Zenty | Professional A/V Solution Provider

User Manual [V1.1]



H.264 H.265 IPTV Encoder | 4K 60Hz (4:4:4) Input, 1080P 60Hz Output

ZT-463 | ZT-EN200V2

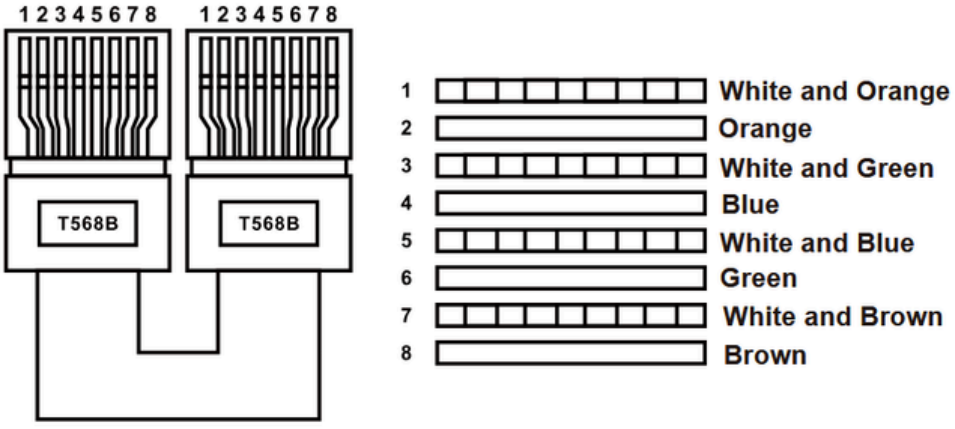
ZENTY ®
9807 EMILY LANE
STAFFORD, TX 77477
(844) 200-1945
SUPPORT@ZENTY.COM

SAFETY PRECAUTIONS

- Please read all instructions before attempting to unpack, install or operate this equipment and before connecting the power supply.
- Please keep the following in mind as you unpack and install this equipment:
- Always follow basic safety precautions to reduce the risk of fire, electrical shock and injury to persons.
- To prevent fire or shock hazard, do not expose the unit to rain, moisture or install this product near water.
- Never spill liquid of any kind on or into this product
- Never push an object of any kind into this product through any openings or empty slots in the unit, as you may damage parts inside the unit.
- Do not attach the power supply cabling to building surfaces.
- Use only the supplied power supply unit (PSU). Do not use the PSU if it is damaged.
- Do not allow anything to rest on the power cabling or allow any weight to be placed upon it or any person walk on it.
- To protect the unit from overheating, do not block any vents or openings in the unit housing that provide ventilation and allow for sufficient space for air to circulate around the unit.

Caution

The product requires the use of UTP connectors. Please connect in direct interconnection method and do not cross connect.



Direct Interconnection Method

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Dear Customer

Thank you for purchasing the ZT-EN200V2. For optimum performance and safety, please read these instructions carefully before connecting, operating or adjusting this product. Please keep this manual for future reference.

1. Features

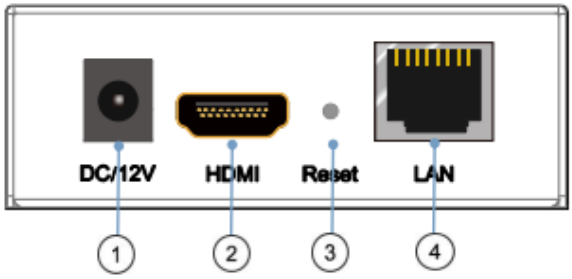
- Supports H.265 | H.264 | MJPEG Encoding
- Supports up to 4K 60Hz (4:4:4) Input and 1080P 60Hz Output
- Supports HDMI Input
- Supports UDP, HTTP, RTSP, RTMP, SRT,HLS,FLV,ONVIF Protocols
- Supports MPEG1 Audio Layer 2
- CBR/VBR Rate: 32Kbps~32Mbps
- 100M Network Interface (full duplex mode)
- Supports up to 1080p@60Hz HD Video Input
- Supports Image Parameter Settings
- Supports Remote Management in WAN (webGUI)
- Supports Customized Resolution Settings

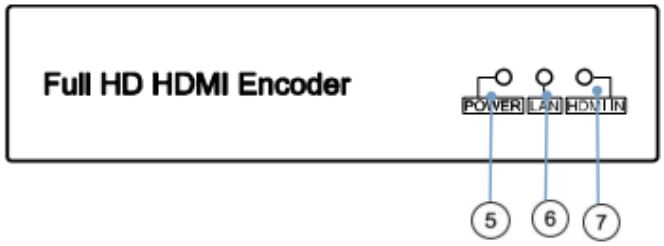
2. Package Contents

- (1) x ZT-EN200V2 Encoder
- (1) x Power Adapter DC12V 1A
- (1) x User Manual

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3. Hardware Description





① Power Input Port ③ Reset Button ⑤ Power Input Indicator ⑦ HDMI Input Indicator

② HDMI Input Port ④ LAN Output Port ⑥ LAN Output Indicator

Note: 1Reset to Factory Default Settings: press & hold "Reset" for 10 seconds until all three indicators go out.

2LAN: Default IP is **192.168.1.168**

4. Typical Application

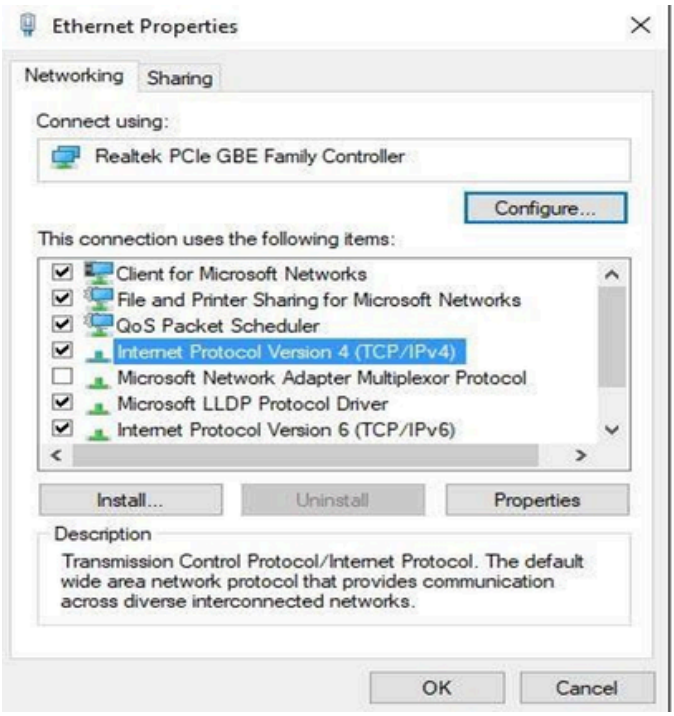


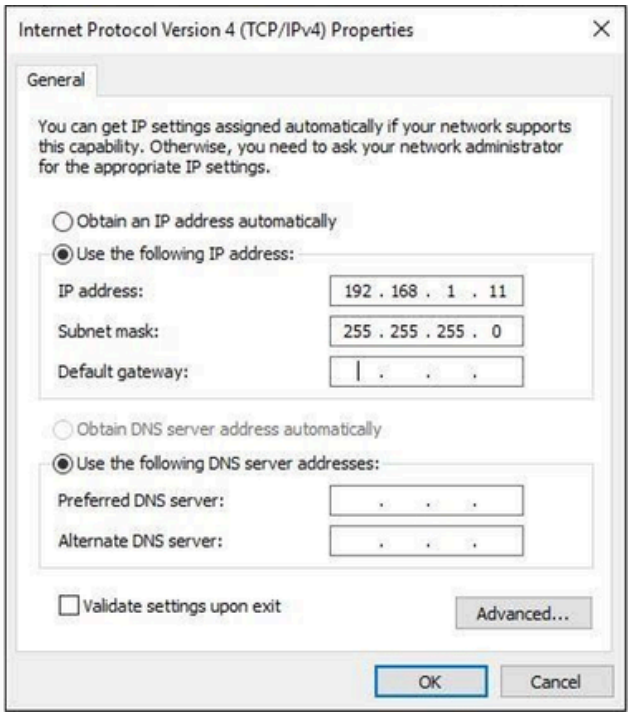
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5. Connection Configuration

5.1 Change the IP Address of PC

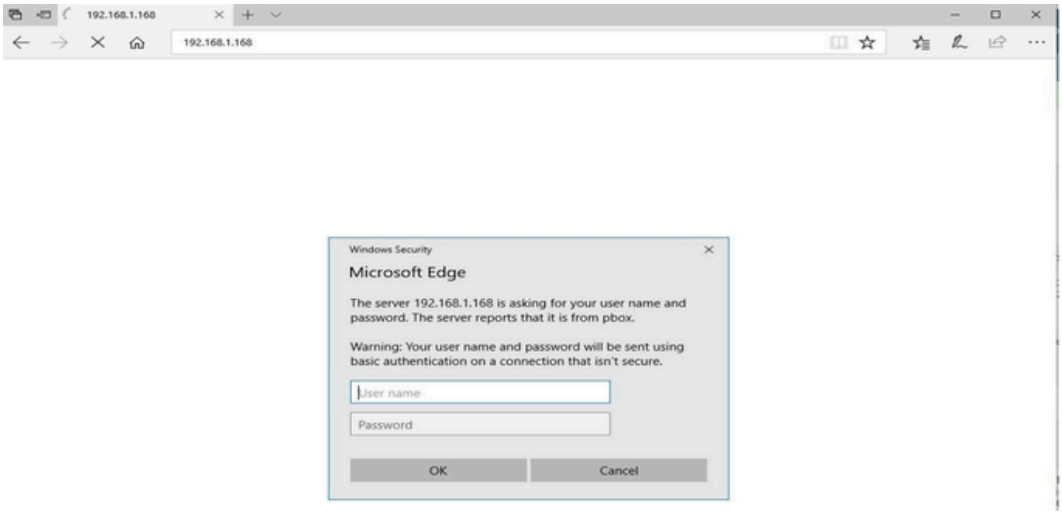
Assign the PC (or laptop) an IP address. On a Windows PC: Press the + R on your keyboard →Enter "**control netconnections**" in the run box and press enter → Right click on your wired ethernet adapter → Select "**Properties**" → Double click "**Internet Protocol Version 4 (TCP/IPv4)**" → Enter the IP address with 192.168.1.11 (0-255) and Subnet mask 255.255.255.0. Press OK twice to save the configuration.





5.2 Login for Configuration

Enter the unit's IP address (192.168.1.168) in your browser's address bar, to open the web GUI. Login with the default credentials, **User Name – admin | Password – admin**



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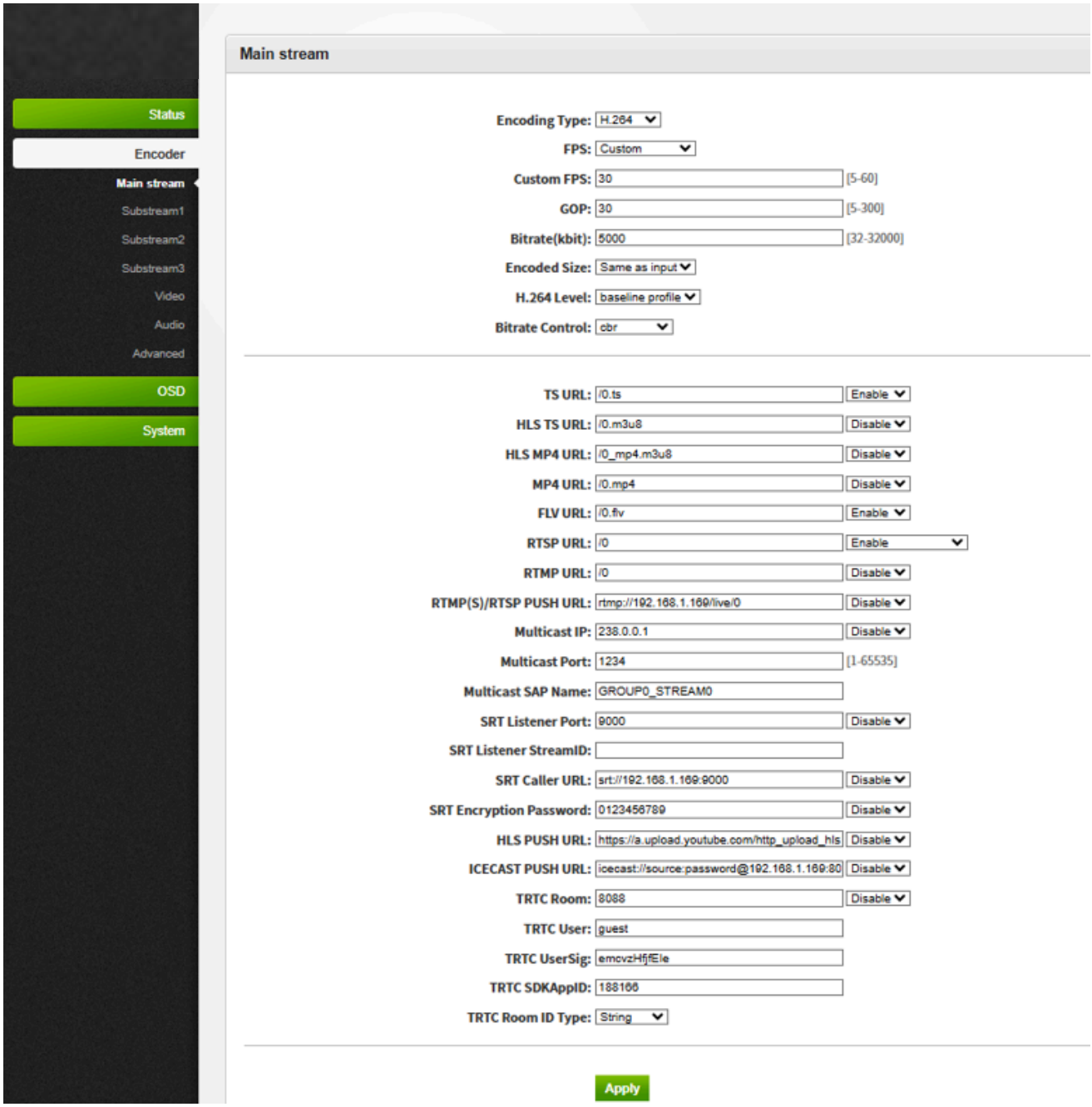
5.3 Check the Stream Address

Stream addresses populate in the “Main Stream” category of the encoders web GUI.

6. Encoder Setting

6.1 Encoder Setting

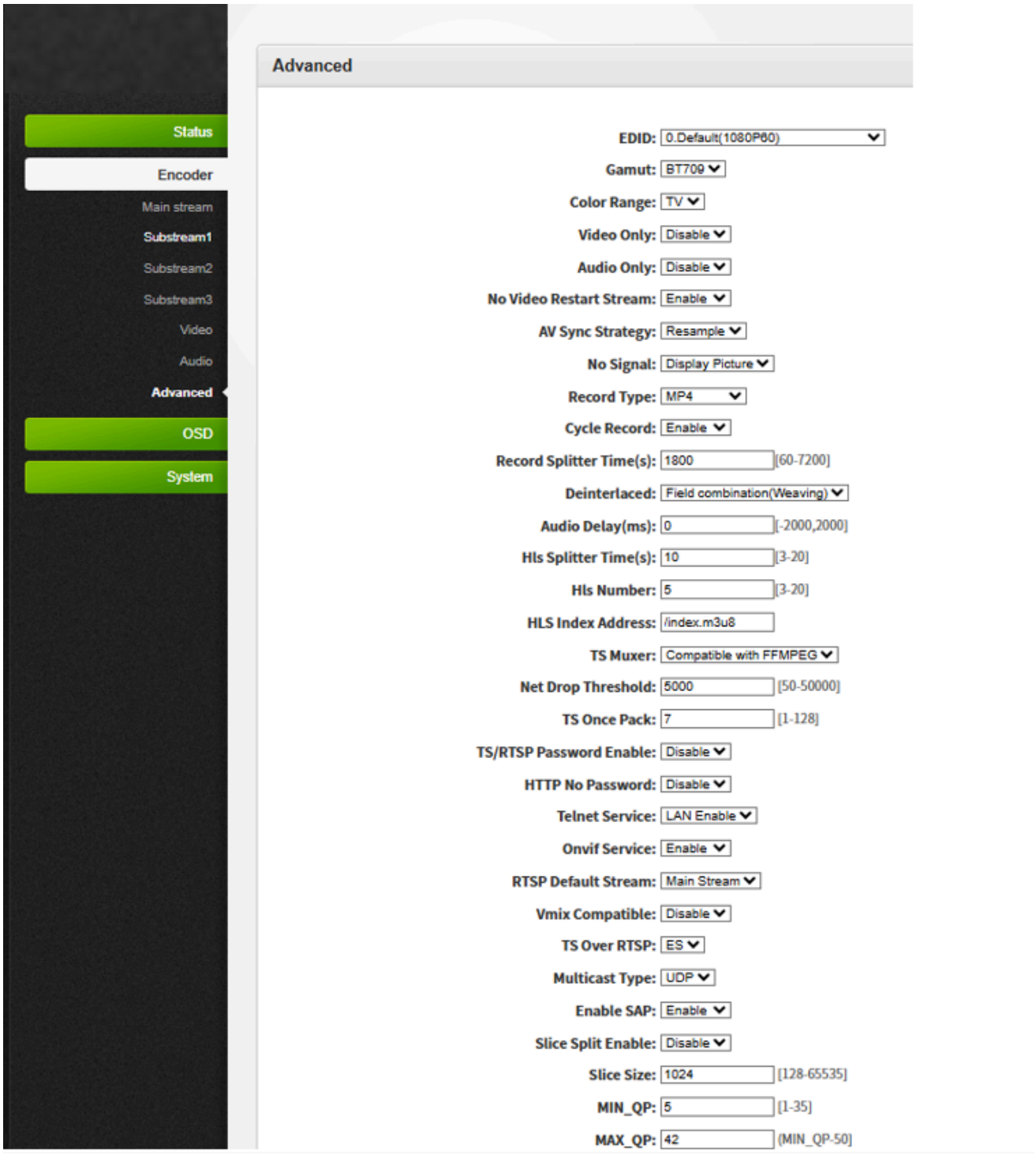
Click “Encoder” setting → “Main stream” → Configure your settings → Click Apply



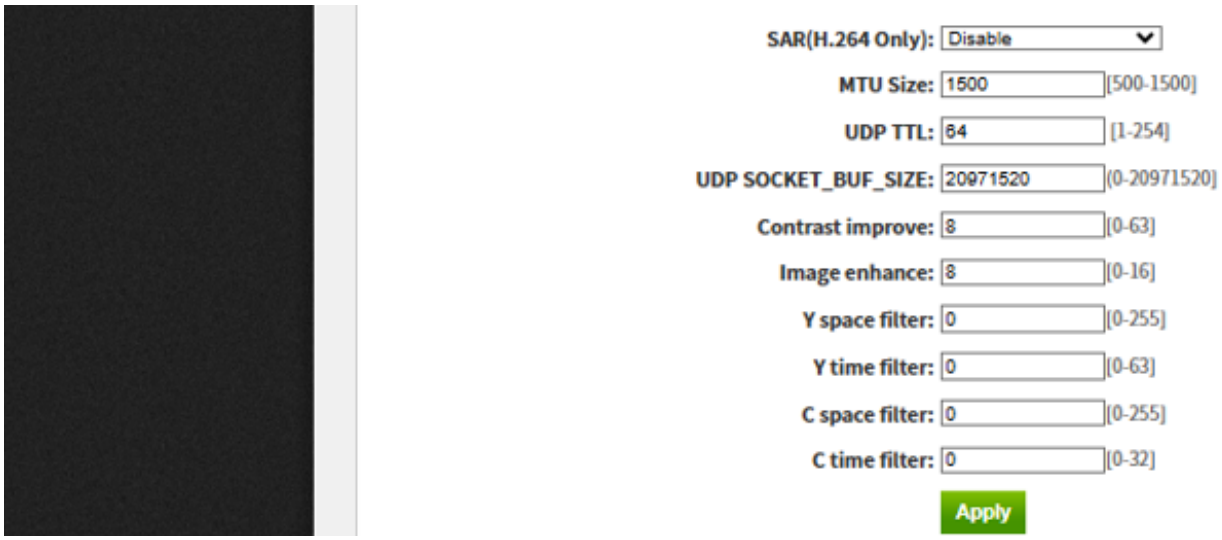
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6.2 Advanced

Click “Encoder” → “Advanced” → Configure your settings → Click “Apply”



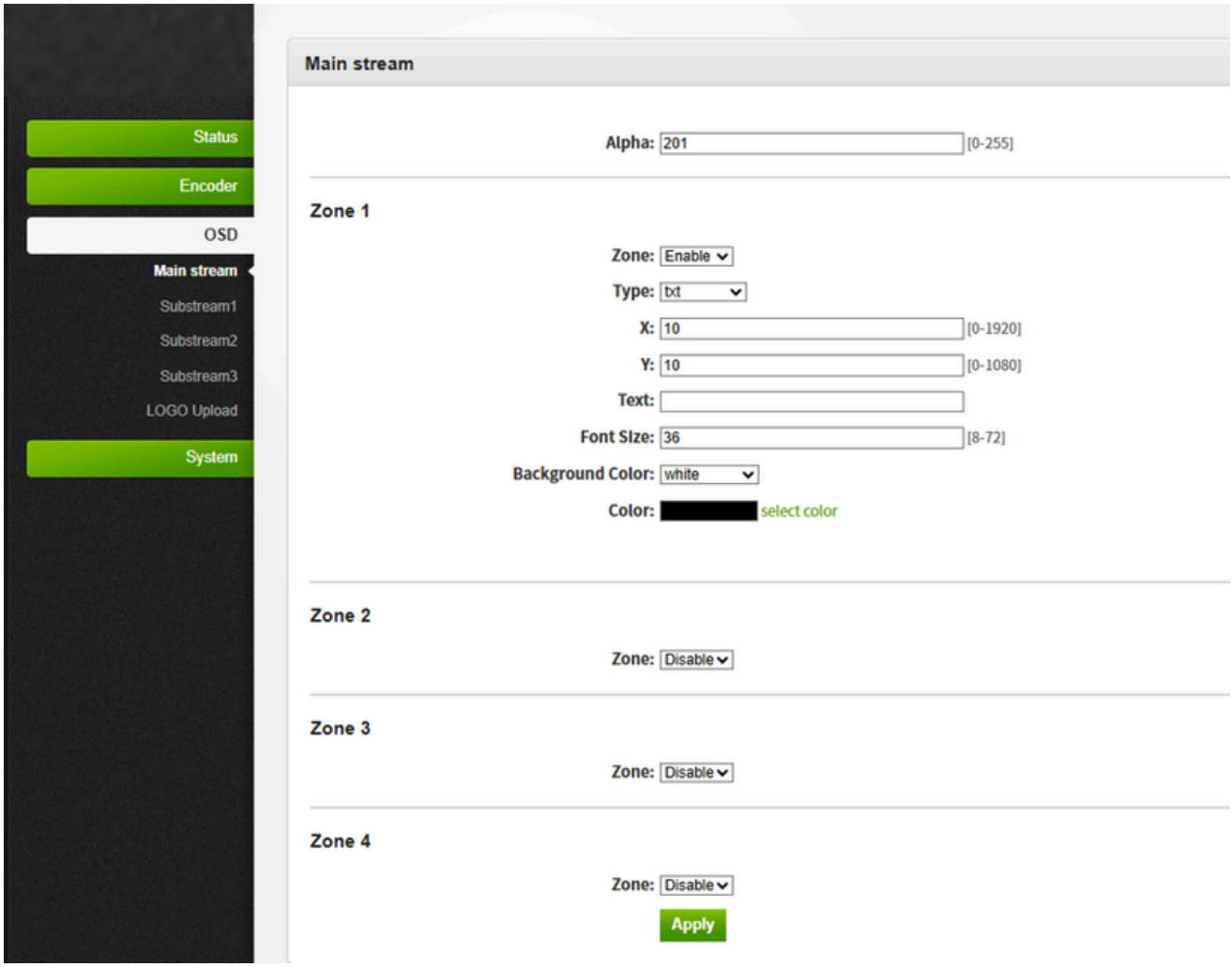
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7. OSD Setting

7.1 Streaming OSD Setting

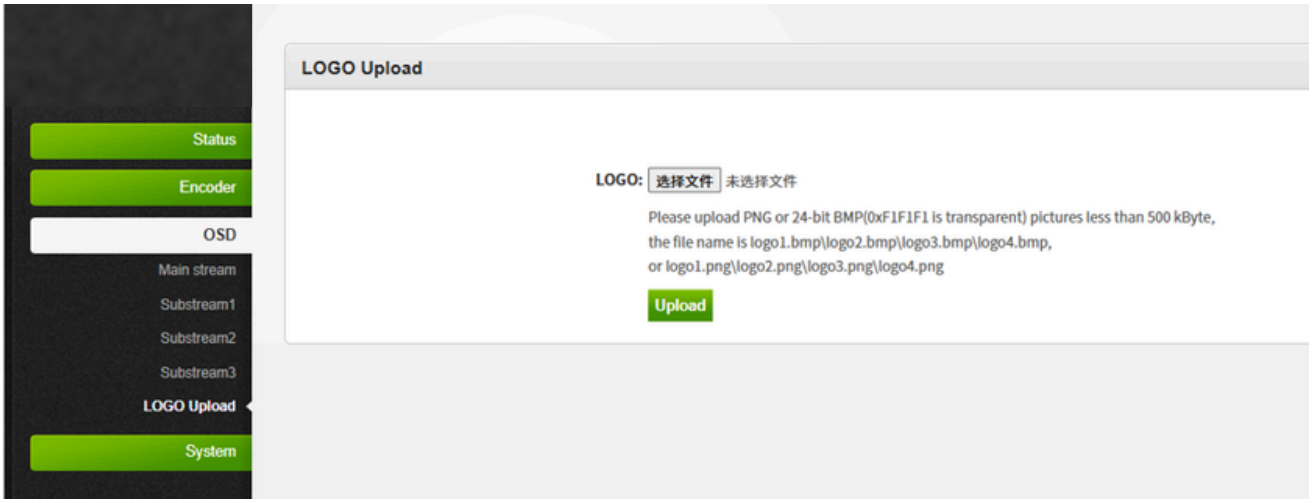
Click “OSD” → Configure your settings → Click “Apply”



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7.2 Logo Uploading

"LOGO upload" → Choose a bmp file that matches the requirements → Click "Apply"



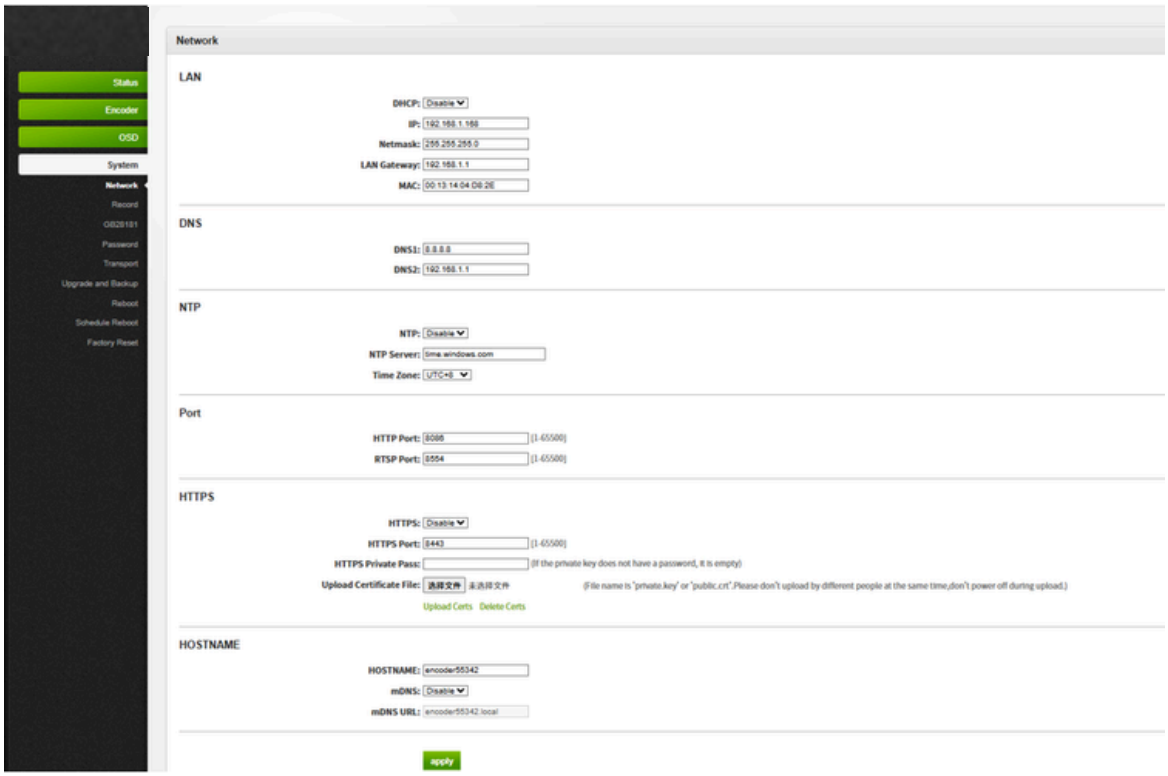
※ Note: The above interface screenshot examples may show a difference with actual operation interface due to software upgrades. All screenshots are for reference only.

8. System

8.1 Network

Click System → Network → Modify the network settings to match those of your network

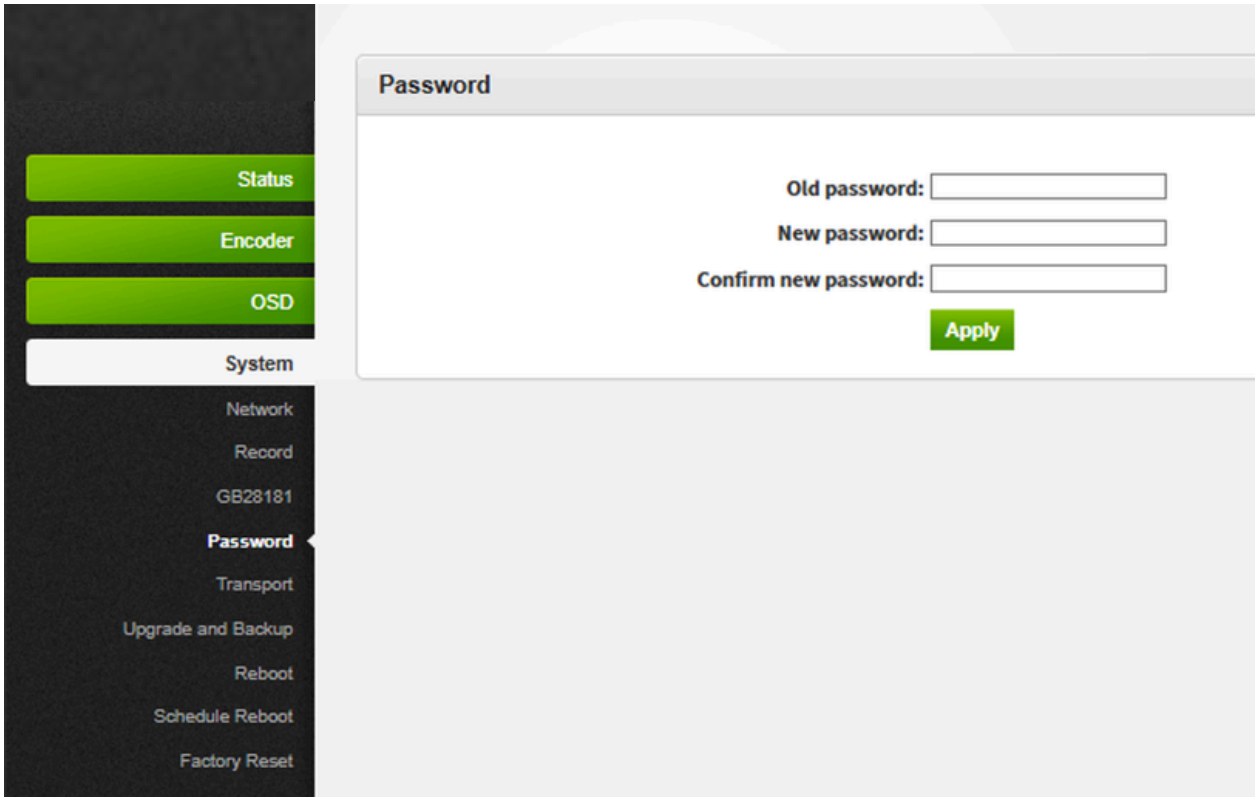
Click apply. **Note: Please change your DNS server to use Google's DNS servers. (Provided in the picture below.)**



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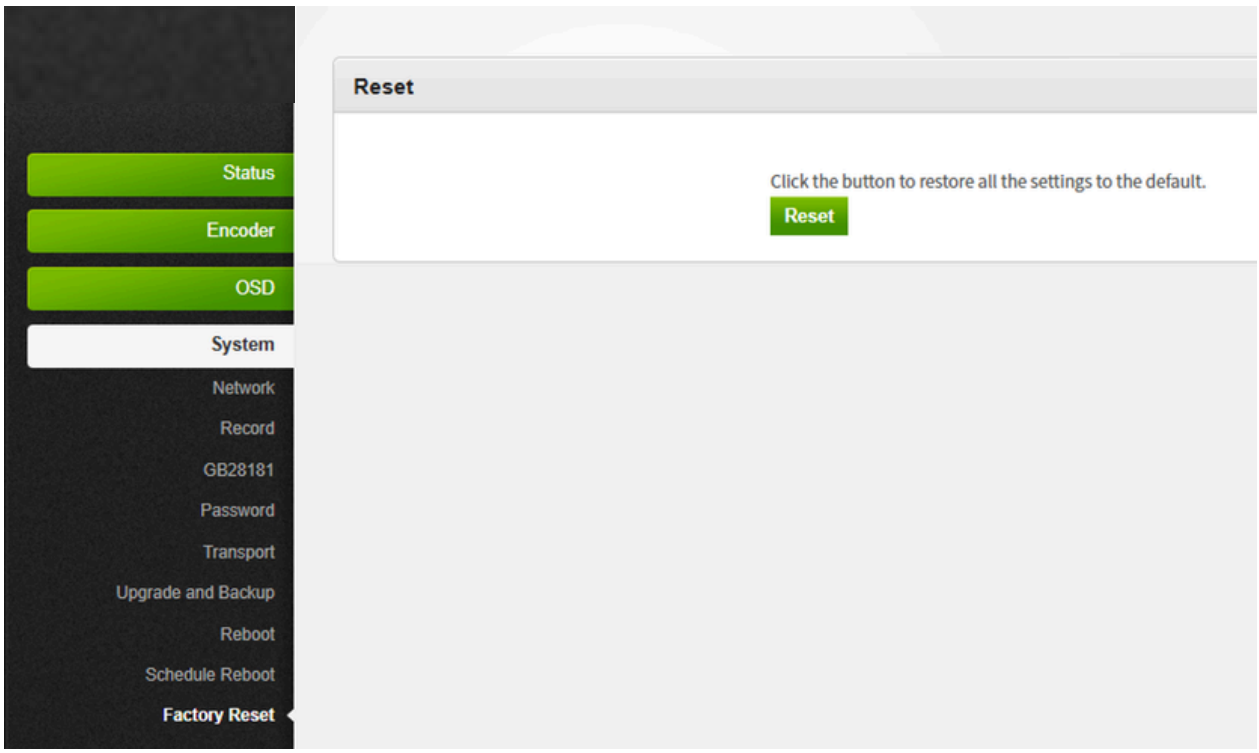
8.2 Change Password

System → Change password → Set your password → Apply



8.3 Reset

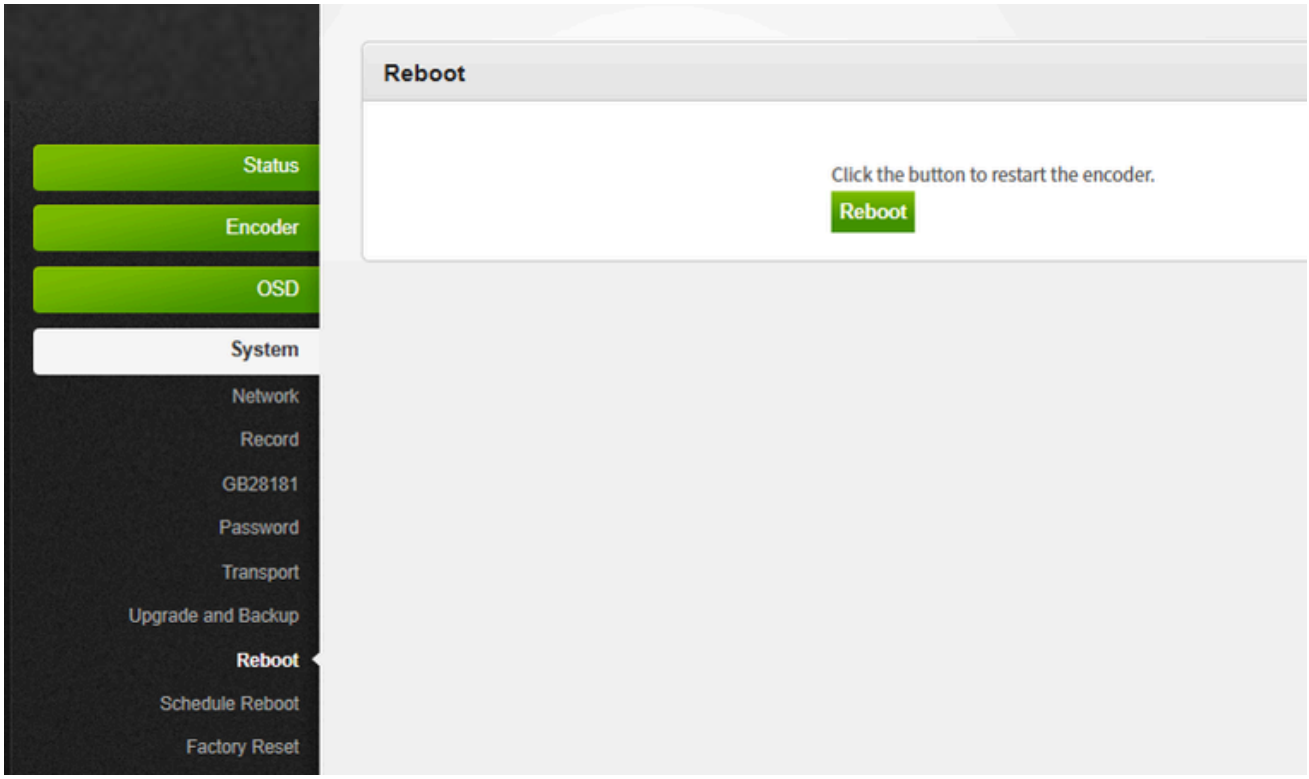
System → Factory Reset → Reset **Note: This will set your device to the factory defaults.**



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8.4 Reboot

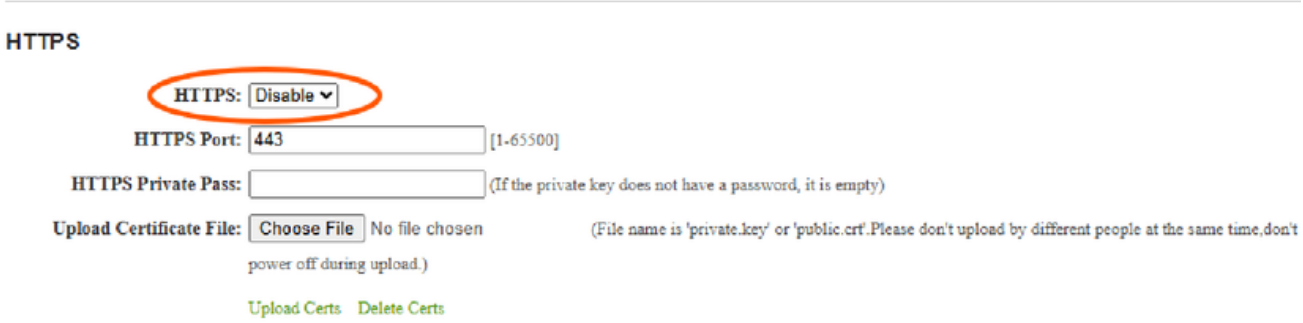
System → Reboot → Reboot (please refresh the web page after 1 minute)



9. Configure SSL Certificate

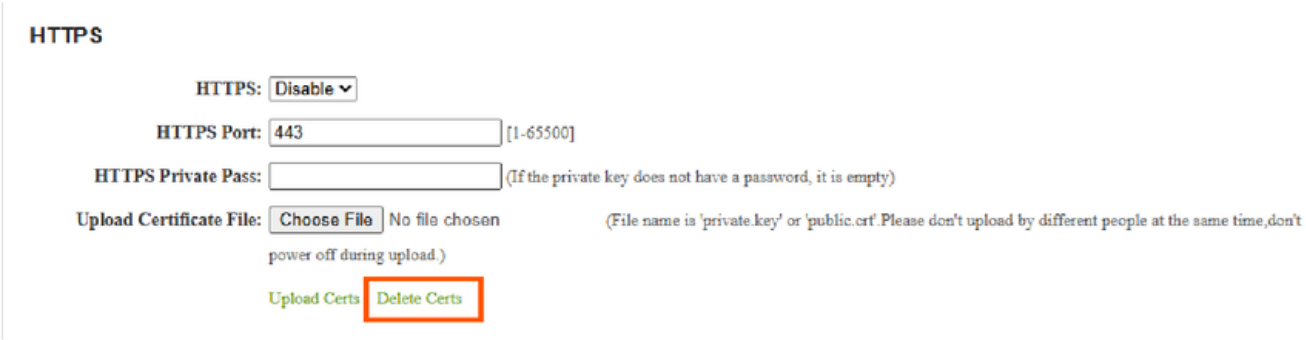
The web GUI of this encoder comes with an option of enabling HTTPs communication between the device and the user's computers.

By default, the system does not have HTTPs enabled.



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Once “enabled”, followed by “apply” and “reboot”, the system will use the built-in default certificate, which can be removed or replaced by user’s own certificate if the user chooses to do so.



Steps to uploading a user’s own certificate:

1. Choose file



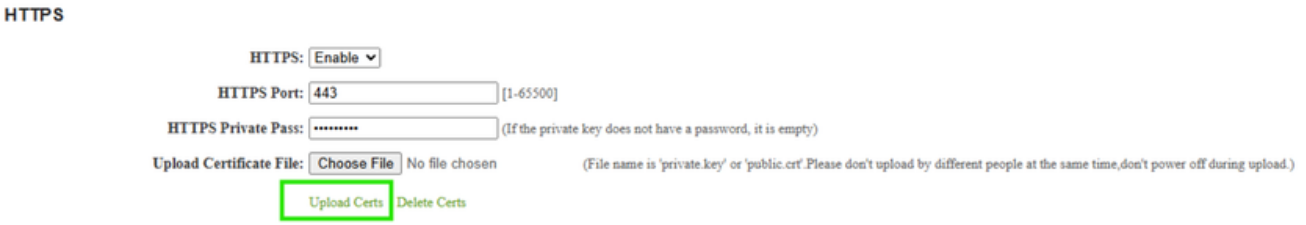
The system only accepts certificates using two specific file names:

private.key

public.crt



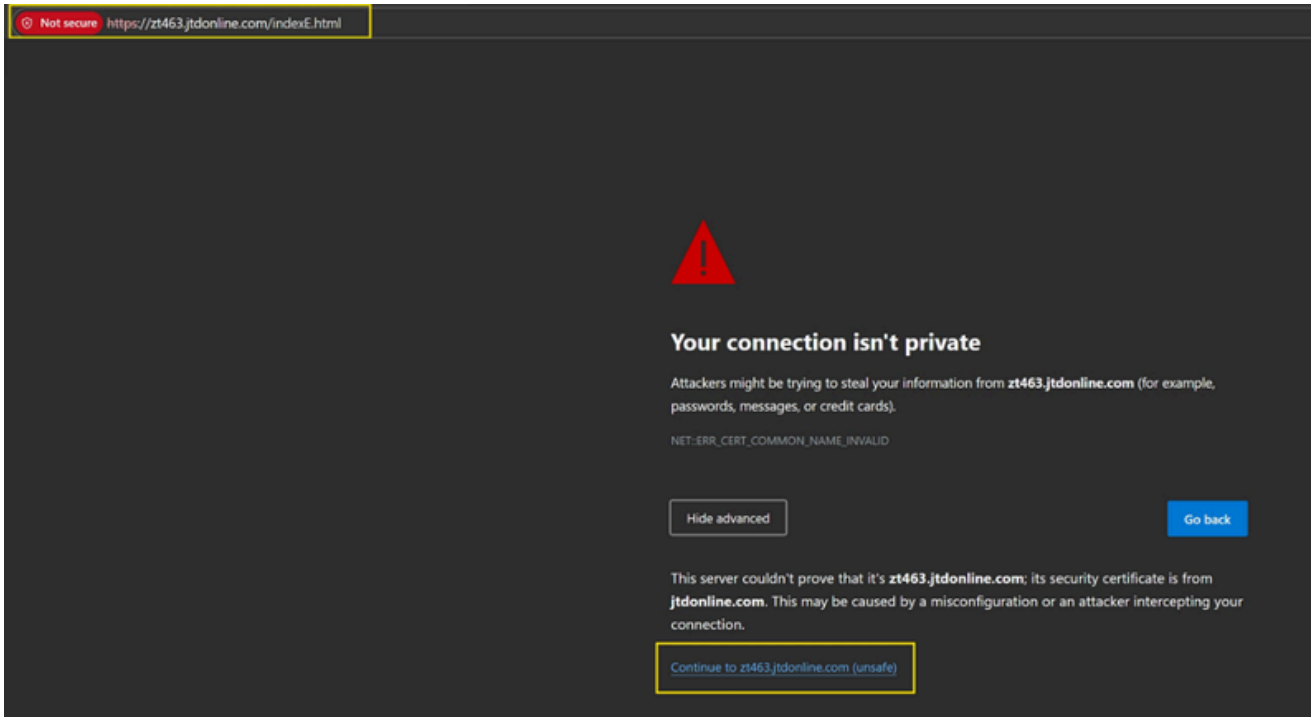
2. These two certificate files can be uploaded in any order followed by clicking the “Upload Certs” button.



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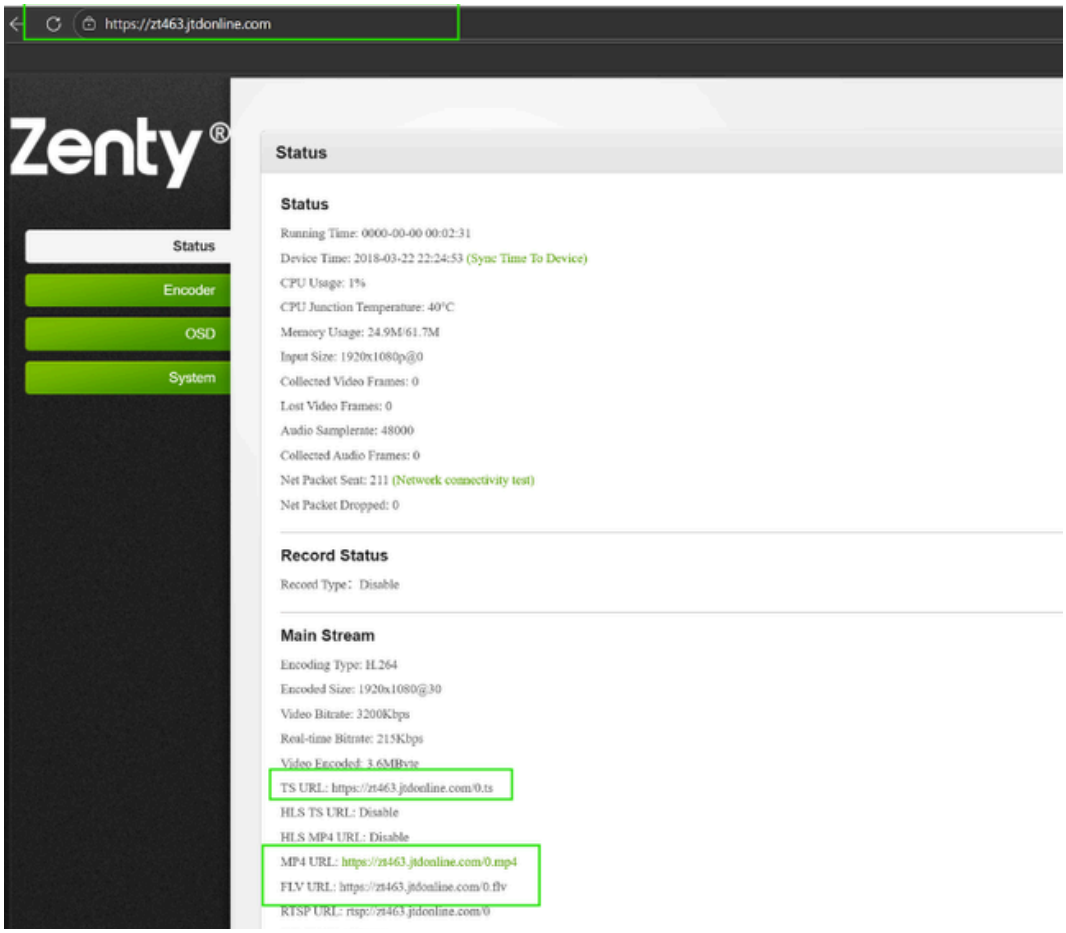
3. Once these two certificate files are uploaded, “Apply” and reboot the device to make the change in effect.

Note:
When the browser says, “Unsafe”, or “Not Secure”, the built-in web server on the device is missing the intermediate chain file. Here in the example below, ZT-463" is the hostname of the device, and there is a certificate issued for, “ZT463.jtdonline.com”.



If the user holds more than two primary files: public.crt and private.key, they can consider combining public.cert with ca_bundle.crt into one file, and then rename the new file to “public.crt” for uploading.

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To combine server certificate with intermediate certificates to form a full chain file that contains:

1. Server certificate (public.crt)
2. Intermediate certificates (ca_bundle.crt)

Follow the format below:

-BEGIN CERTIFICATE
[Your server certificate]
-END CERTIFICATE]
-BEGIN CERTIFICATE
[Intermediate CA #1]
-END CERTIFICATE
-BEGIN CERTIFICATE
[Intermediate CA #2]
END CERTIFICATE

The server certificate always goes first, followed by the CA bundle exactly as provided.

10. Application

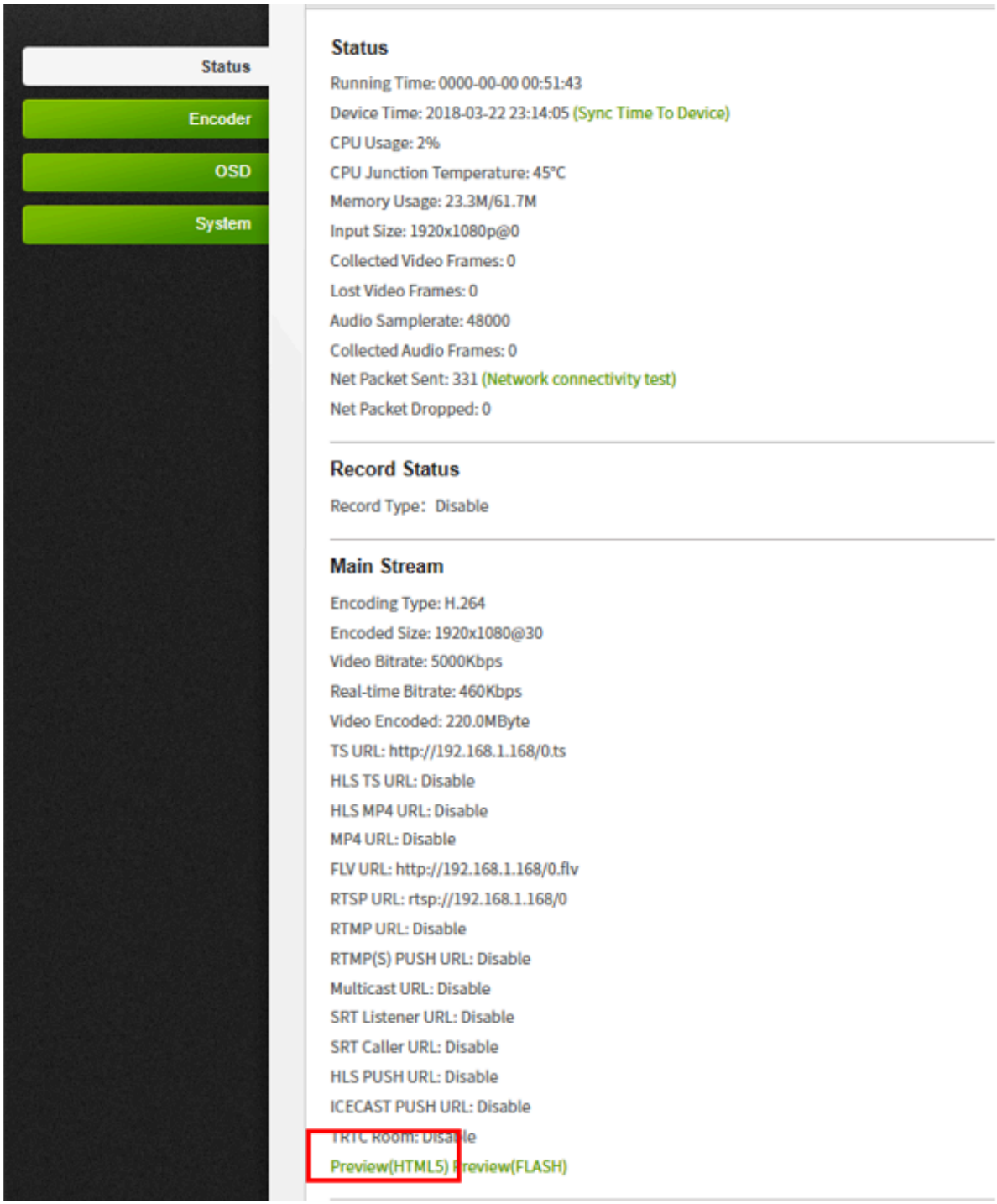
10.1 User Application Example

10.1.1 Web Video Preview

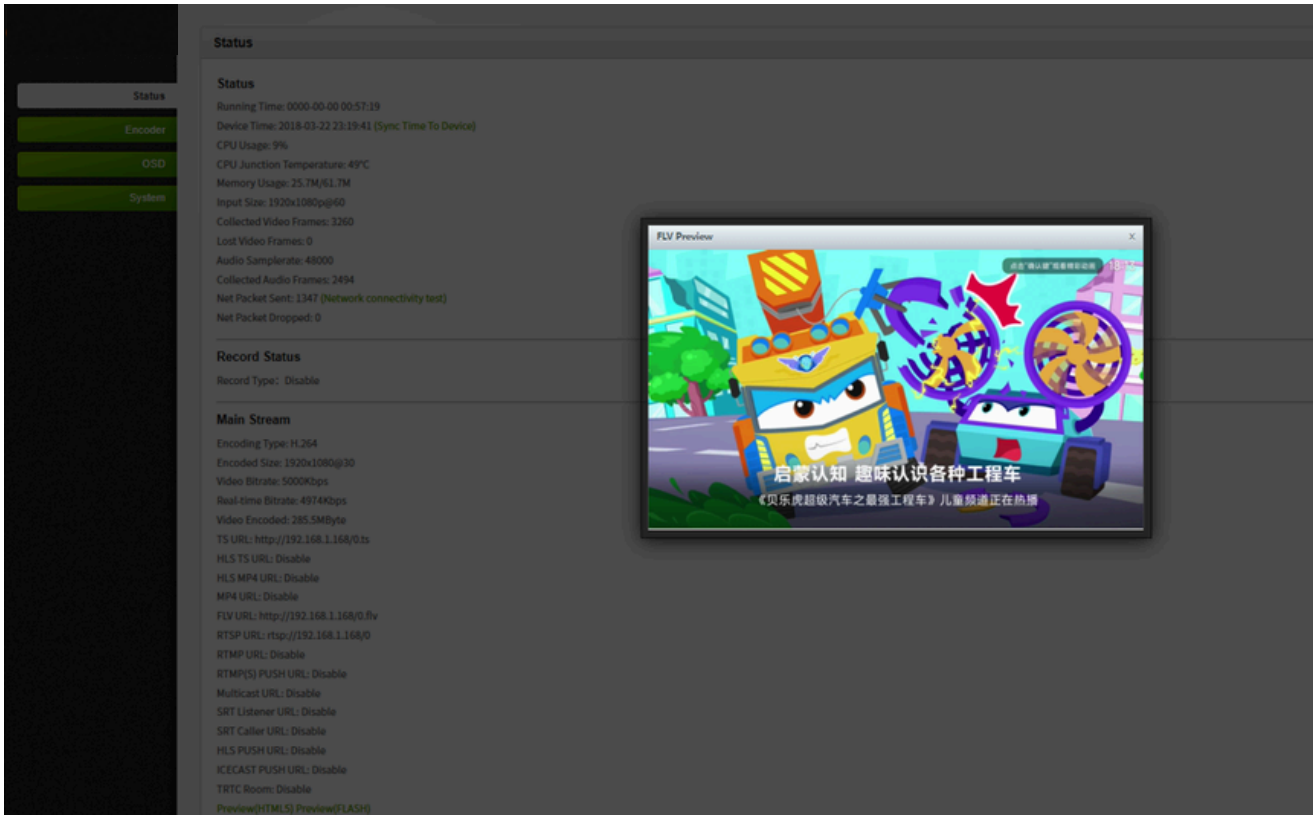
Status → Main Stream → Preview

Note: For Internet Explorer, you can get preview window directly.

For Chrome, you must install an extension called "Native HLS Playback" to get the preview window.



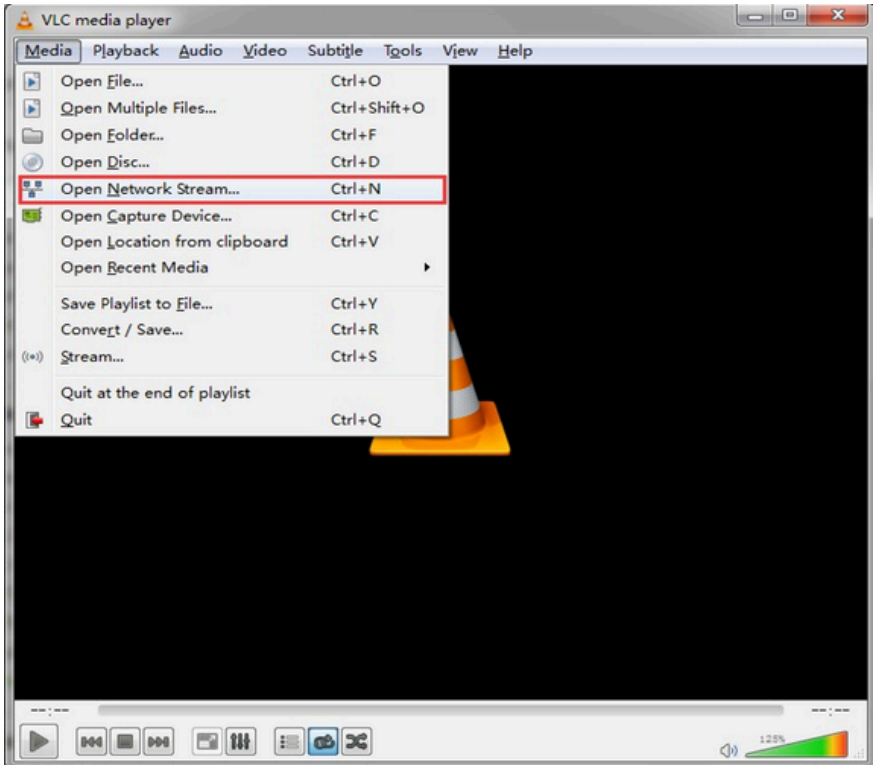
Picture below shows the stream preview



10.1.2 VLC

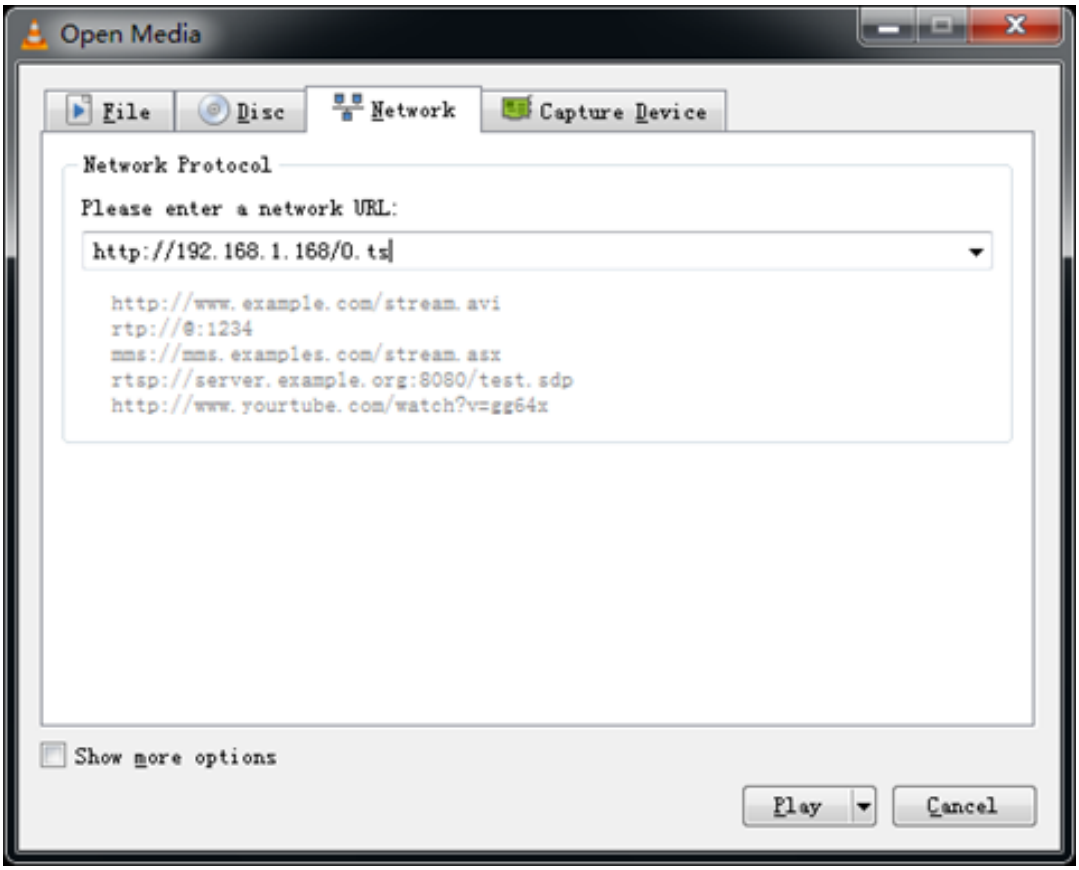
Connect an HDMI source to the encoder. Open VLC media player

(Download link: http://www.videolan.org/)，Click “Media”, then click “Open Network Stream”.

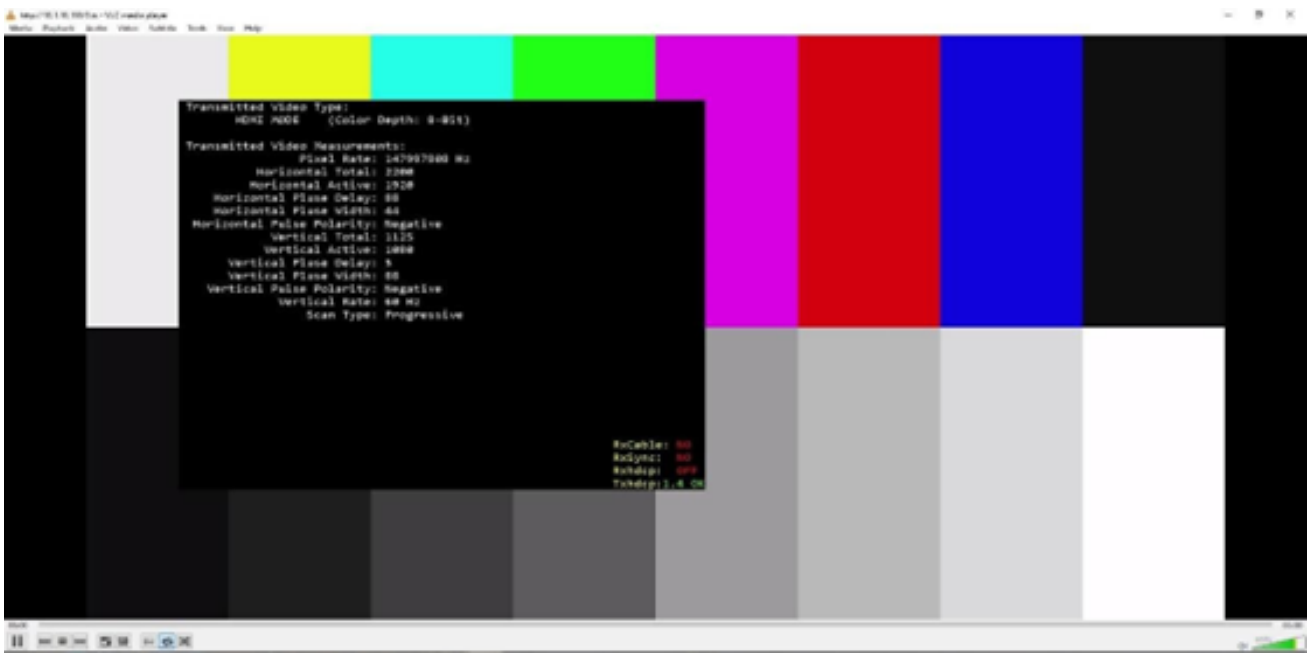


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Enter the Stream URL from the page of “Main stream”, click “Play”. **Note: Please make sure that the stream type you choose is enabled in the encoder.**



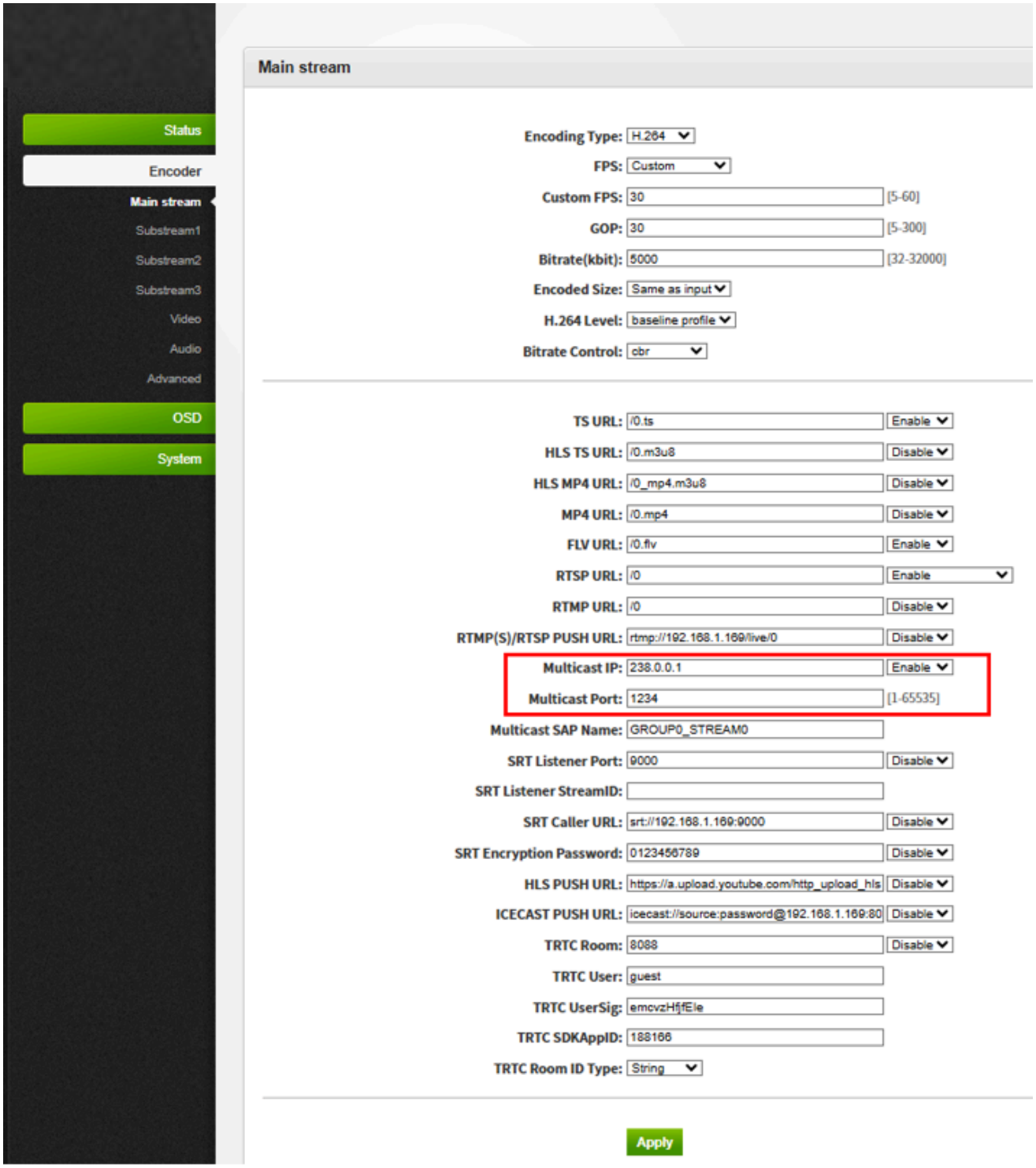
VLC Example:



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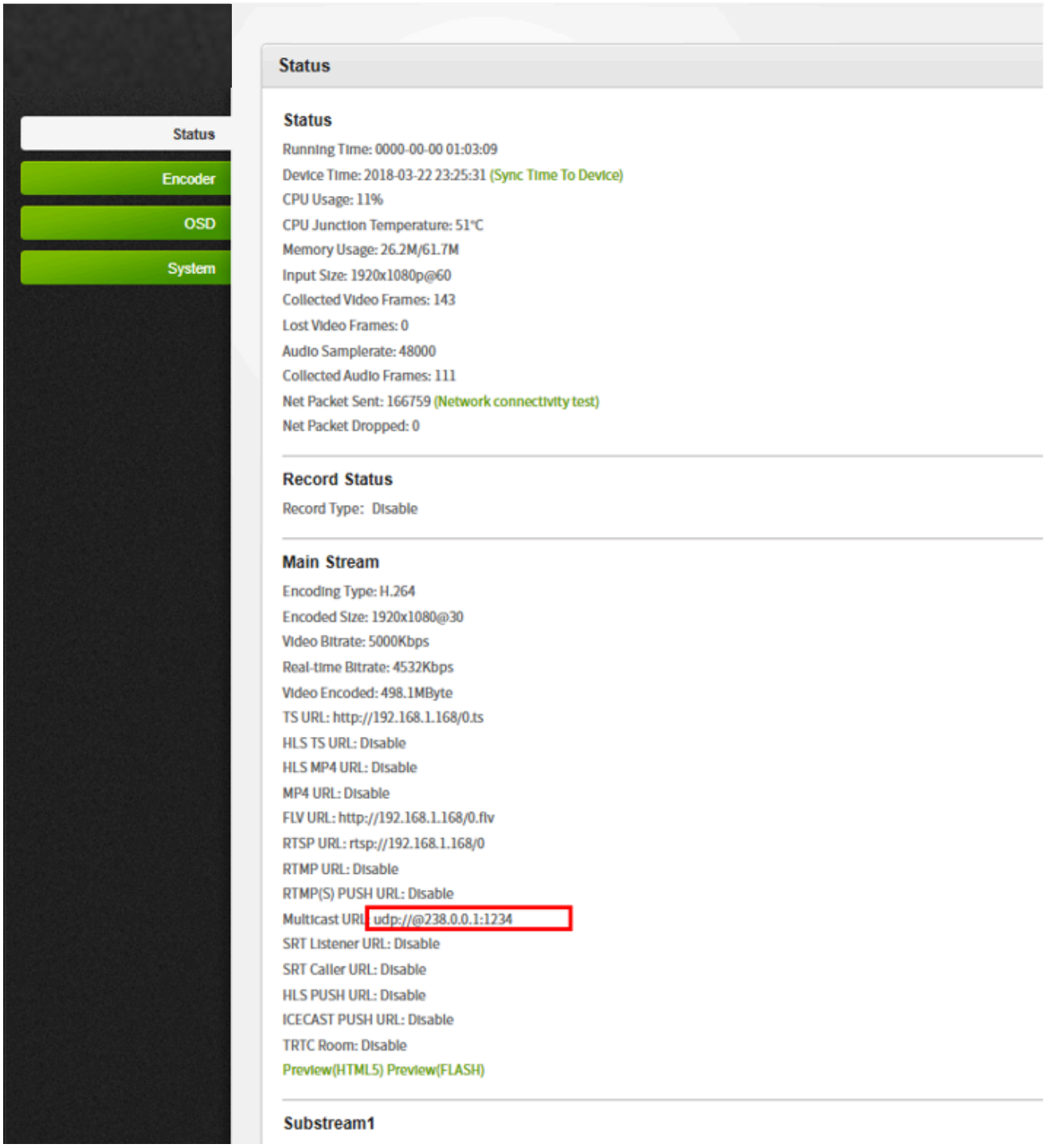
10.2 Multi Local User Application - Multicast

If more than one local user needs to stream the video of the encoder simultaneously, you may enable multicast IP, then reboot the encoder.



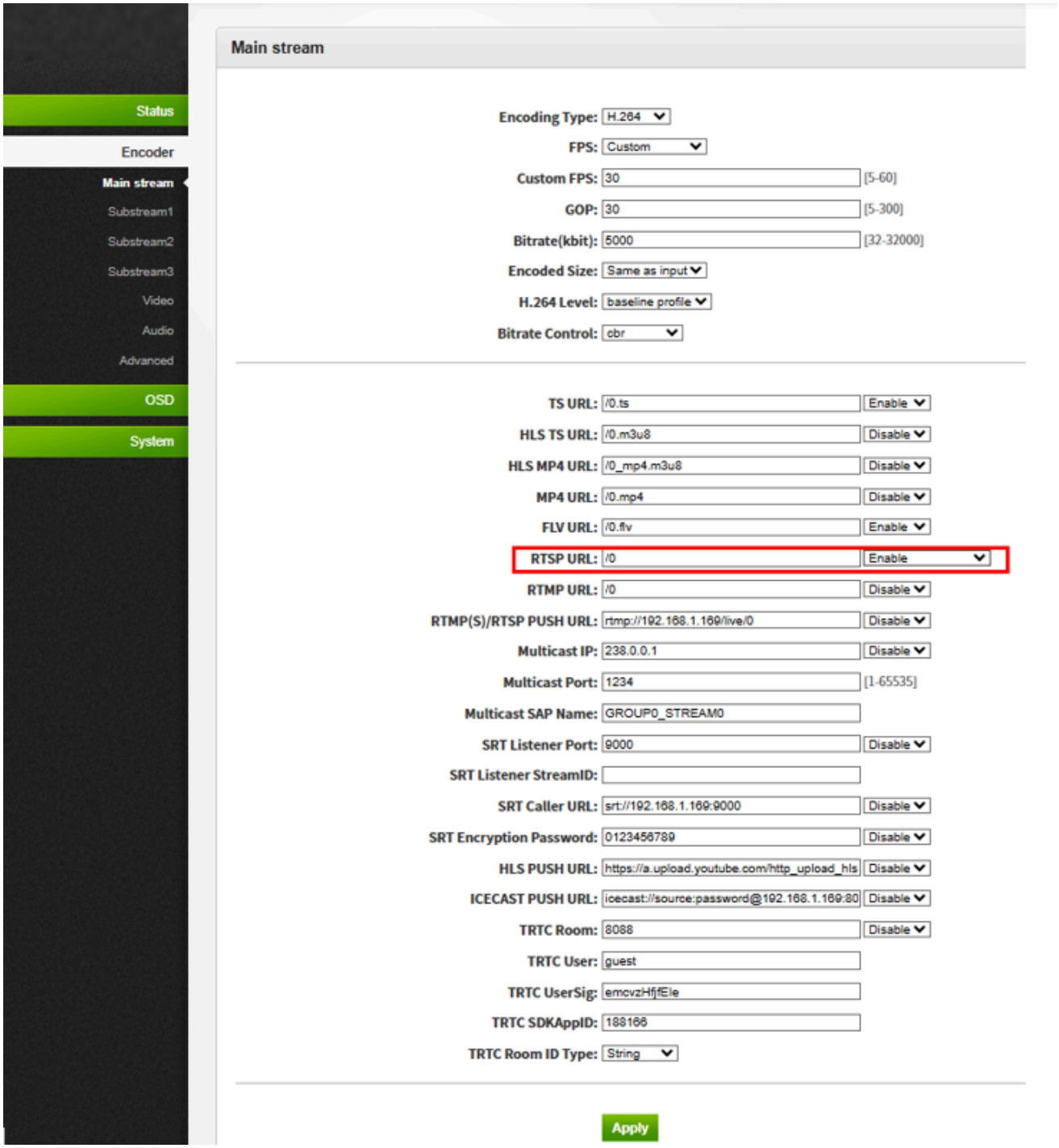
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After the reboot, copy the multicast IP address from the Status page, and paste the IP address into VLC Player. This stream can be viewed by more than one user at the same time



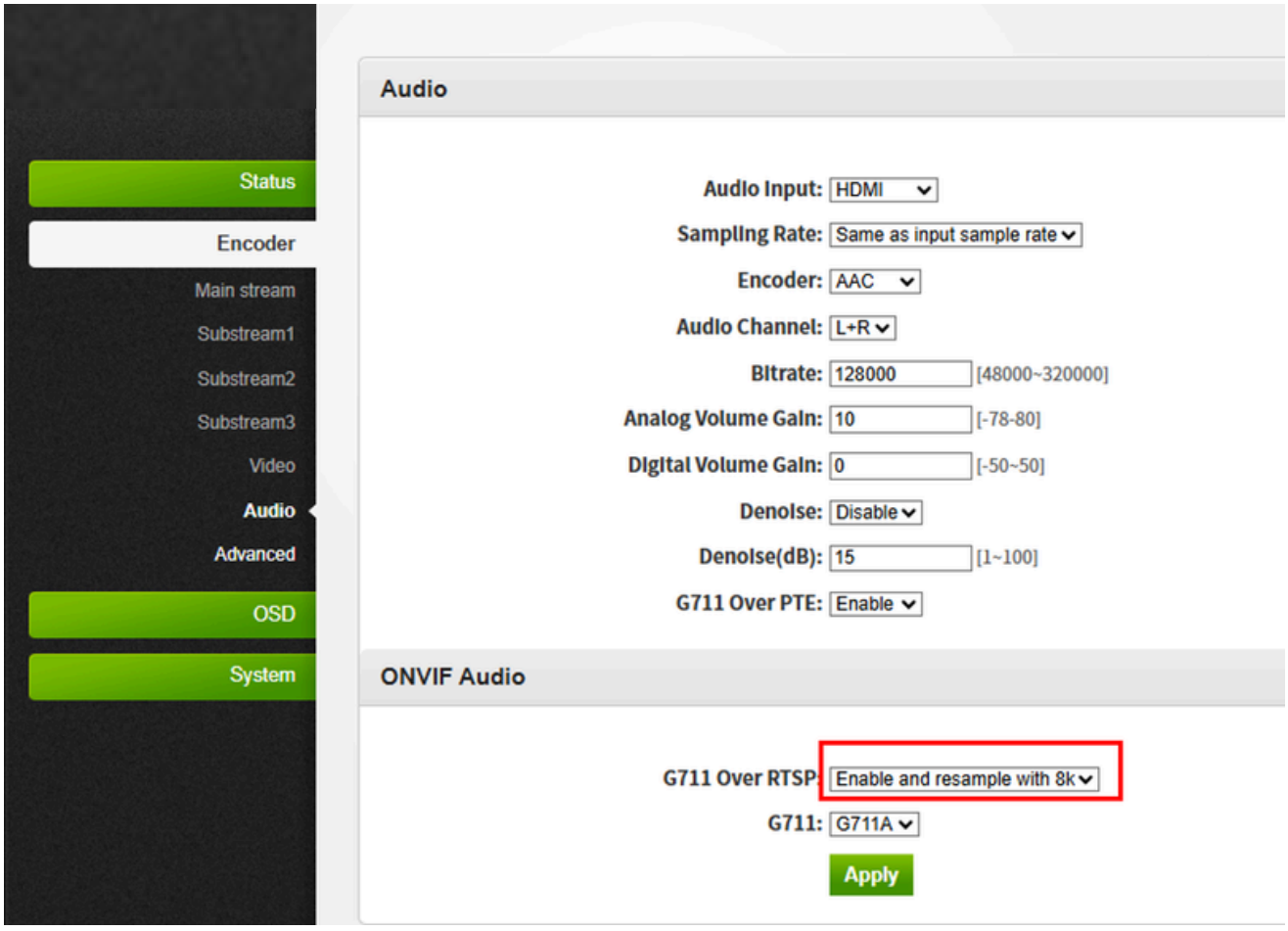
10.3 Local Surveillance System Application NVR Connection

1. Confirm if your NVR supports the H.264 codec. Since we're using ONVIF, you will need to enable the "RTSP" function as pictured below.



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2. If you need the NVR to recognize the audio of the HD Encoder, you will need to enable the Audio as below picture:

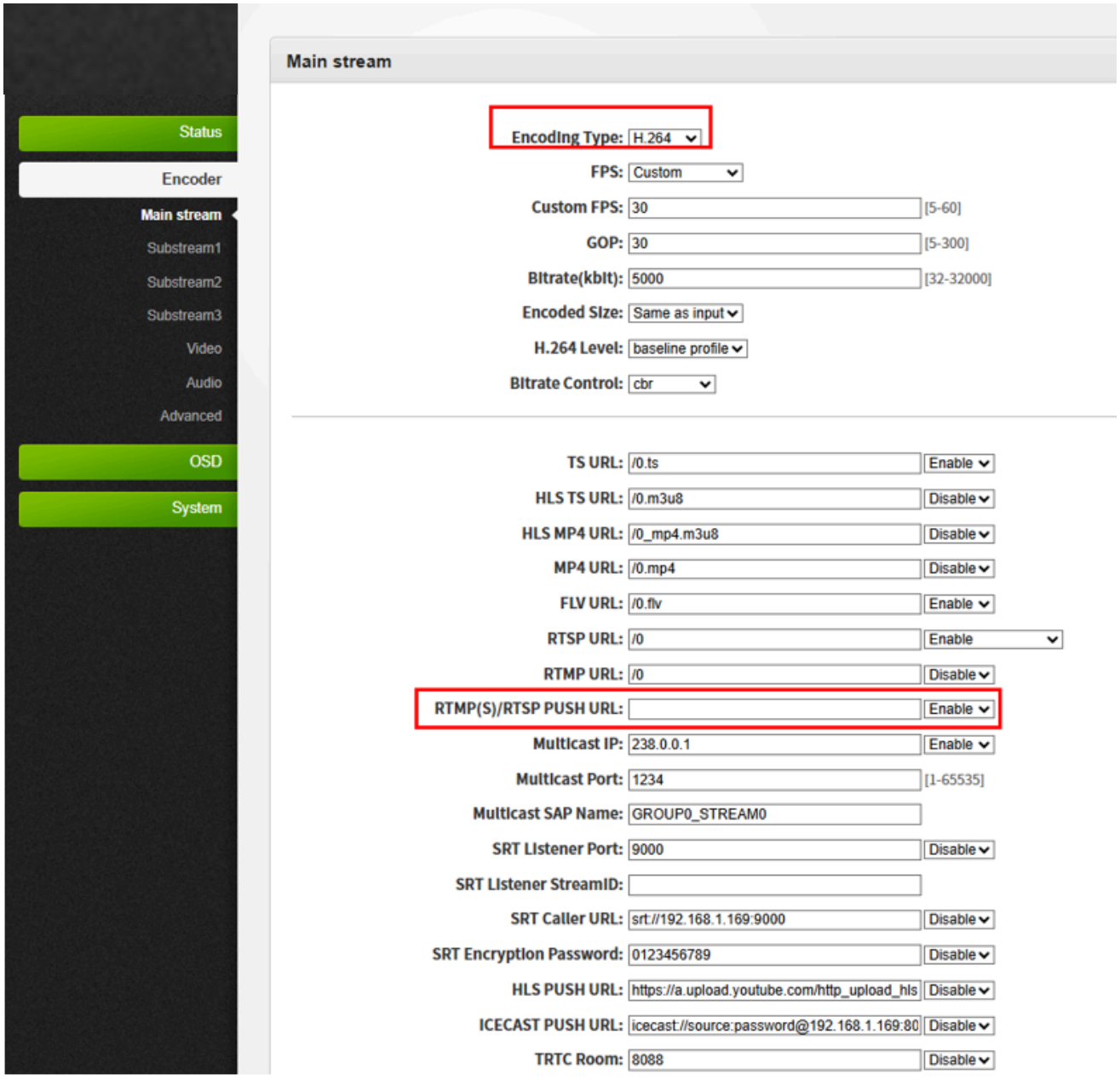


Note: If you've enabled the ONVIF setting and still can't open the video, we suggest you download the ONVIF TEST tool.

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10.4 Remote Multi User: RTMP Connection

To stream over the web, to multiple locations, you may use RTMP. This encoder supports multiple platforms, including: YouTube Live, Facebook Live, DaCast, Red5, etc.

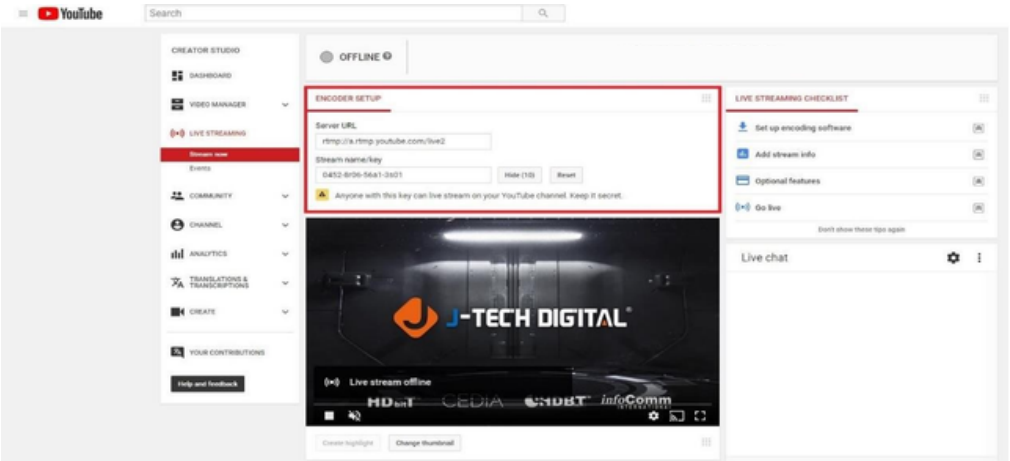


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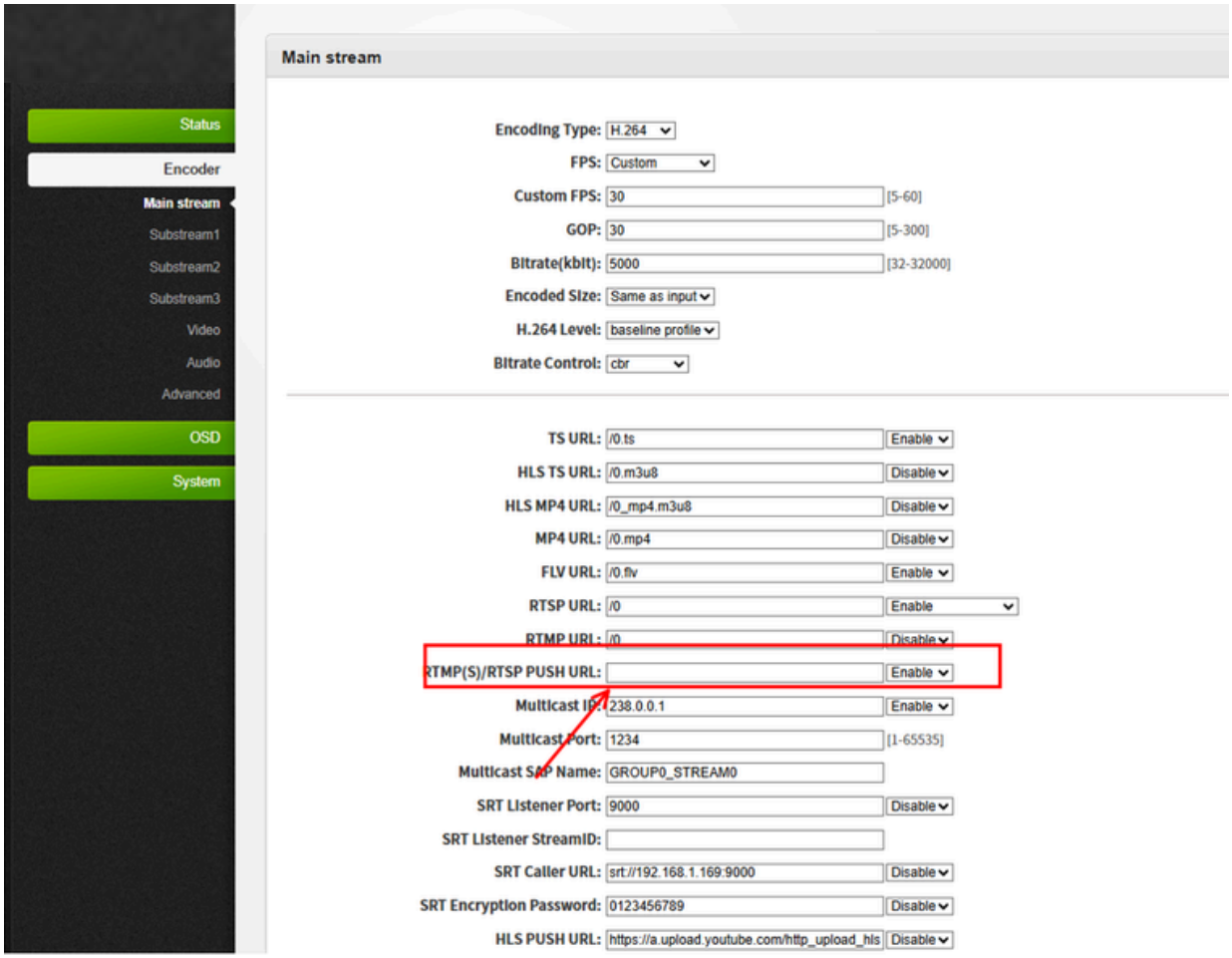
10.5 RTMP: Stream to YouTube Live

1. To stream to YouTube: access your YouTube Live settings (below) and combine your “Server URL” and “Stream name/key” (separated by a forward slash).

Full RTMP URL Example: rtmp://a.rtmp.youtube.com/live2/zc3e-yw22-bbdw-baeg

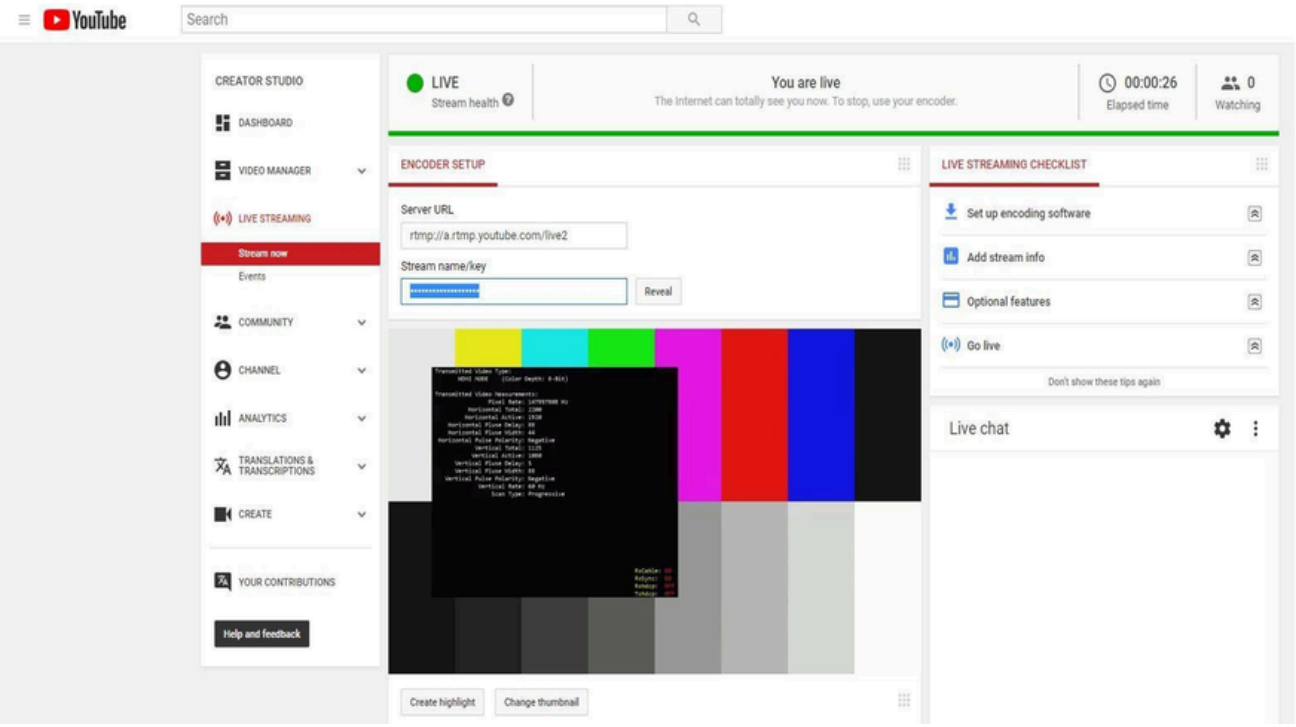


2. Enter the full RTMP URL into the “RTMP PUBLISH URL” setting of your Digital Encoder; apply and reboot. **Note: For best results, check that “TS muxer” is set to “Compatible with FFMPEG”**



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3. Check “Stream Health” in YouTube and adjust settings accordingly, per your specific stream requirements. **Note: Use Google’s DNS servers (8.8.8.8 and 8.8.4.4), in your encoder’s network settings for best results**



Maintenance

Clean this unit with a soft, dry cloth. Never use alcohol, paint thinner of benzine to clean.

11. Product Service

1. Damage requiring service: The unit should be serviced by qualified service personnel if:

(a) The DC power supply cord or AC adapter has been damaged; (b)Objects or liquids have gotten into the unit;

(c) The unit has been exposed to rain;

(d) The unit does not operate normally or exhibits a marked change in performance;

(e)The unit has been dropped or the cabinet damaged.

2. Servicing Personnel: Do not attempt to service the unit beyond that described in these operating instructions. Refer all other servicing to authorized servicing personnel.

3. Replacement parts: When parts need replacing ensure the service uses parts specified by the manufacturer or parts that have the same characteristics as the original parts. Unauthorized substitutes may result in fire, electric shock, or other hazards.

4. Safety check: After repairs or service, ask the service to perform safety checks to confirm that the unit is in proper working condition.

12. Warranty

If your product does not work properly because of a defect in materials or workmanship, our Company (referred to as "the warrantor") will, for the length of the period indicated as below, (Parts(1)Year, Labor(90) Days) which starts with the date of original purchase ("Limited Warranty period"), at its option either(a) repair your product with new or refurbished parts, or (b) replace it with a new of a refurbished product. The decision to repair or replace will be made by the warrantor.
During the "Labor" Limited Warranty period there will be no charge for labor.
During the "Parts" warranty period, there will be no charge for parts. You must mail-in your product during the warranty period. This Limited Warranty is extended only to the original purchaser and only covers product purchased as new. A purchase receipt or other proof of original purchase date is required for Limited Warranty service.

13. Mail-In Service

When shipping the unit carefully pack and send it prepaid, adequately insured and preferably in the original carton. Include a letter detailing the complaint and provide a day time phone and/or email address where you can be reached.

14. Limited Warranty Limits and Exclusions

This Limited Warranty ONLY COVERS failures due to defects in materials or workmanship, and DOES NOT COVER normal wear and tear or cosmetic damage. The Limited Warranty ALSO DOES NOT COVER damages which occurred in shipment, or failures which are caused by products not supplied by warrantor, or failures which result from accidents, misuse, abuse, neglect, mishandling, misapplication, alteration, faulty installation, set-up adjustments, misadjustment of consumer controls, improper maintenance, power line surge, lightning damage, modification, or service by anyone other than a Factory Service center or other Authorized Servicer, or damage that is attributable to acts of God.

THERE ARE NO EXPRESS WARRANTIES EXCEPT AS LISTED UNDER "LIMITED WARRANTY COVERAGE". THE WARRANTOR IS NOT LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF THIS PRODUCT, OR ARISING OUT OF ANY BREACH OF THIS WARRANTY. (As examples, this excludes damages for lost time, cost of having someone remove or re-install an installed unit if applicable, travel to and from the service, loss of or damage to media or images, data or other recorded content. The items listed are not exclusive, but are for illustration only.) PARTS AND SERVICE, WHICH ARE NOT COVERED BY HIS LIMITED WARRANTY, ARE YOUR RESPONSIBILITY.

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