the resolution of the input video. For example, if you need 1280x720 output, you need to input a video source with a resolution of 1280x720 or higher.

Encoded size:

- **Bitrate Control:** If the network bandwidth is sufficient, you can select "VBR"; If the network bandwidth is normal, you can select "strong CBR"; If the network bandwidth is not good, you can select "CBR";

Bitrate control:
vbr
cbr
vbr
strong cbr

- **GOP:** Please use the default value of 30.
- **Audio Bitrate:** You can adjust the higher bitrate to get better audio quality.

Bitrate: [48000~320000]

- **Audio Sampling Rate:** You can set the output sampling rate to be the same as the input sampling rate. (Input sampling rate is displayed in "Input Status")

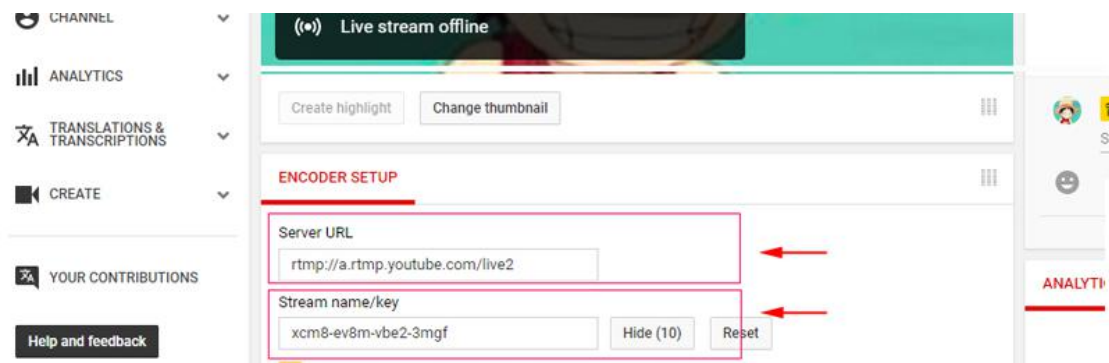
Sampling Rate:

6. Online Live Streaming

6.1 YouTube Live Streaming(RTMP)

Step 1. Visit website https://www.youtube.com/live_dashboard

Step 2. Log in to YouTube account and find "Stream name /key"



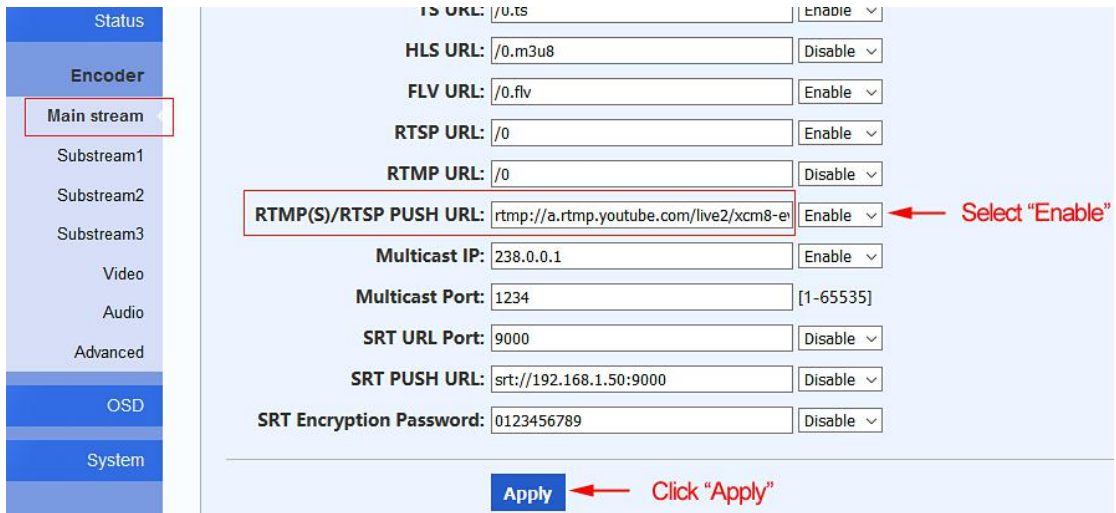
Step 3. Configure the setting of "RTMP(S) /RTSP PUSH URL", then select "Enable", and then click "Apply"

This is the RTMP setting format of YouTube.

`rtmp://a.rtmp.youtube.com/live2/xxx` (xxx is your Stream Key)

For example, my Stream Key is xcm8-ev8m-vbe2-3mgf. Therefore, I need to enter the following RTMP information of YouTube into the setting of "RTMP(S) /RTSP PUSH URL".

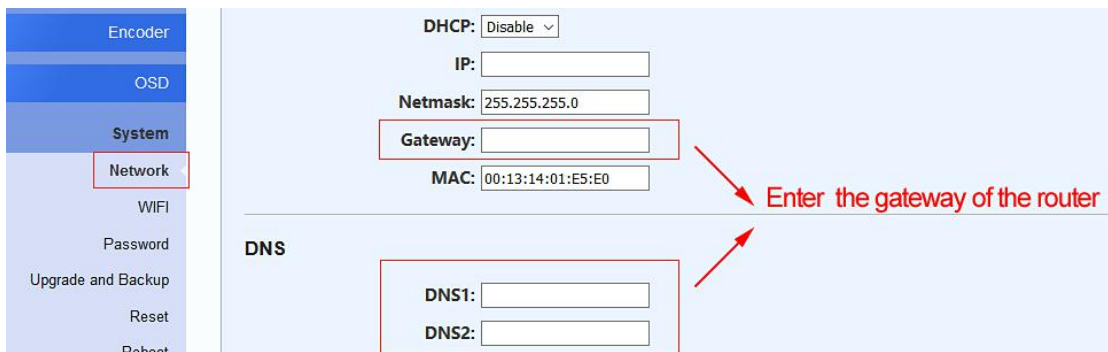
`rtmp://a.rtmp.youtube.com/live2/xcm8-ev8m-vbe2-3mgf`



Step 4. Configure the setting of "DNS1" and "DNS2" and "Gateway", then click "Apply"

Enter the gateway of the router to the setting of the "DNS1" and "DNS2" and "Gateway".

You can find the gateway of the router in step 4 of chapter 2.1 or step 5 of chapter 2.2.

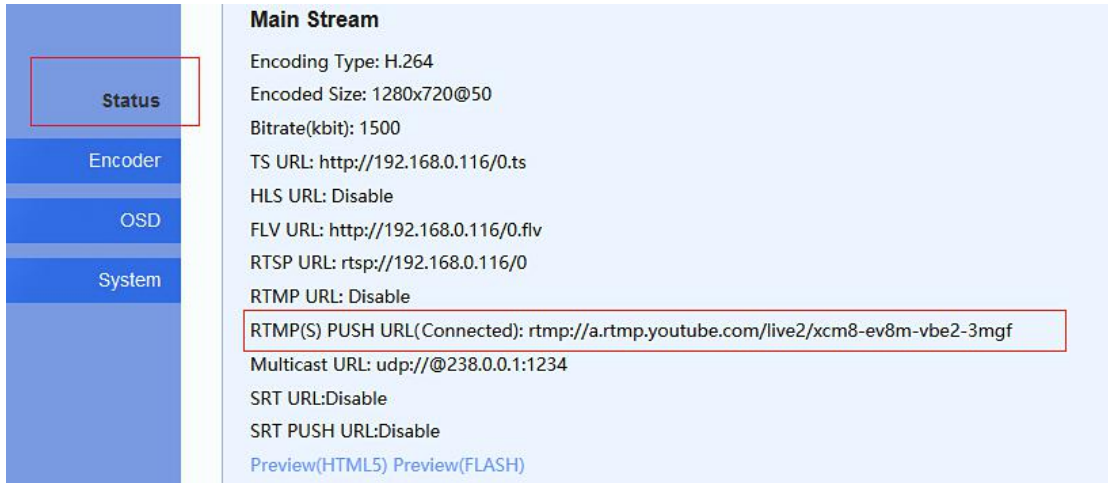


Step 5. Click "Reboot" to restart the video encoder



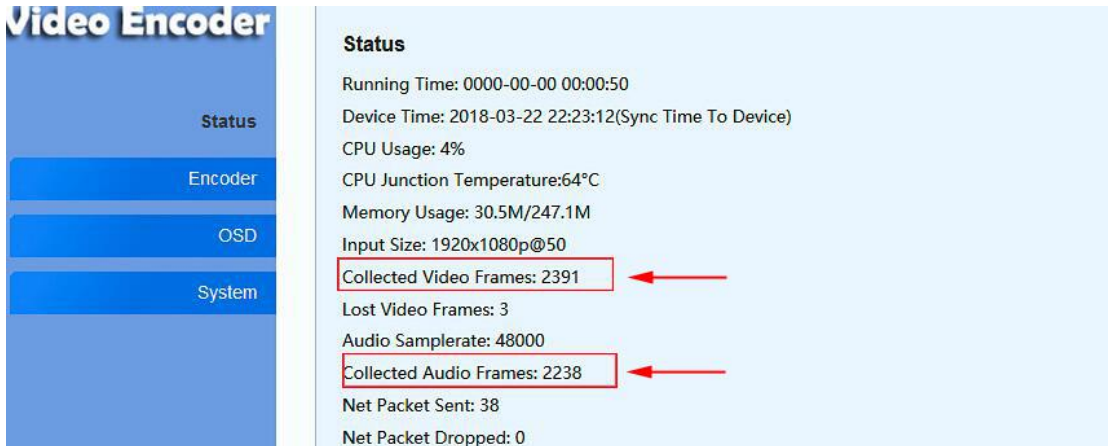
Step 6. Check if the video encoder is connected to YouTube.

If "Connected" is displayed, it means the video encoder is connected to YouTube already.

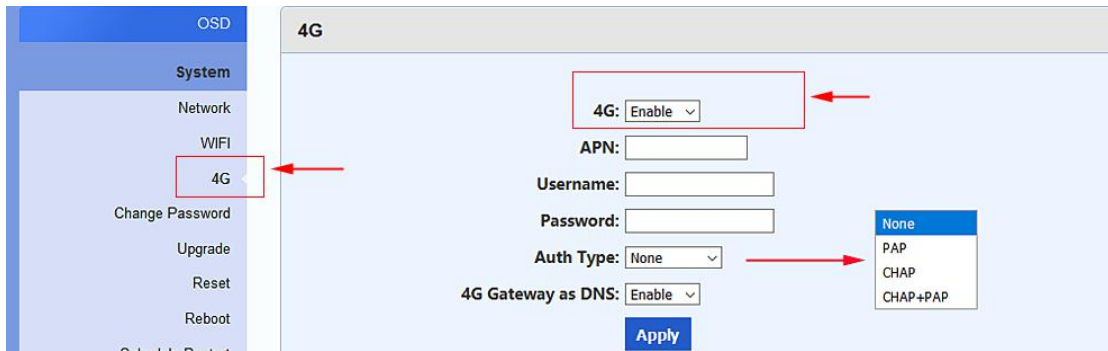


If it still shows “Not Connected” after completing the above steps, please refresh the web page. Meanwhile, please check for the following issues.

1) . Make sure that the video and audio are input to the video encoder. You can check the input status in “Status”. If the value of “Collected Video Frames” or “Collected Audio Frames” is 0, it means there is no audio or video input. Unable to start live streaming.



2) . If you purchased an encoder with 4G function, when you only use WIFI mode or Ethernet port mode instead of 4G mode, please select “disable” in 4G setting. Otherwise, unable to start live streaming.

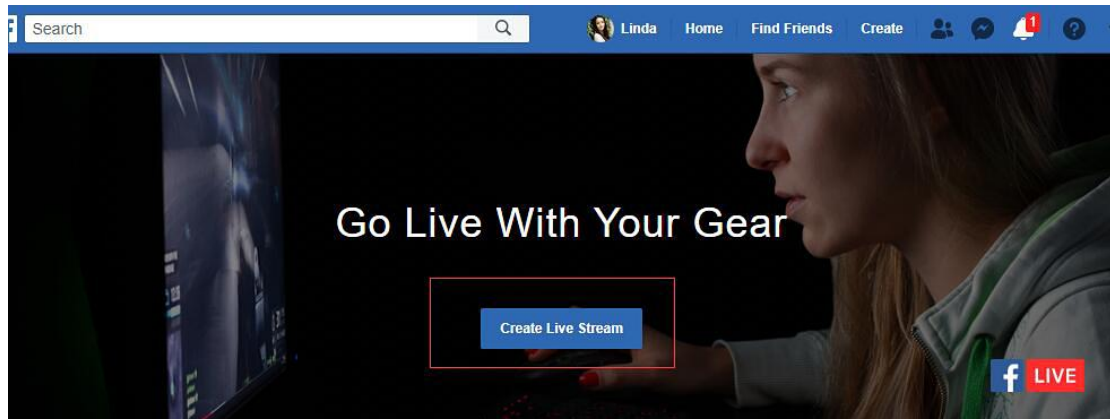


3) . Please contact us for assistance. Our engineer will help you solve the problem.

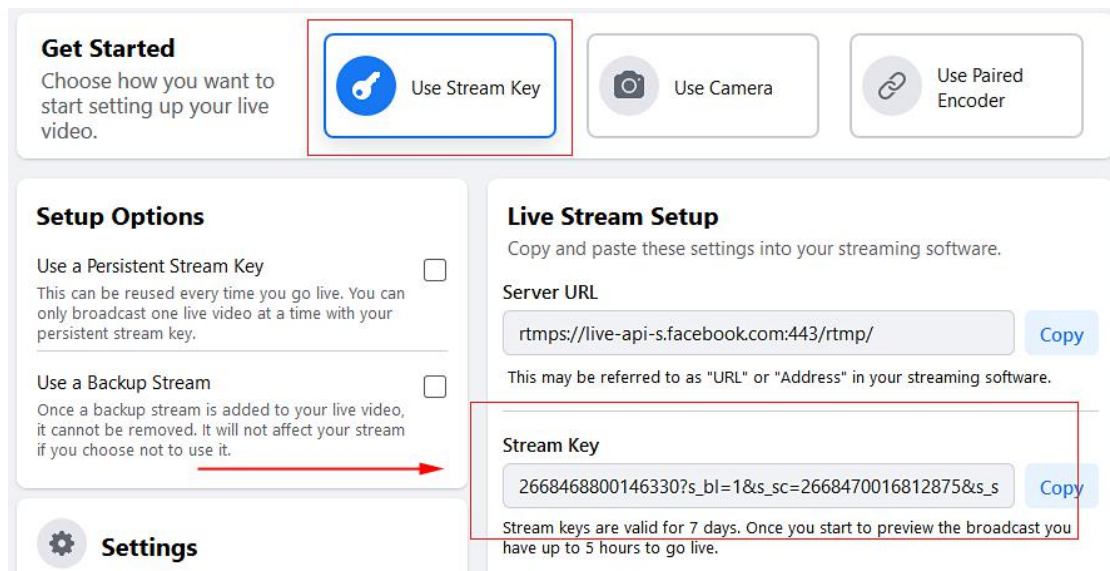
6.2 Facebook Live Streaming(RTMP)

Step 1. Visit website <https://www.facebook.com/live/create>

Step 2. Log in to Facebook account, and then click "Creat Live Stream"



Step 3. Find "Stream Key"



Step 4. Configure the setting of "RTMP(S) /RTSP PUSH URL", then select "Enable", and then click "Apply"

This is the RTMPS setting format of FB Live.

`rtmps://live-api-s.facebook.com:443/rtmp/xxx` (xxx is your Stream Key)

For example, my Stream Key is

2668468800146330?s_bl=1&s_sc=2668470016812875&s_sw=0&s_vt=api-s&a=Abw1q8di5MI5fc7v. Therefore, I need to enter the following RTMPS information of Facebook into the setting of "RTMP(S) /RTSP PUSH URL".

rtmps://live-api-s.facebook.com:443/rtmp/2668468800146330?s_bl=1&s_sc=2668470016812875&s_sw=0&s_vt=api-s&a=Abw1q8di5MI5fc7v

RTSP URL: /0 Enable ▾
RTMP URL: /0 Disable ▾
RTMP/RTSP PUSH URL: rtmps://live-api-s.facebook.com:443/rtmp/23386 Enable ▾ ← Choose "Enable"
Multicast IP: 238.0.0.1 Disable ▾
Multicast Port: 1234 [1-65535]
Apply ← Click "Apply"

Step 5. Configure the setting of "DNS1" and "DNS2" and "Gateway", then click "Apply"

Enter the gateway of the router to the setting of the "DNS1" and "DNS2" and "Gateway".

You can find the gateway of the router in step 4 of chapter 2.1 or step 5 of chapter 2.2.

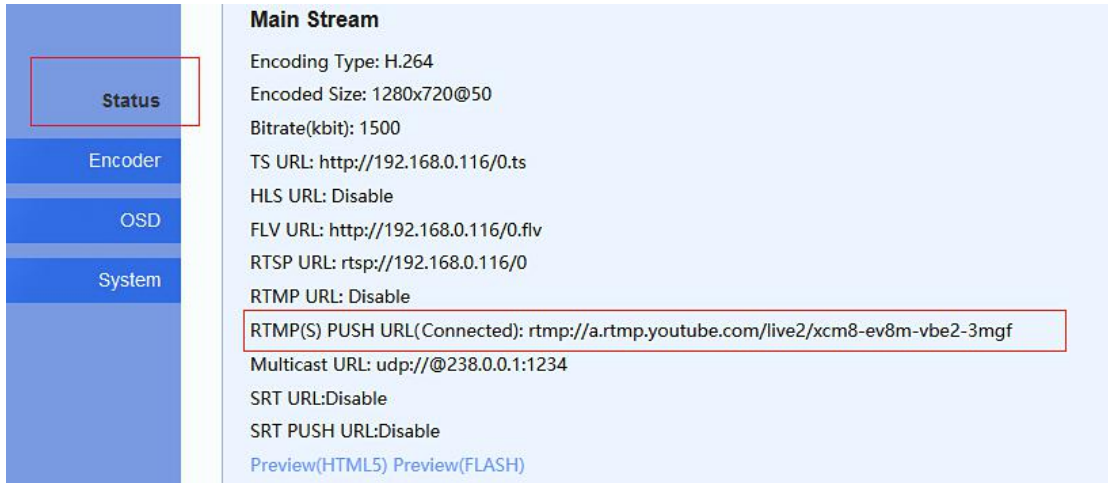
DHCP: Disable ▾
IP:
Netmask: 255.255.255.0
Gateway: ← Enter the gateway of the router
MAC: 00:13:14:01:E5:E0
DNS
DNS1:
DNS2:

Step 6. Click "Reboot" to restart the video encoder

Reboot
Click the button to restart the encoder.
Reboot ← Click "Reboot"

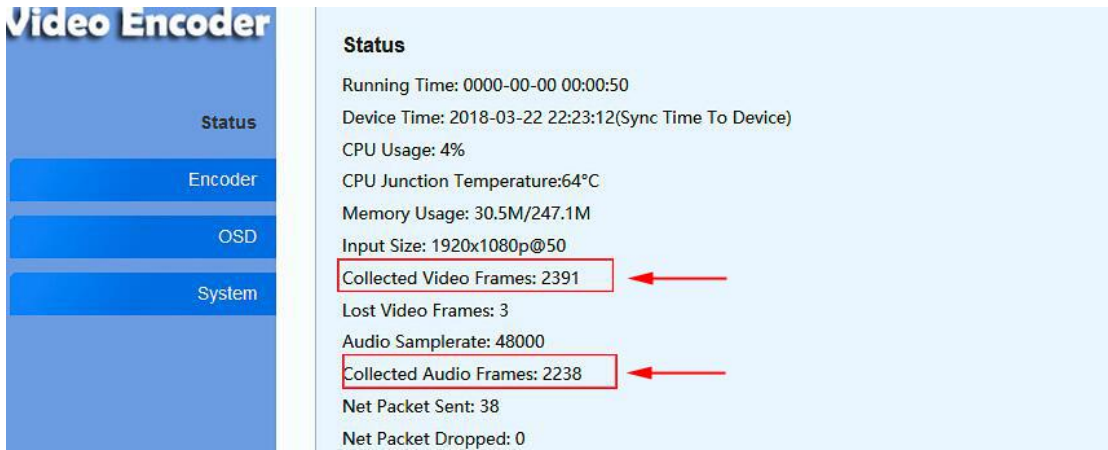
Step 7. Check if the video encoder is connected to FB Live.

If "Connected" is displayed, it means the video encoder is connected to Facebook.

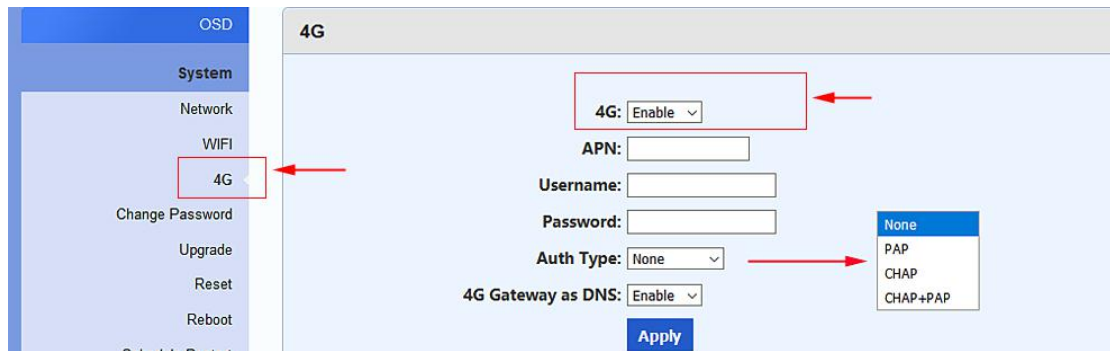


If it still shows “Not Connected” after completing the above steps, please refresh the web page. Meanwhile, please check for the following issues.

- 1). Make sure that the video and audio are input to the video encoder. You can check the input status in “Status”. If the value of “Collected Video Frames” or “Collected Audio Frames” is 0, it means there is no audio or video input. Unable to start live streaming.



- 2). If you purchased an encoder with 4G function, when you only use WIFI mode or network port mode instead of 4G mode, please select “disable” in 4G setting. Otherwise, unable to start live streaming.



3). Please contact us for assistance. Our engineer will help you solve the problem.

6.3 Push Stream to the Streaming Server

Step 1. Find RTMP information in the streaming server

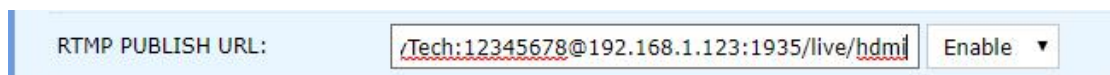
Step 2. Configure the setting of "RTMP(S) /RTSP PUSH URL", then select "Enable", and then click "Apply"

This is the RTMP setting format.

`rtmp://user:pass@ip/xxx/xxx`

Due to the variety of streaming media servers, it is impossible to list them here. Here I use the Wowza server as an example. For example, the Server URL of Wowza is `rtmp://192.168.1.123:1935/live`, the Stream Key of Wowza is `hdmi`, the user ID of Wowza is `URayTech`, and the password of Wowza is `12345678`. Therefore, I need to enter the following RTMP information of Wowza into the setting of "RTMP(S) /RTSP PUSH URL".

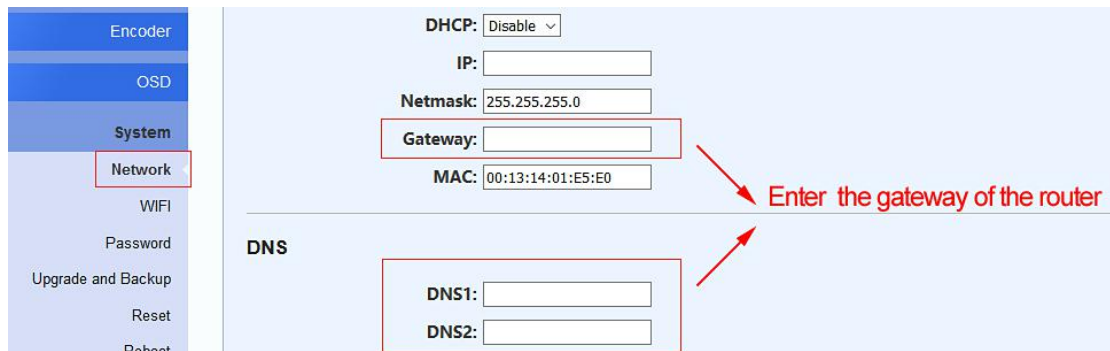
`rtmp://URayTech:12345678@192.168.1.123:1935/live/hdmi`



Step 3. Configure the setting of "DNS1" and "DNS2" and "Gateway", then click "Apply"

Enter the gateway of the router to the setting of the "DNS1" and "DNS2" and "Gateway".

You can find the gateway of the router in step 4 of chapter 2.1 or step 5 of chapter 2.2.



Step 4. Click "Reboot" to restart the video encoder



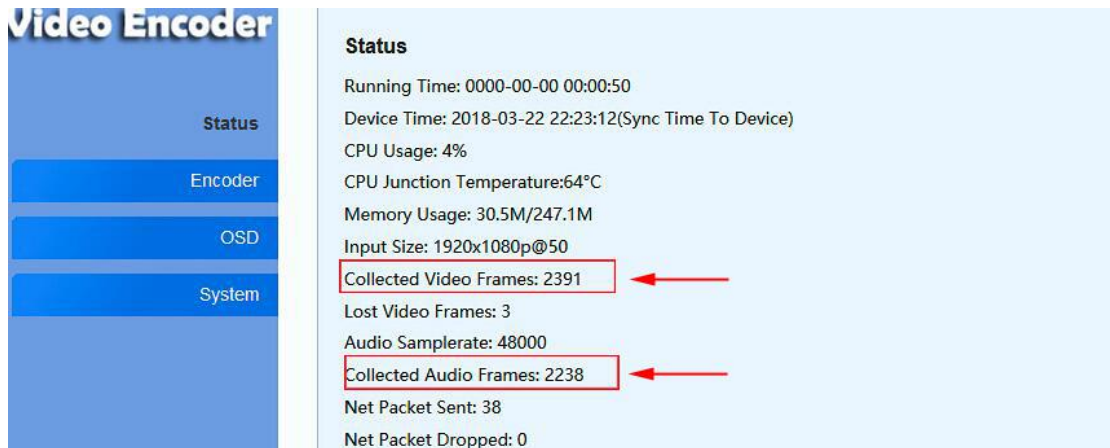
Step 5. Check if the video encoder is connected to the streaming server.

If it shows "Connected", it means the video encoder is connected to the streaming server.

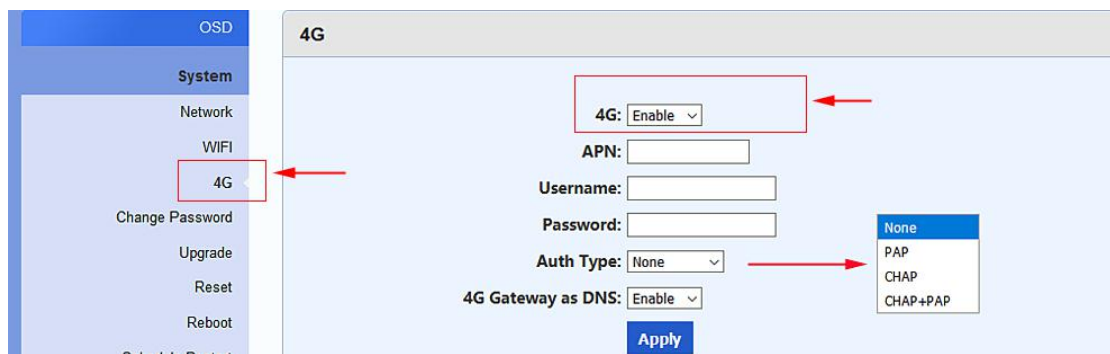


If it still shows "Not Connected" after completing the above steps, please refresh the web page. Meanwhile, please check for the following issues.

- 1). Make sure that the video and audio are input to the video encoder. You can check the input status in "Status". If the value of "Collected Video Frames" or "Collected Audio Frames" is 0, it means there is no audio or video input. Unable to start live streaming.



2). If you purchased an encoder with 4G function, when you only use WIFI mode or Ethernet port mode instead of 4G mode, please select “disable” in 4G setting. Otherwise, unable to start live streaming.



3). Please contact us for assistance. Our engineer will help you solve the problem.

7. Port Mapping

Many clients want to watch the output video stream on a wide area network(WAN). In this case, you will need to perform “port mapping” or “DDNS”. This is network part, not video encoder part, you need to configure the settings in the router control panel.

This is an example of “port mapping” I configured in the TP-LINK router. By the way, the internal port of the video encoder is 80.

You need to have an IP address on the public network to perform "port mapping" or

"DDNS". Please contact your network operator to check whether your network has a public IP address.



	常用服务器	外部端口 (external port)	内部端口 (internal port)	IP地址 (ip address)	协议类型 (protocol type)	编辑
<input type="checkbox"/>		8000	8000	192.168.0.168	ALL	
<input type="checkbox"/>		554	554	192.168.0.168	ALL	
<input type="checkbox"/>		66	80	192.168.0.169	ALL	
<input type="checkbox"/>		888	80	192.168.0.168	ALL	

8. Contact Us

Since this product is a professional product, and Amazon customer service is not familiar with it, if you encounter any technical problems when using the device, or encounter document requirements (such as new firmware, SDK, APP etc), please contact us via the following contact information, we will arrange professional engineers to provide you with technical service.

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