HAIWEI

User manual- HAIWEI- General

Last updated: 10/ 31/ 2019

Preface

In order to learn more about the product information, technical operation of HD encoder more efficiently, convenient and fast maintenance for engineers and professionals, Haiwei keeps editing its instruction manual if renewed.

The user manual can be applied to general encoders!

Our products mainly including:

ENCODER : HDMI/ SDI/ VGA/ YPBPR/ CVBS/ DVI over HTTP/ RTSP/ RTMP (pull/ push)/ UDP Unicast O Multicast/ RTP/ SRT/ P-P (Haiwei proprietary protocol), 4G ,WIFI, Ethernet encoder

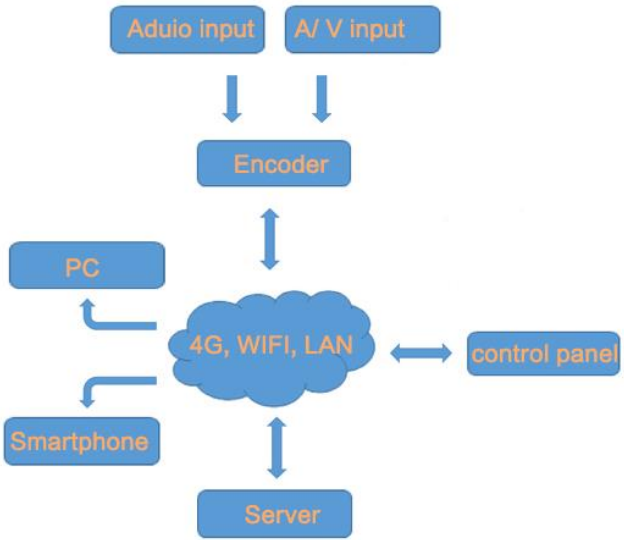
DECODER: 4K (4096*2160) IP decoder, transcoder

Transcoder: RTSP/ RTMP/ UDP/ HTTP/ HLS/ P-P/ SDK to HTTP/ HLS/ RTSP over UDP TCP/ RTMP/ UDP Unicast Multicast/ ONVIF/ RTP/ P-P

AI: AI camera, AI module, machine learning module

Official CN/ EN web: www.hwcodec.com

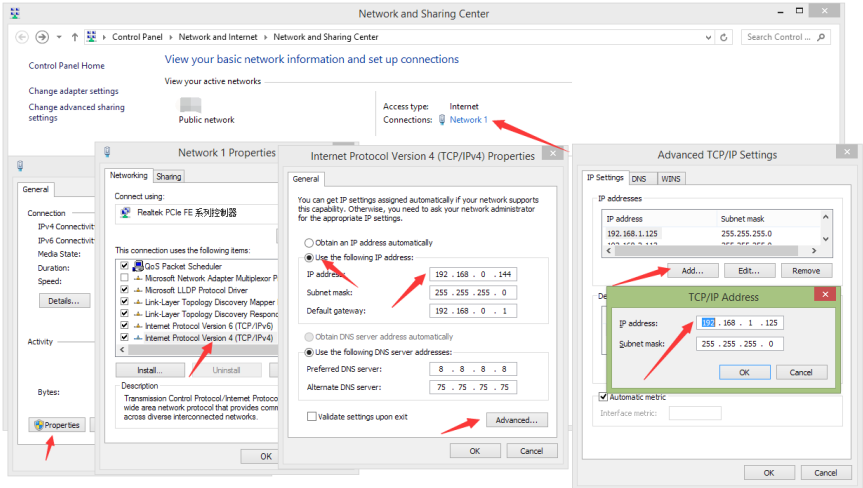
Part 1: Connection illustrated



Part 2: Configure network

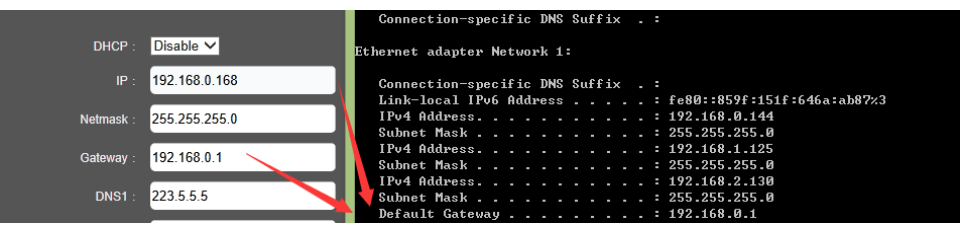
DHCP suggested for new customer or will use it in different networks, so network configuration can be ignored if parameter of the stream configured.

If not DHCP enabled by default, please follow the following steps to configure the network for streaming



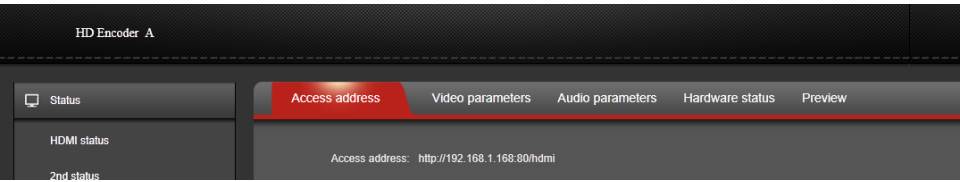
1- Enter network setting
2- Enter “Properties”
3- Choose IPv4
4- Enter current IP address and DNS (if don’t know the DNS, use 8.8.8.8)
5- Add another 192.168.1.x based IP address.
6- Then reboot the encoder on the UI of “System”option.

Once the network configured, to change the IP address of the encoder to your local IP gateway required, like following instance



Part III: Encoder Functions

1- States



Access address – Show the RTSP/ RTMP pull/ HTTP/ UDP/ RTP address

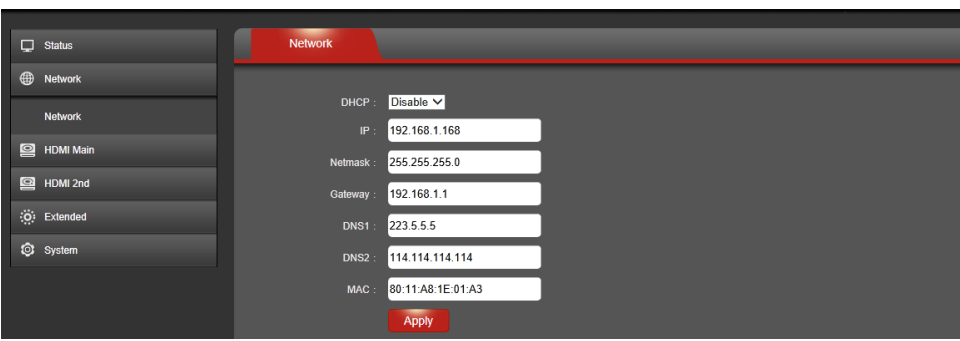
Video/ Audio parameters – Show the information of the inputting signal

Hardware status– If the encoder working normally, the data will keeps going

Preview– VLC based preview for P-P encoder, HTML5 based for general encoder

2- Network

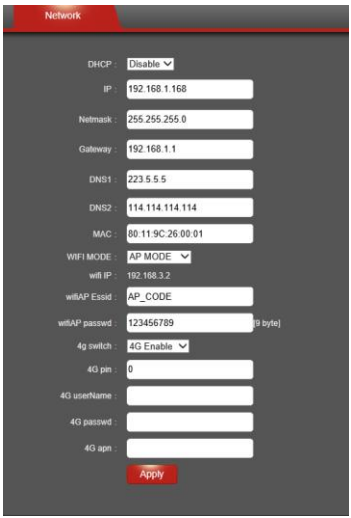
1)- general encoder- Once the network configured, to change the IP address of the encoder to your local IP gateway required



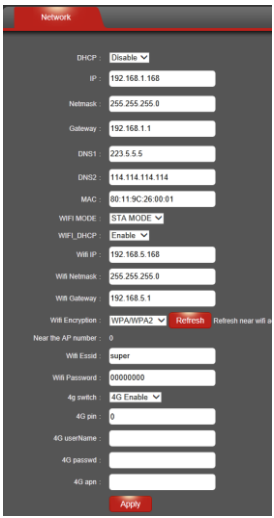
2)- 4G/ WIFI encoder- Once the network configured, to change the IP address of the encoder to your local IP gateway required;

If need to use WiFi, different IP gateway to encoder IP required; for 4G, enable STA MODE.

If need to Use 4G network, just enable it

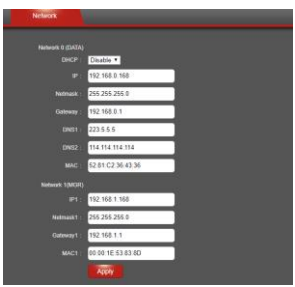


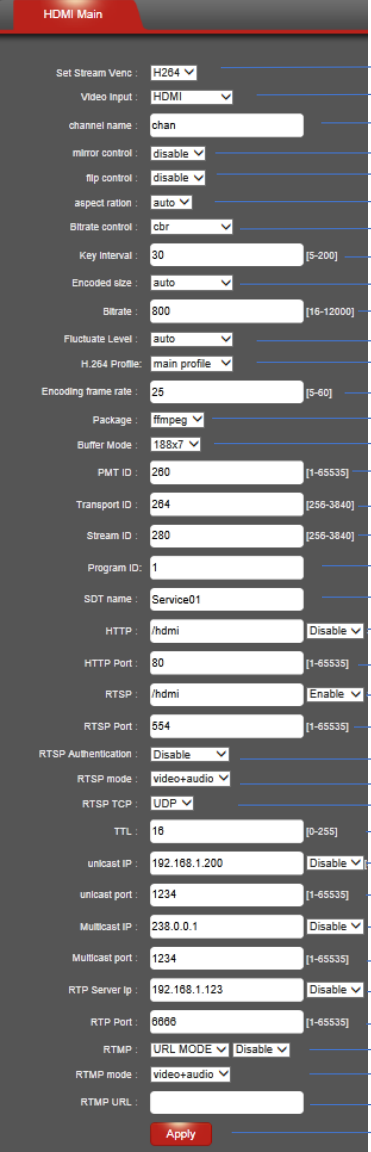
4G+ AP mode



4G+ STA mode

3)- Two Ethernet (U/Y520 series)





To choose H.264/ H.265 for streaming

To choose the input source

Set your channel name for to recognize the encoder

Rotate the video

To choose the display resolution from 4:3 or 16:9

To choose VBR/ CBR

To change the GOP size

To change the output resolution

To change the output video bitrate

higher level higher bit fluctuation

Alternatives: H.265 main, H.264 high/ main/ baseline profile

To choose your output frame frequency

To choose VLC/ FFMPEG package

Modify it if signal detected wrongly

To rename PMT ID

To rename transport ID

To rename stream ID

To set up the channel name

To rename SDT name

To rename the HTTP stream name; Enable HTTP streaming

To change the HTTP port

To rename the RTSP stream name; Enable RTSP streaming

To change the RTSP port

To enable RTSP authentication

Alternatives: Audio/ video/ AV

RTSP over UDP/ TCP

Time To Live

To choose the Unicast address; Enable Unicast streaming

To change the Unicast port

To choose the Multicast address; Enable Multicast streaming

To change the Multicast port

To choose the RTP address; Enable RTP streaming

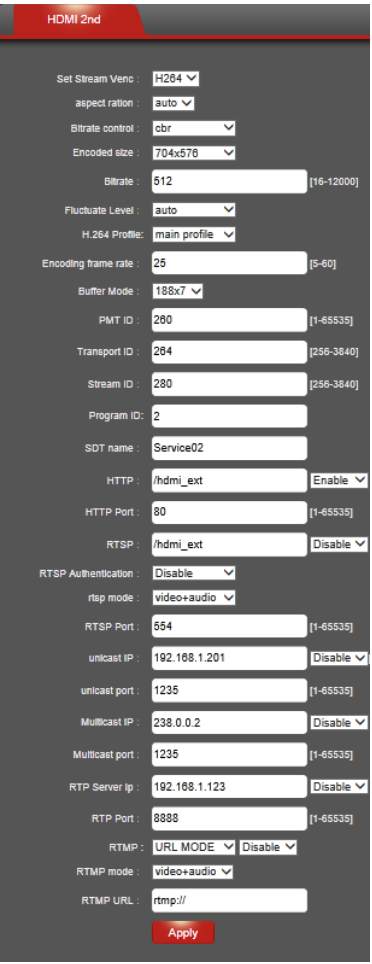
To change the RTP port

RTMP by URL/ IP mode; Enable RTMP streaming

Alternatives: Audio/ video/ AV

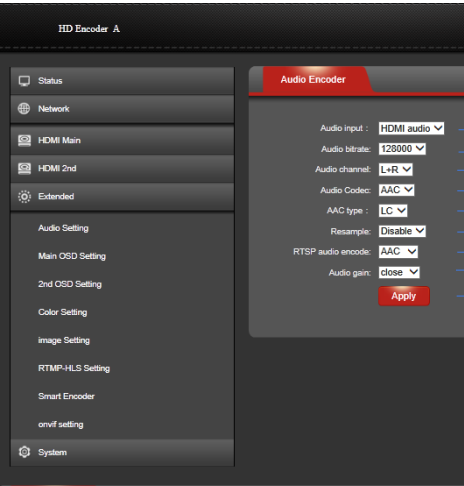
RTMP stream address

Save current setting

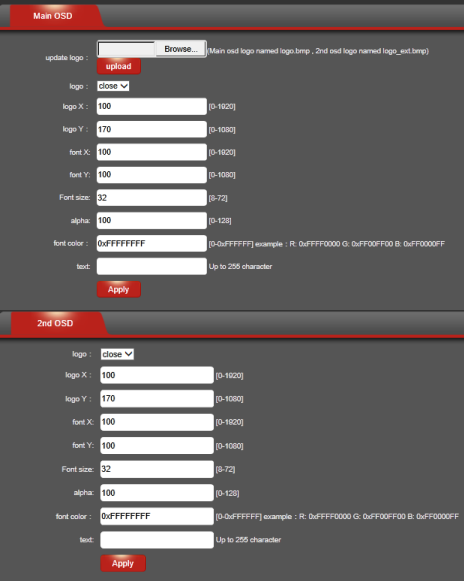


2nd stream

- The parameters are same to the 1st stream, to see more details please check the previous page
- The 2nd stream can use at most 1280*720 for HDMI/ SDI encoder, the resolution will be lower than main stream
- 1st and 2nd stream can be used at same time



To choose the input source, SDI/ HDMI, Line In
To modify the audio bitrate
To choose audio channel, alternative: Left/ right/ stereo
AAC/ MP3
LC/ HE
Enable/ disable Resample
RTSP over AAC/ G.711
Audio gain
Save current setting



OSD function

Tips: if need transparent logo, black/ grey background required,
To make the OSD function work, 24 Bits in BMP format required

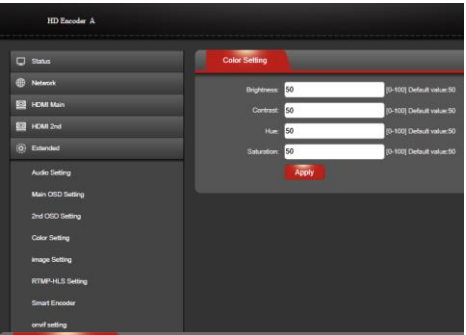
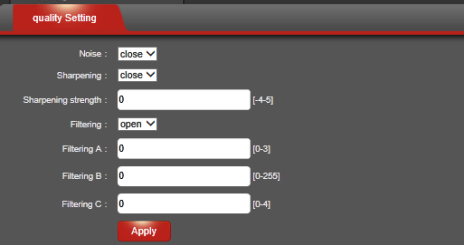
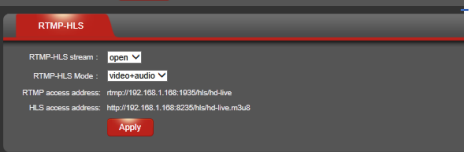


Image optimization

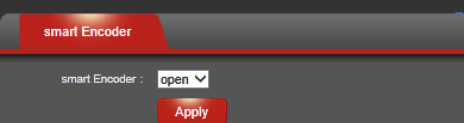
To adjust the video quality based on the video sources





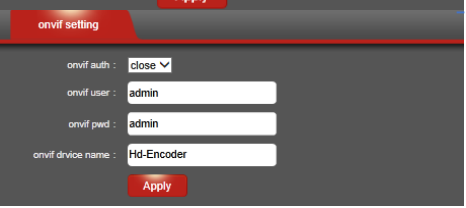
RTMP-HLS

To enable RTMP pull and HLS protocol, for general encoder, HTML5 preview will be available once the HLS enabled.



Smart Encoder

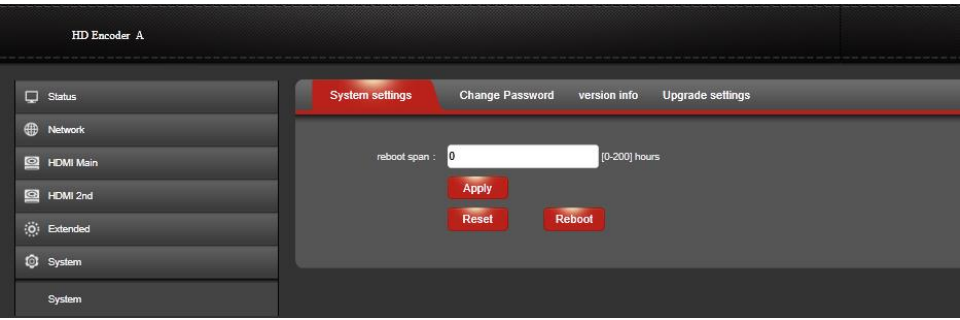
If using in low bitrate condition, the function would helps for better quality and info completeness



ONVIF

To enable ONVIF and modify its info

System



To reboot, reset, change admin password, check the firmware version and upgrade the firmware.
If using TCP based protocols, 168 hours reboot span required (in case latency cache)

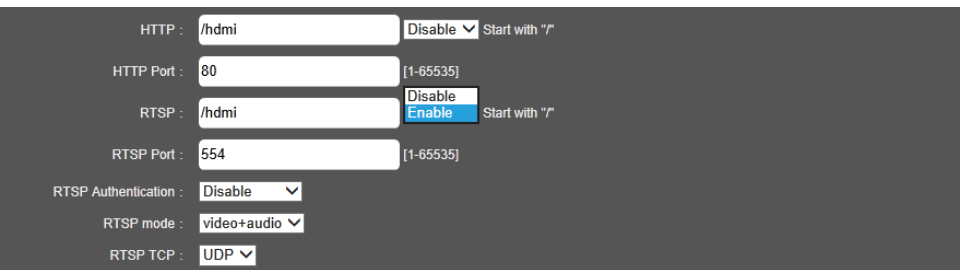
The encoder web GUI will be some kind different for the different design, the user manual can be applied to almost all encoder except K3, IPC, U/Y 10, for more details please ask for more information

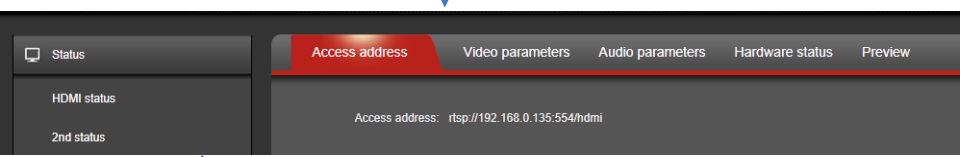
Part Ⅳ: Operation Guidance

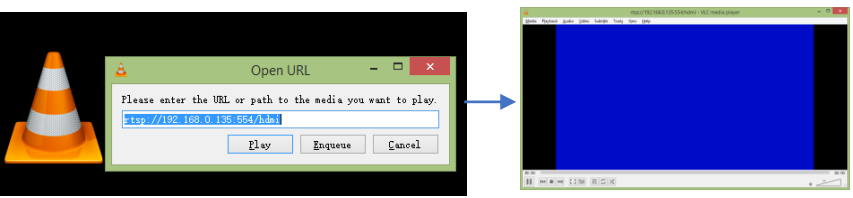
1) HTTP-RTSP

Copy the address and open it with VLC- streaming- network- fill the URL (Except RTMP push)

Such as HTTP： WEB management→ HDMI Main→ Enable HTTP/ RTPS→ Apply→ Status(find the URL) → VLC→ fill the URL→ Done





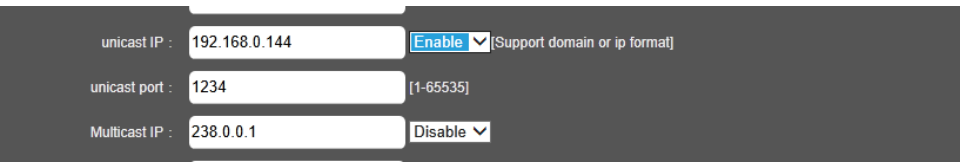


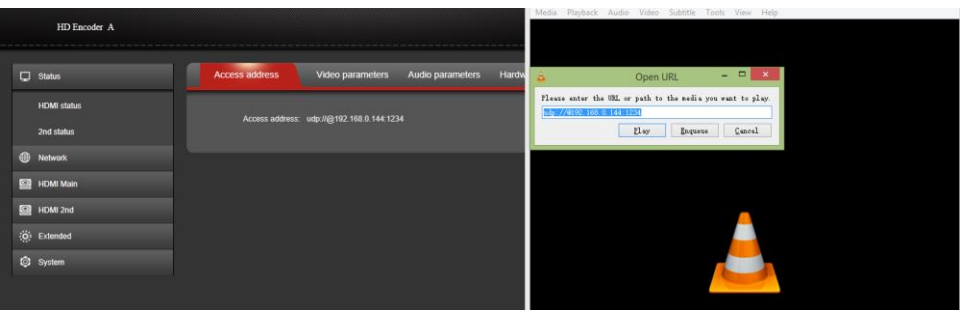
2) Unicast- Multicast- RTP

For those three protocol, fill in the IP address required (multicast can be by default)

Then copy the address and open it with VLC- streaming- network- fill the URL

Such as HTTP： WEB management→ HDMI Main→ Enable HTTP/ RTPS→ Apply→ Status(find the URL) → VLC→ fill the URL→ Done

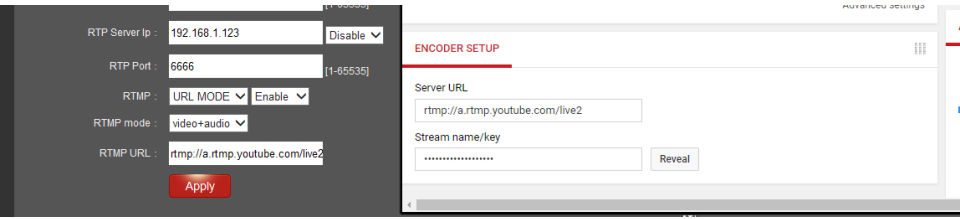




3) RTMP (Push/ pull)- HLS

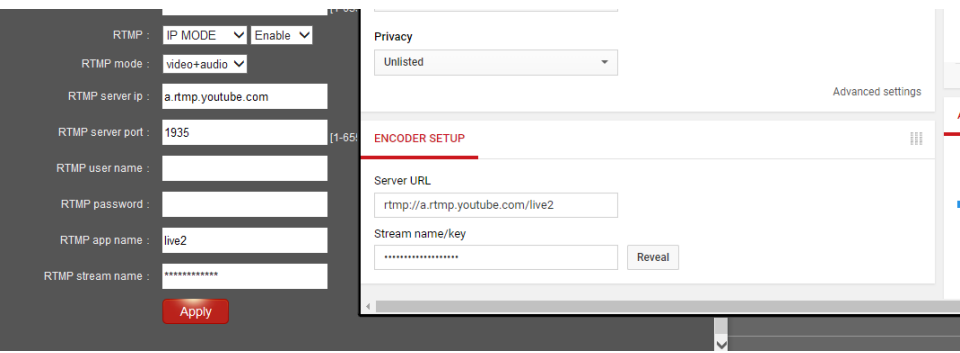
URL mode

Copy the CORRECT RTMP address from the server or platform and directly paste it on the RTMP filed, then “Enable" the RTMP function.



IP mode

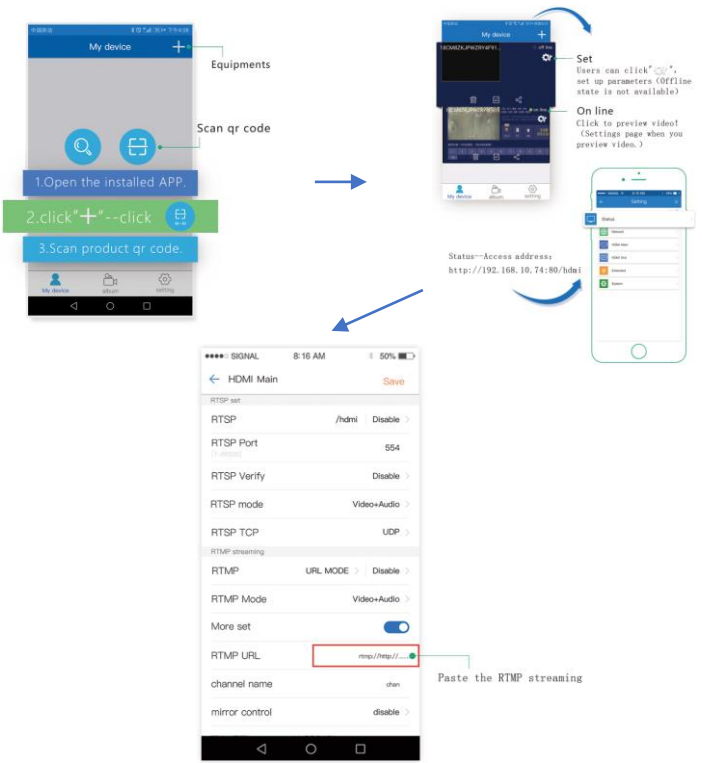
Copy the CORRECT RTMP address from the server or platform, separately input it like following image, then “Enable" the RTMP function.



Part Ⅴ: LiveX

APP—LiveX, control the encoder and record the video at anywhere, any network, any device.

Android/ IOS: download it on its apple/ Google play store



No	Question	Solution
1	How to connect encoder?	Connect encoder with computer directly via net cable.
2	How to access to encoder?	Set up one constant IP including IP: 192.168.1.1**, then access to 192.168.1.168 on PC browser.
3	How to watch the TS stream from the encoder?	Copy the streaming URL to VLC - Media- Open network stream- paste, enjoy it.
4	How to use RTSP?	1 Enable RTSP on the user interface, and watch it on VLC with same step to last question. 2. Enter RTSP address to your server
5	How to use UDP Unicast and RTP?	Enter your Unicast IP and RTP IP address, then you can watch it on the server or on VLC.
6	How to set up display resolution?	To set up the “encoded size” on the user interface , then click “apply”
7	How to set up bitrate?	To set up the output” Bitrate” on the user interface, then click “apply”
8	How to set up” IP address” of the encoder?	To set up the IP address at “ Network” function on the user interface, new address works after “apply” and “reboot” the device
9	How to do RTMP streaming live?	You will get your streaming URL and key once created the live streaming function on the platform, then enter the full address on the RTMP option, if use ip mode, separate each part via”/”.
10	How to set up my logo on the video?	logo size: 1920*1080；2M；BMP: 24, name: logo.bmp, 2nd logo name: logo_ext.bmp, upload the logo at”main/ 2nd OSD setting” on the” extended”, adjust the coordination and “apply”
11	Not smooth on the platform?	1 The problem of the platform. 2 Network unable to afford the bit, lower required.
12	Failed to use RTMP?	1 Network ip address not matched. 2 upload speed unable to upload the stream
13	How to makes encoder works on RTMP transmission?	Set up the same segment to the computer, and another available IP address.