Zenty | Professional A/V Solution Provider

User Manual [V1.0]

H.264 / H.265 HDMI Encoder with NDI

ZT-432 | ZT-EN300

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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.

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Table of Contents

1. Introduction 5
2. Features 5
3. Package Contents 5
4. Hardware Description 6
5. Typical Application 7
6. Connection Configuarion 7
    6.1 Change the IP Address of PC 7
    6.2 Login for Configuration 8
    6.3 Check the Stream Address 8
7. Encoder Setting 9
    7.1 Encoder Settings 9
    7.2 Audio Settings 10
    7.3 Advanced 11
8. OSD Setting 12
    8.1 Streaming OSD Setting 12
    8.2 Logo Uploading 13
9. System 13
    9.1 Network 13
    9.2 Change Password 14
    9.3 Reset 14
    9.4 Reboot 15
10. Application 15
    10.1 User Application Example 15
    10.2 NDI Stream 19
    10.3 Multi Local User Application - Multicast 20
    10.4 Local Surveillance System Application NVR Connection 22

10.5 Remote Multi User: RTMP Connection 23
10.6 RTMP: Stream to Youtube Live 24
11. Maintenance 26
12. Product Service 26
13. Warranty 27
14. Mail-In Service 27
15. Limited Warranty Limits and Exclusions 27

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1. Introduction

Introducing our Zenty H.264/H.265 HDMI Encoder with NDI Hx support, designed to deliver high-performance video encoding for professional broadcasting and streaming applications. This versatile encoder supports H.265, H.264, and MJPEG encoding formats, ensuring exceptional video quality and efficiency. With seamless audio input and HDMI local loop output capabilities, it accommodates diverse integration needs. It is equipped with multiple streaming protocols, including UDP, HTTP, RTSP, RTMP, ONVIF, and NDI HX2, offering unmatched flexibility for live streaming and video distribution. The device supports up to 1080p@60Hz HD video input, custom resolution settings, and advanced image parameter adjustments, ensuring precise visual fidelity. A 100M network interface in full-duplex mode ensures robust connectivity, while CBR/VBR rates from 16Kbps to 16Mbps provide fine-tuned control over bitrate. Manage and monitor your encoder remotely via webGUI for WAN, enabling easy operation in any setup. Reliable, adaptable, and powerful, this HDMI encoder is your all-in-one solution for professional-grade video streaming.

2. Features

- H.265 | H.264 | MJPEG Encoding
- Supports Audio Input
- Supports HDMI Local Loop Output
- Supports UDP, HTTP, RTSP, RTMP, ONVIF, NDI HX2 Protocols
- Supports MPEG1 Audio Layer 2
- CBR/VBR Rate: 16Kbps~16Mbps
- 100M Network Interface (full duplex mode)
- Up to 1080p@60Hz HD Video Input
- Supports Image Parameter Settings
- Remote Management in WAN (webGUI)
- Supports Customized Resolution Settings

3. Package Contents

- (1) x Encoder
- (1) x Power Adapter
- (1) x User Manual

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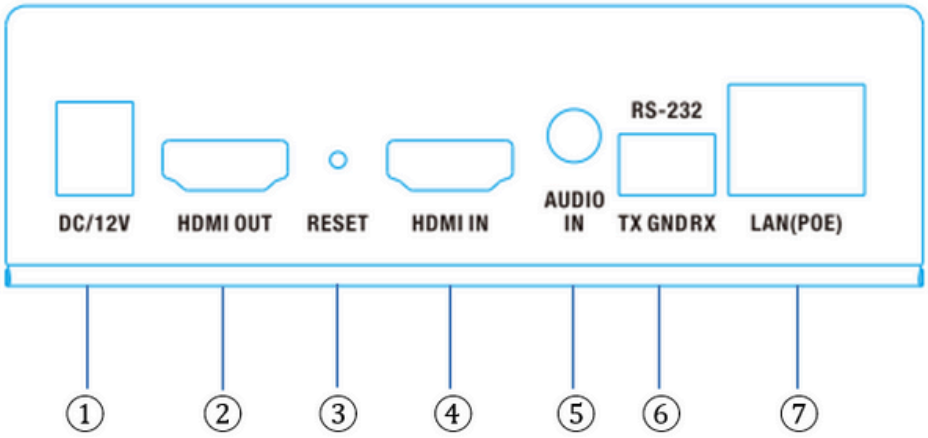
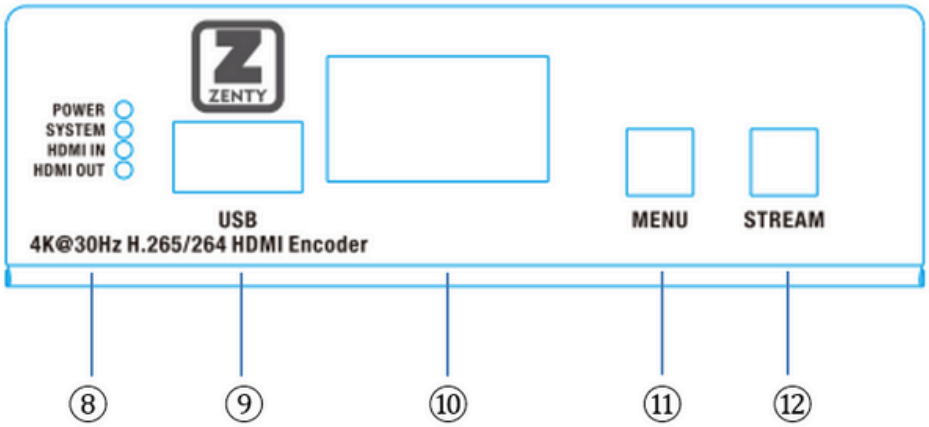
4. Hardware Description





① Power Input Port

② HDMI Loop

③ Reset Button

④ HDMI Input Port

⑤ Audio Input Port

⑥ RS-232 Port

⑦ LAN Output Port

⑧ Power Input Indicator

⑨ USB Record Port

⑩ Device Information Display

⑪ System Menu Button

⑫ Stream Control Button

Note:

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

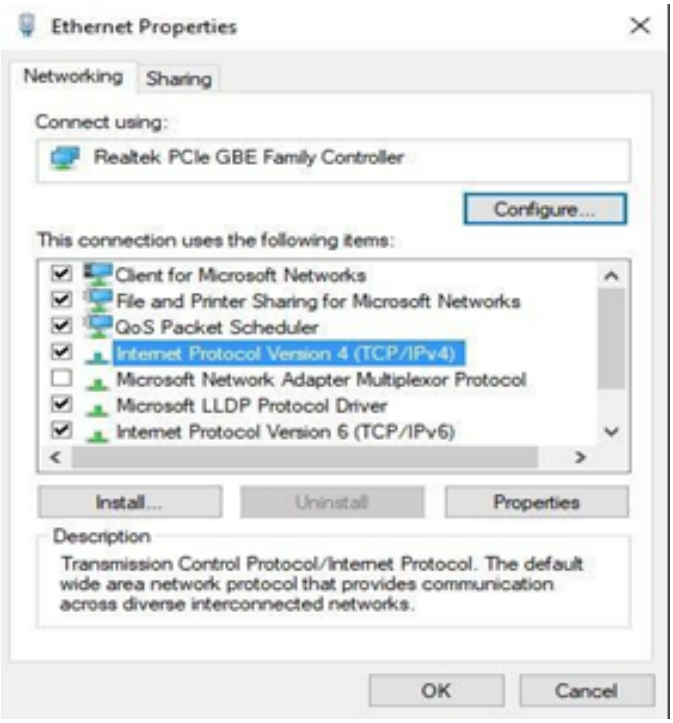
(2) LAN: Default IP is **192.168.1.168**

5. Typical Application

6. Connection Configuration

6.1 Change the IP Address of PC

Assign the PC (or laptop) an IP address. On a Windows PC: Press the ÿ+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.



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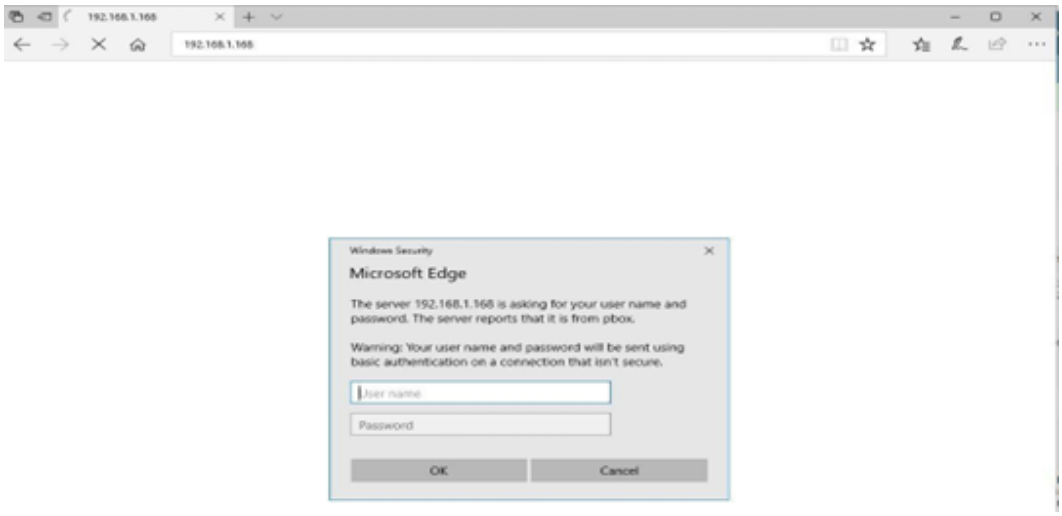
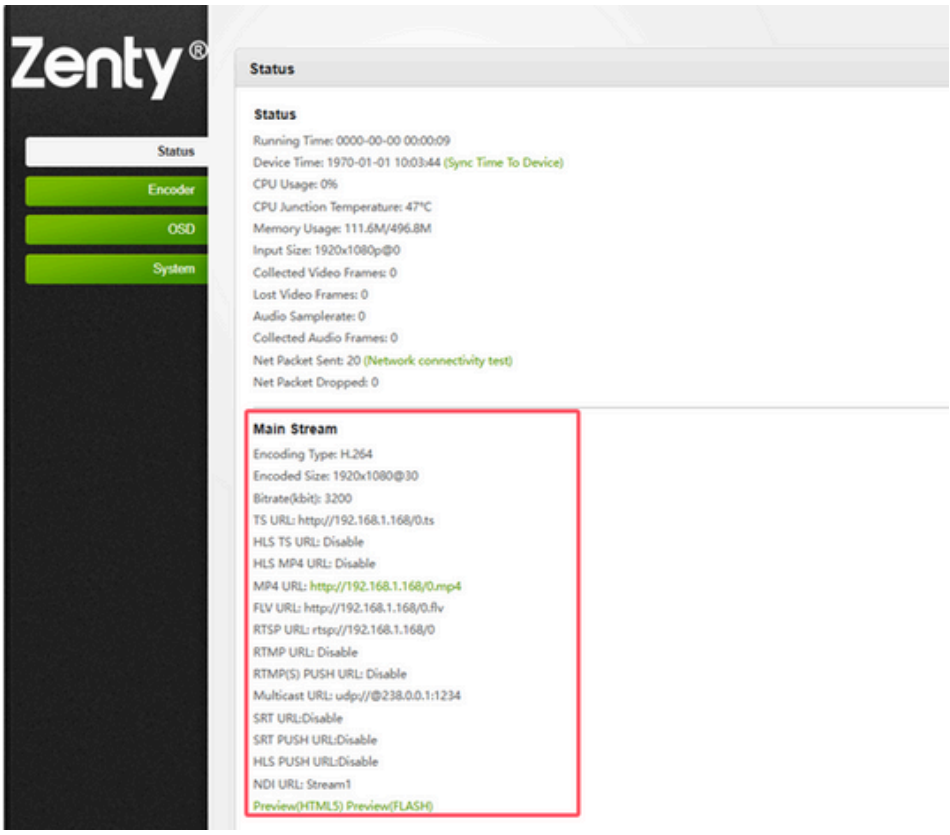
6.2 Login for Configuration

Enter the unit'sIP 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**



6.3 Check the Stream Address

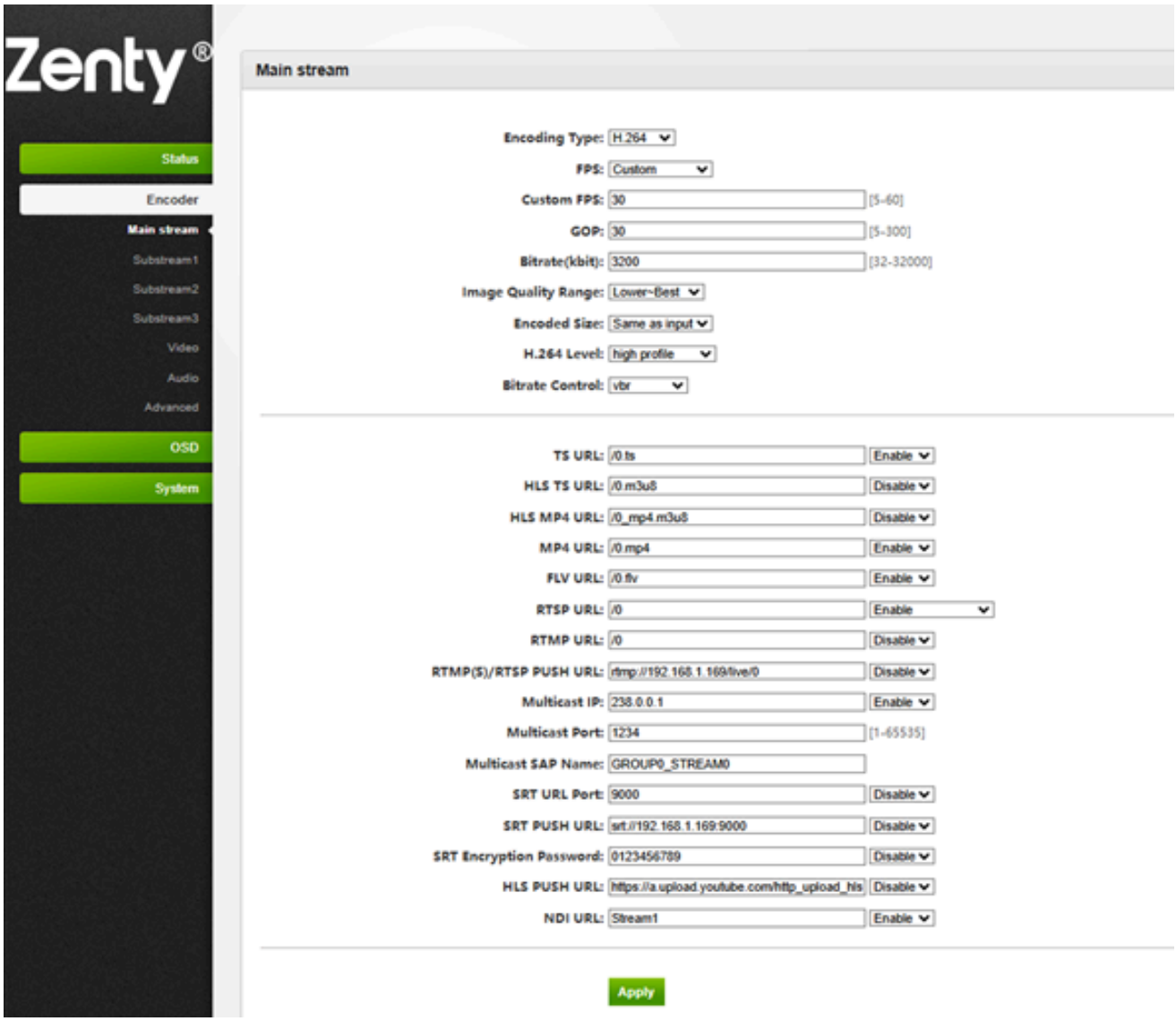
Stream addresses populate in the "Main Stream" category show in the red box below:



7. Encoder Setting

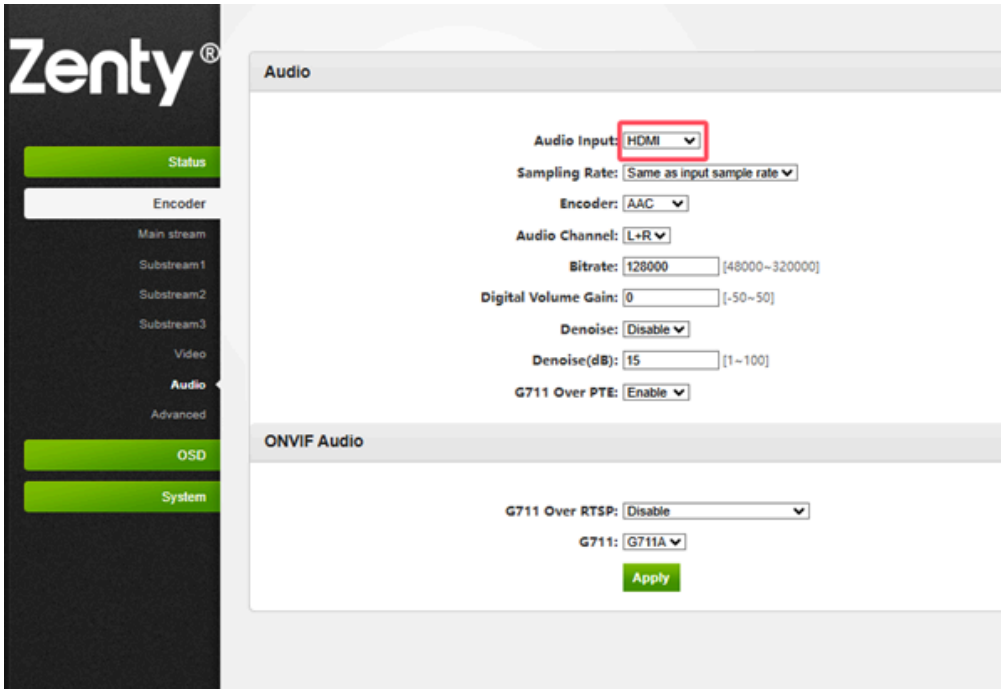
7.1 Encoder Settings

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

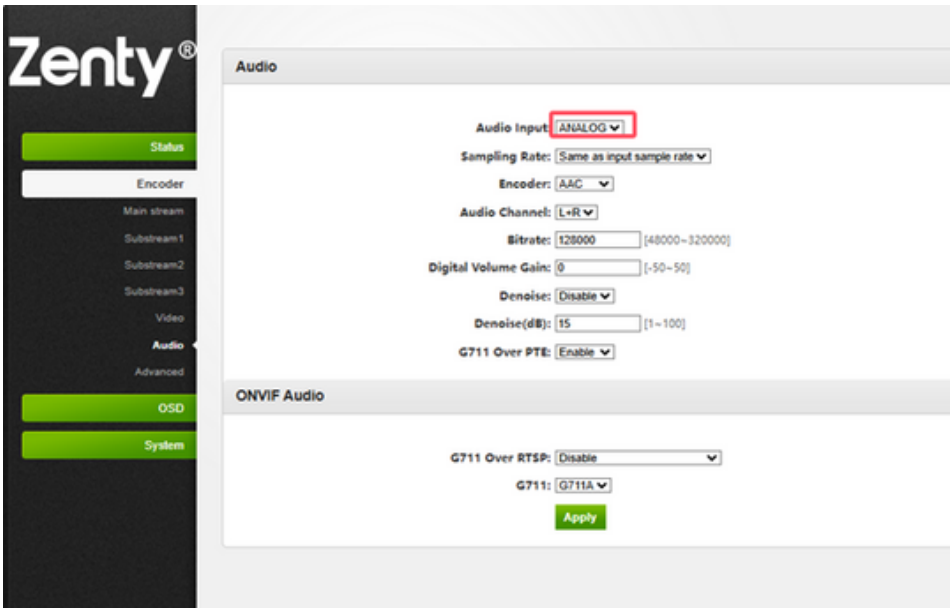


7.2 Audio Settings

Audio from HDMI Port: Click “Encoder” → “Audio” → Select “HDMI” from the drop-down menu for Audio Input → Click “Apply”

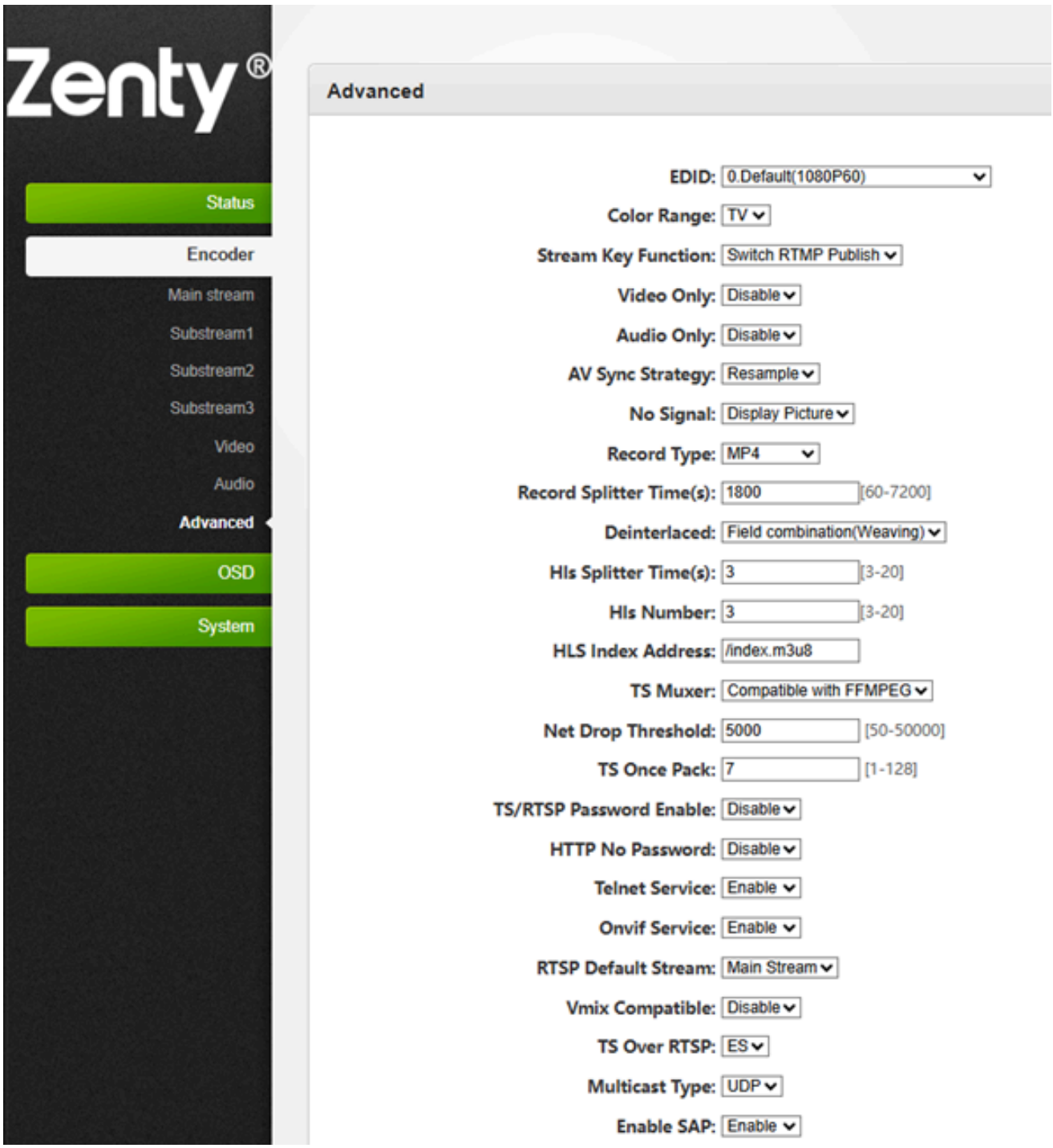


Audio from the 3.5mm audio port: Click “Encoder” → “Audio” → Select “ANALOG” from the drop-down menu for Audio Input → Click “Apply”



7.3 Advanced

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



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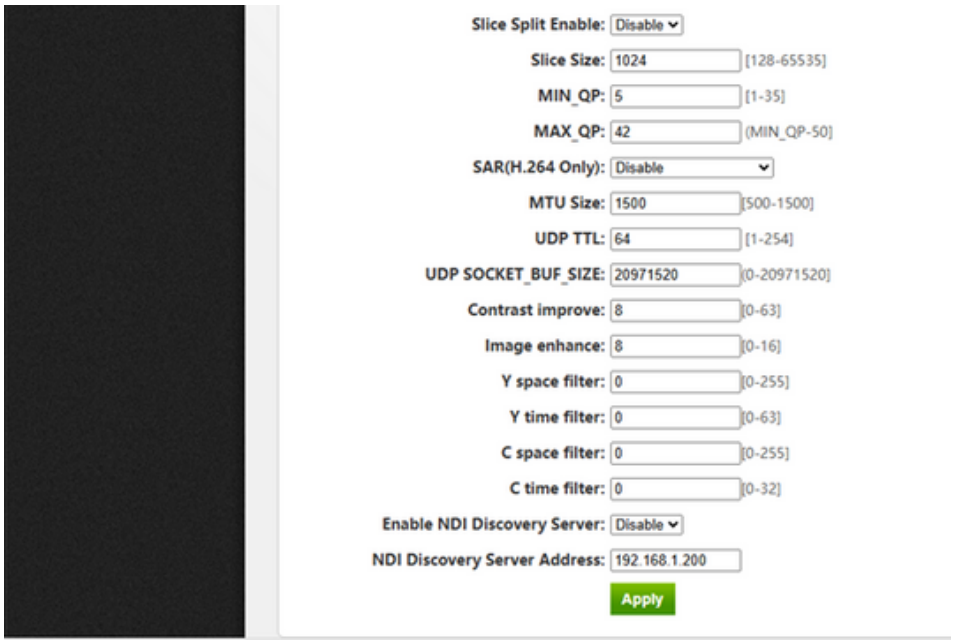
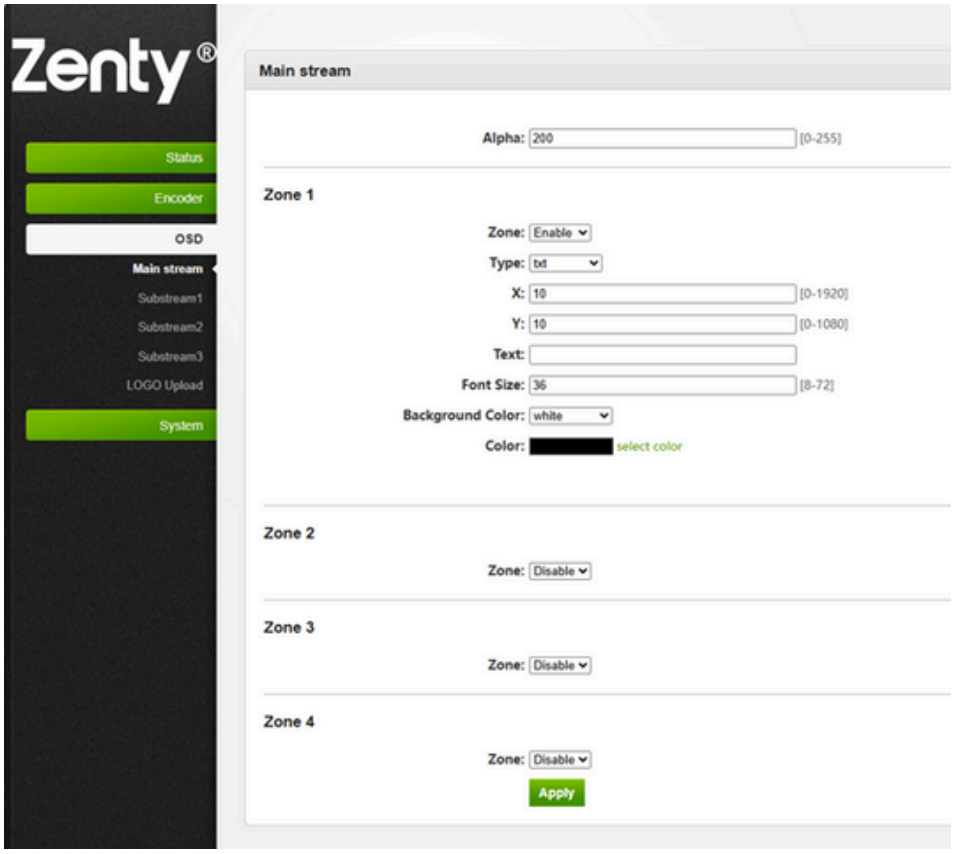


8. OSD Setting

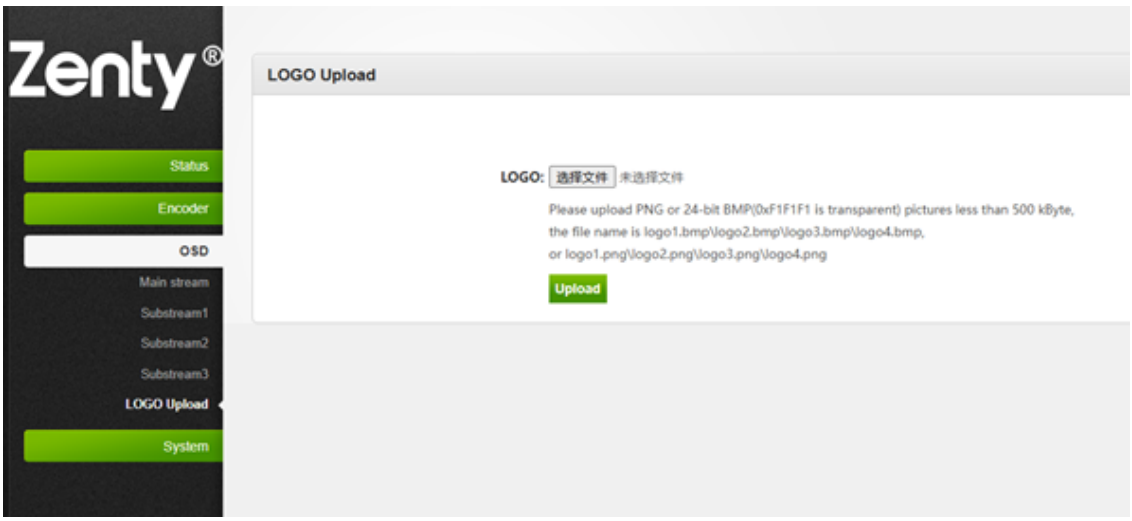
8.1 Streaming OSD Setting

Click "OSD" → Configure your settings → Click "Apply"



8.2 LOGO Uploading

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



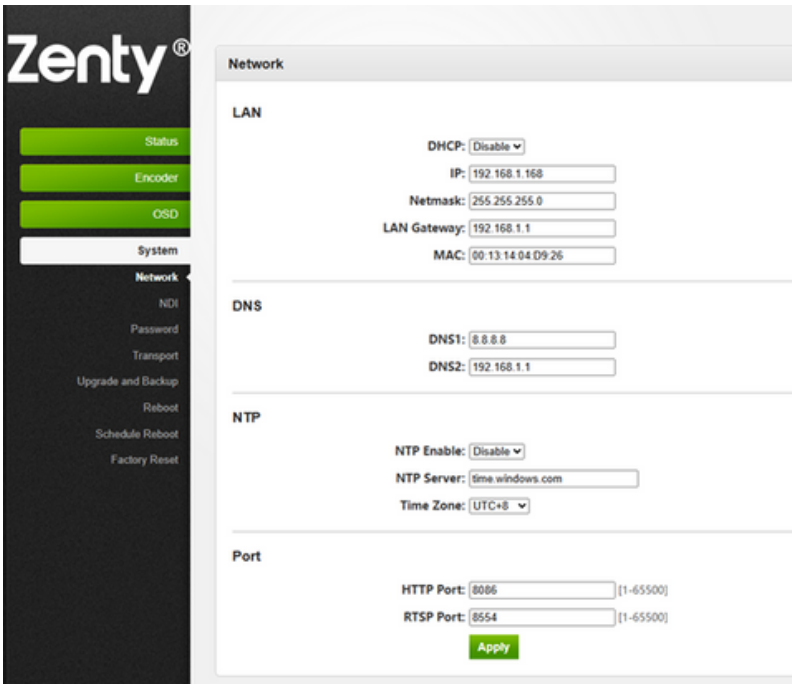
※**Note:** The above interface screenshot examples may show a difference with actual operation interface due to software upgrades. All screenshots are for reference only.

9. System

9.1 Network

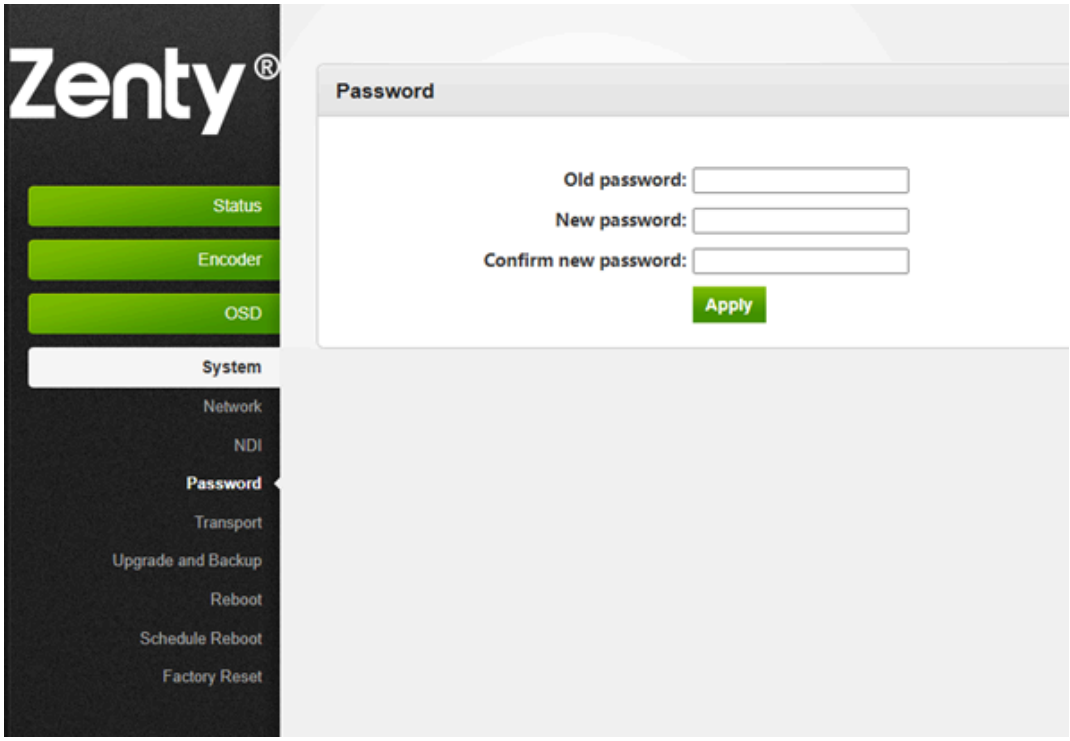
Click System → Network → Modify the network settings to match those of your network

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



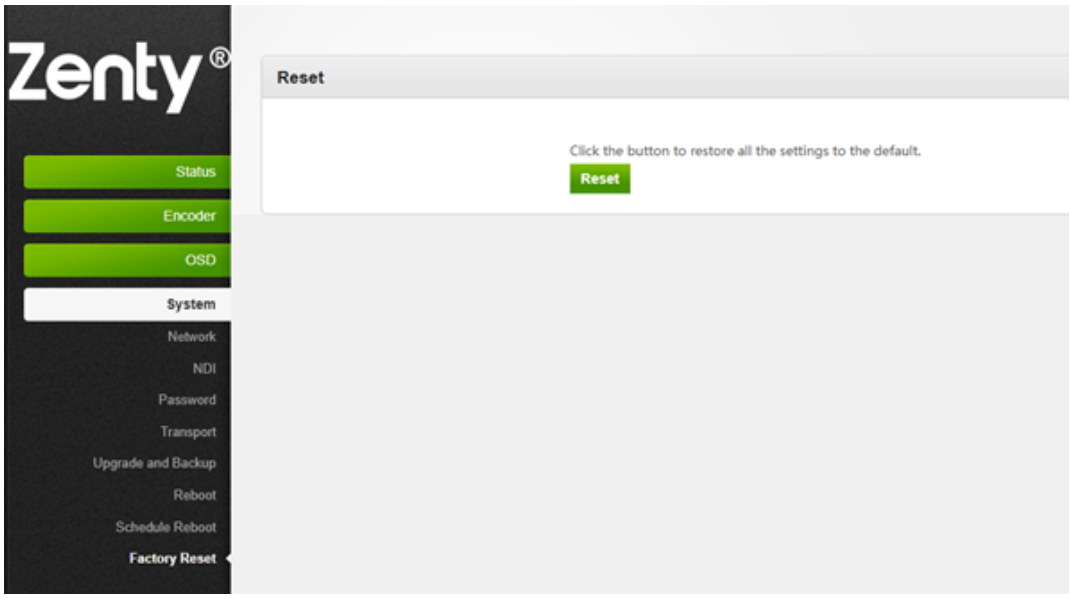
9.2 Change Password

System → Change password → Set your password → Apply



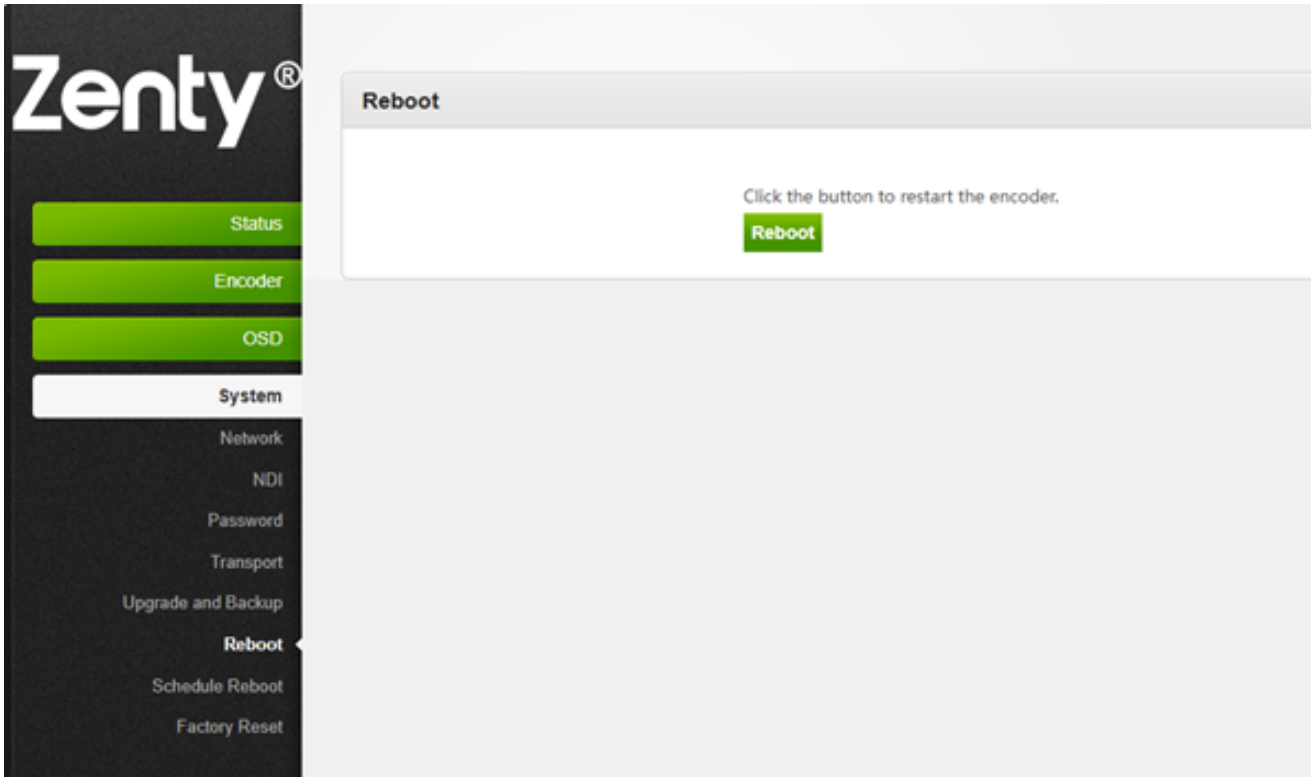
9.3 Reset

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



9.4 Reboot

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



10. Application

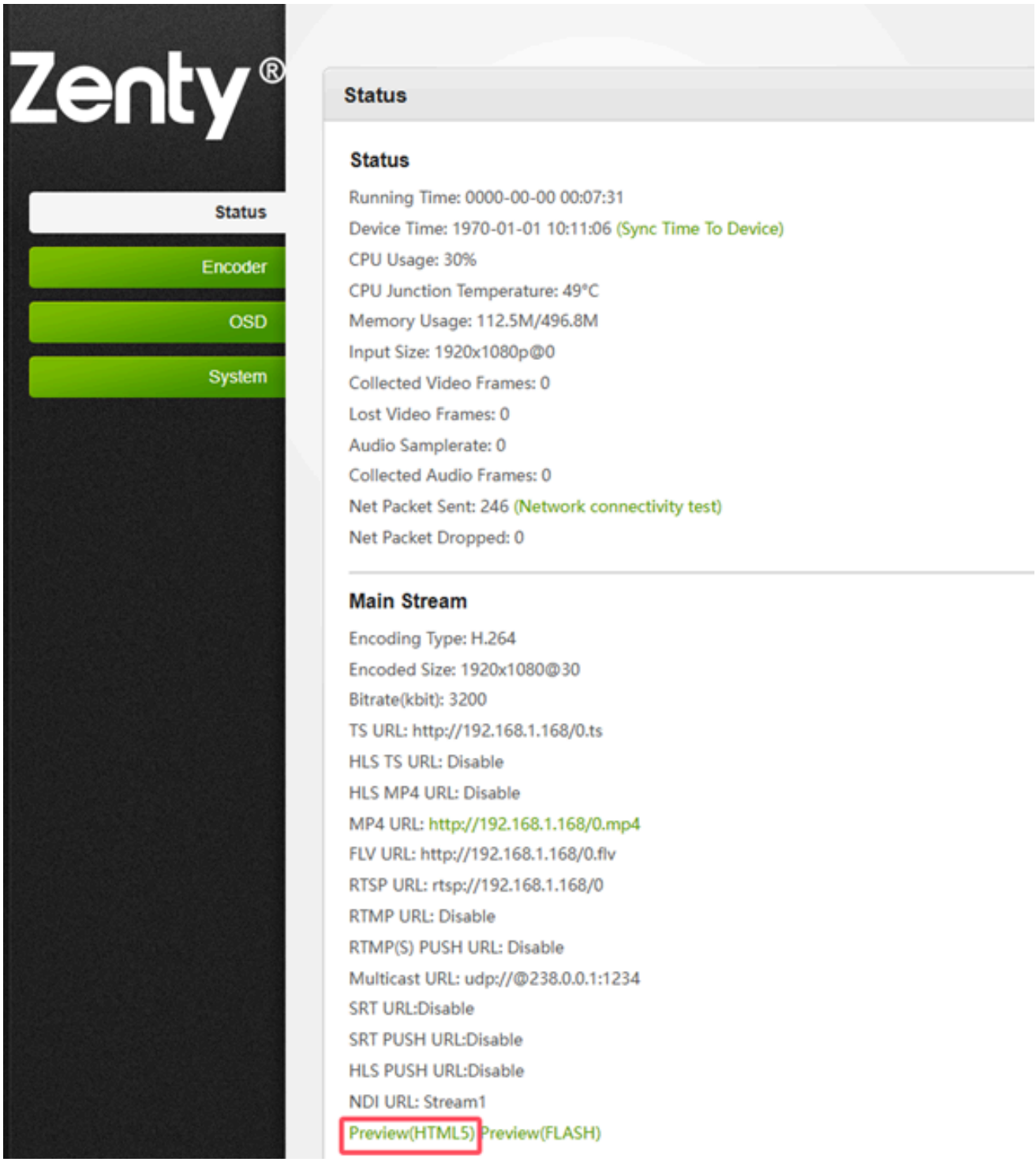
10.1 User Application Example

10.1.1 Web Video Preview

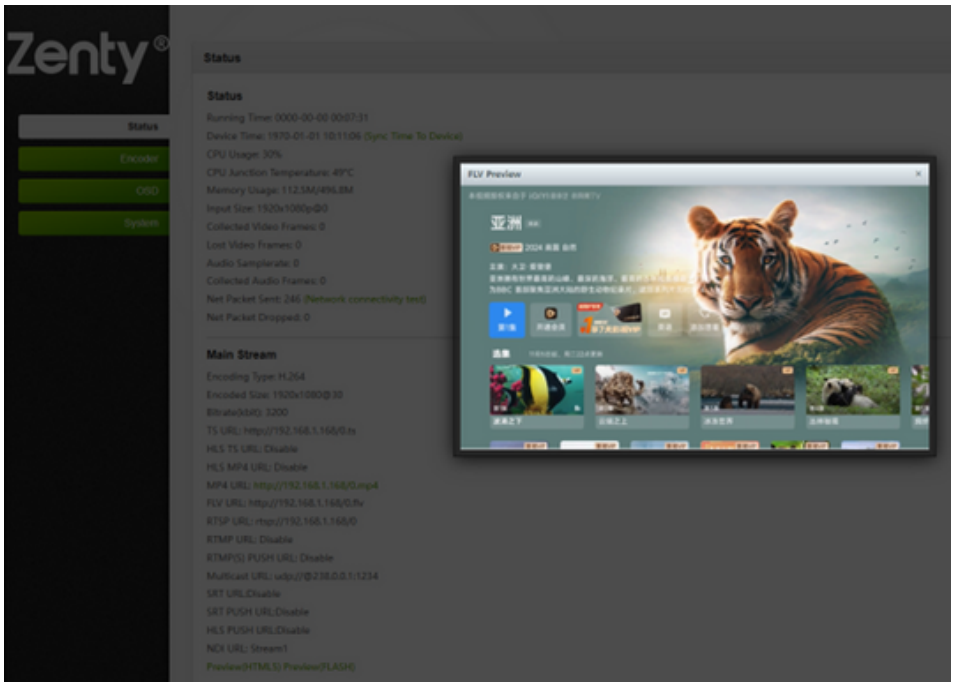
Status → Main Stream → Preview

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.

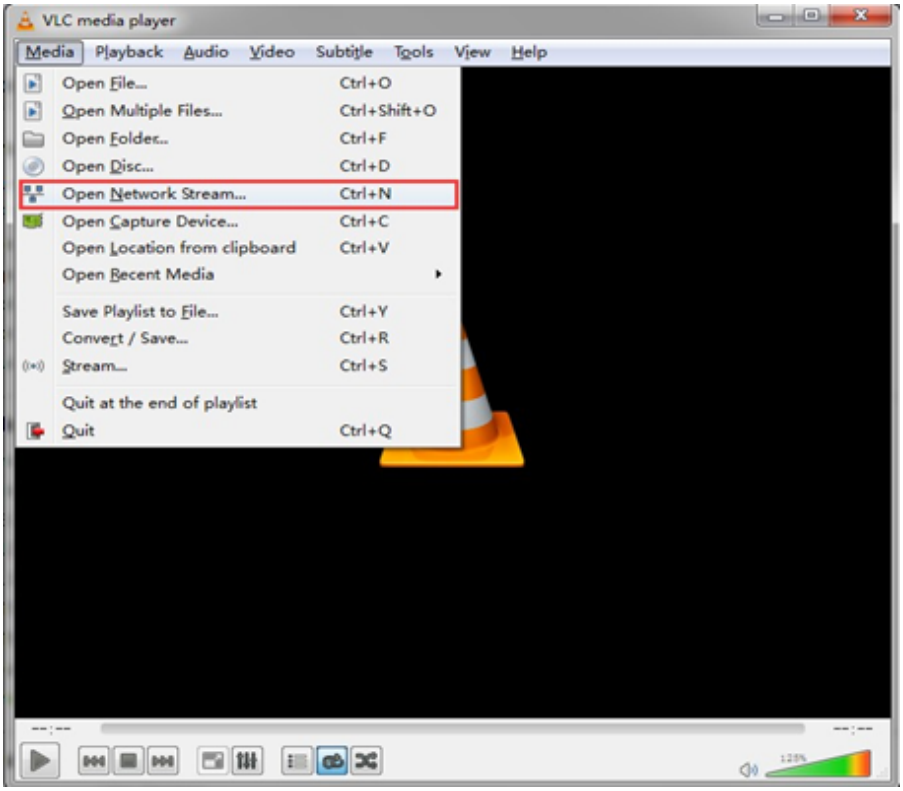


Picture below shows the stream preview

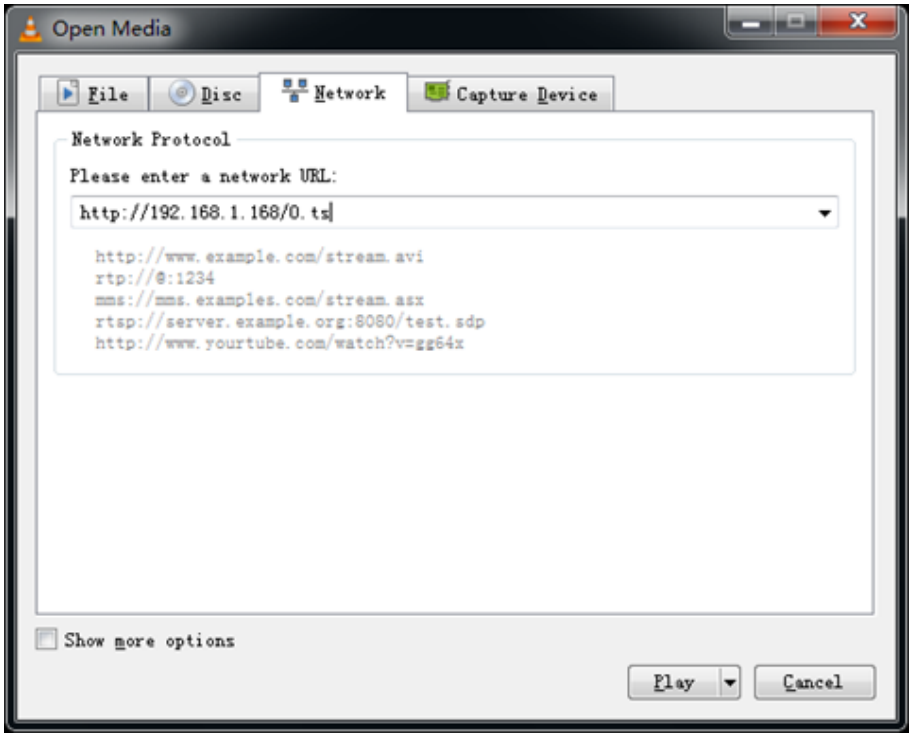


10.1.2 VLC

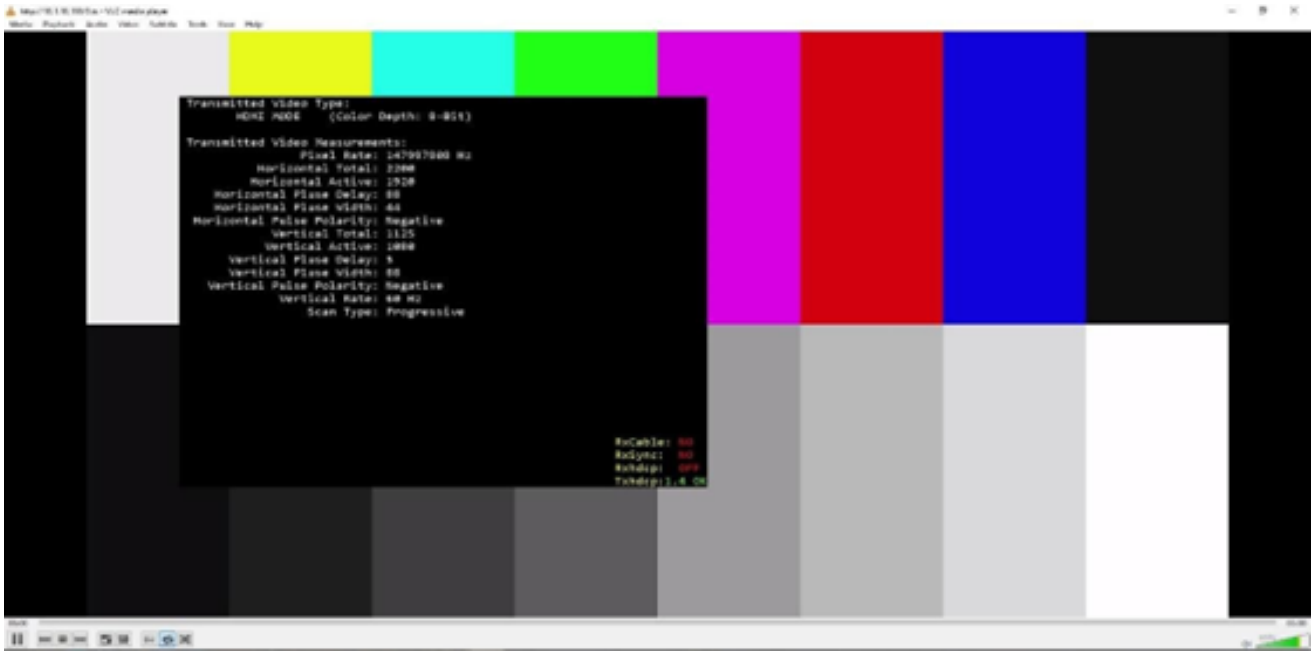
Connect an HDMI source to the ZT-EN300 encoder. Open VLC media player (Download link: http://www.videolan.org/)，Click “Media”, then click “Open Network Stream”.



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.

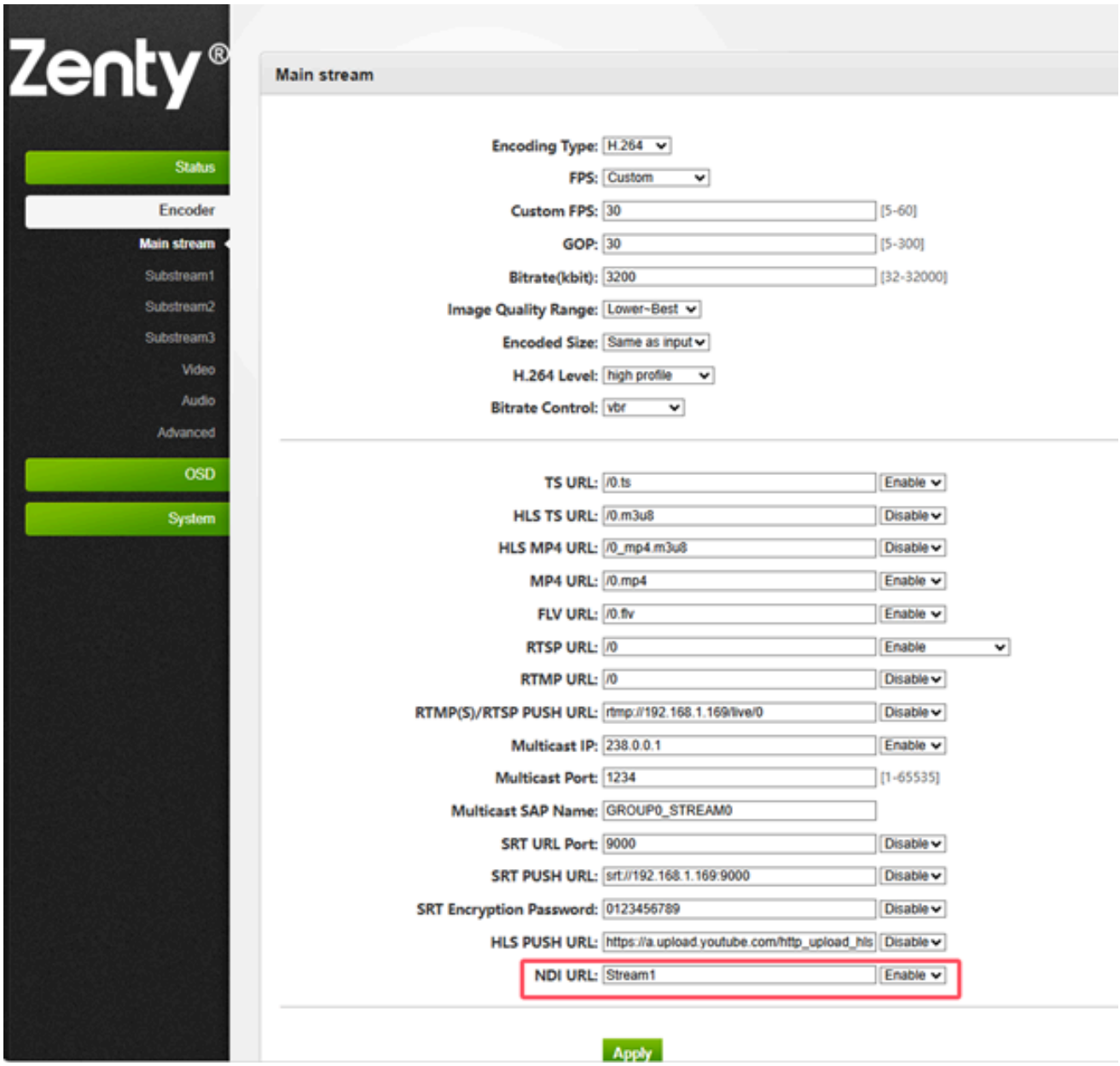


VLC Example:



10.2 NDI Stream

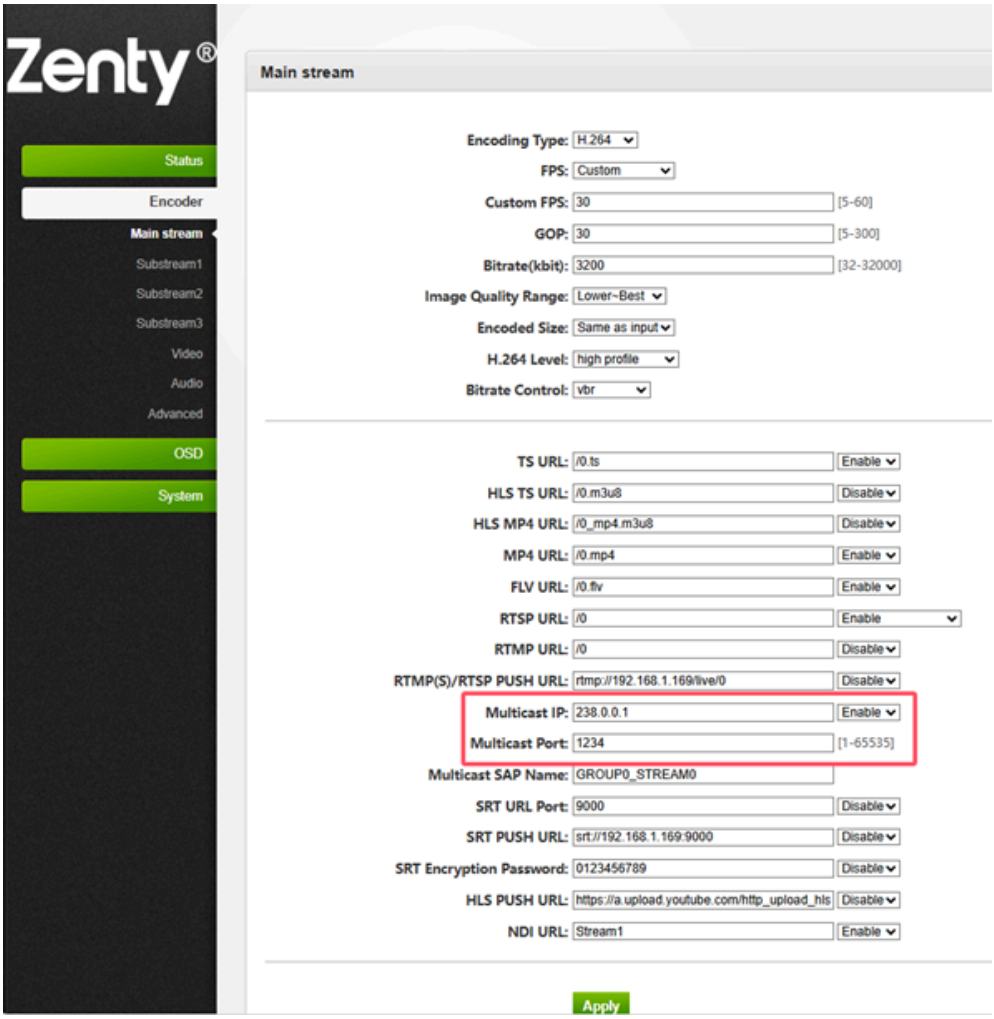
Enable NDI URL and turn off the firewall on your computer.



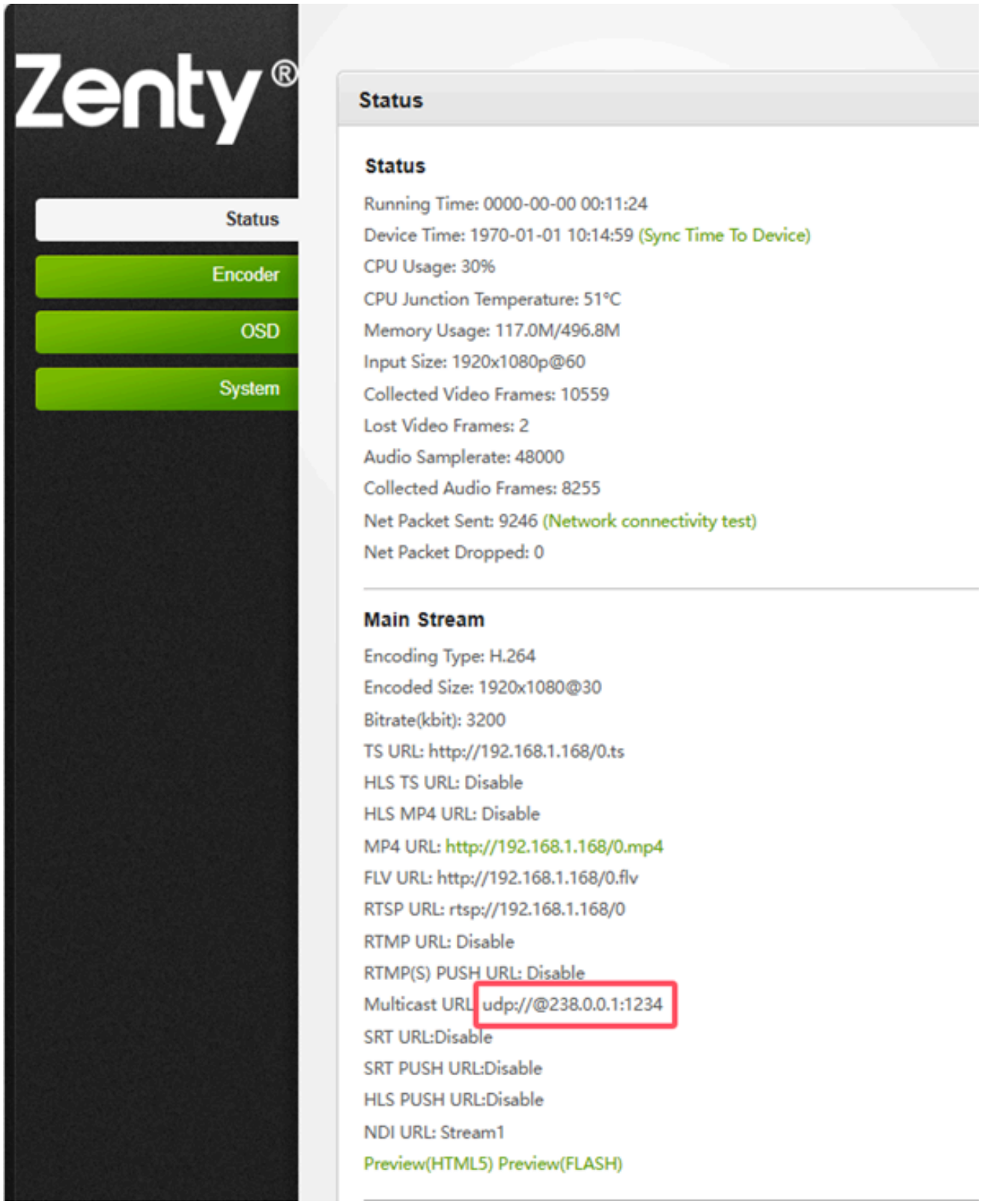
Open NDI player to play “stream1”. NDI player is available for download here (https://www.ndi.tv/tools/)

10.3 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 ZT-EN300 encoder.

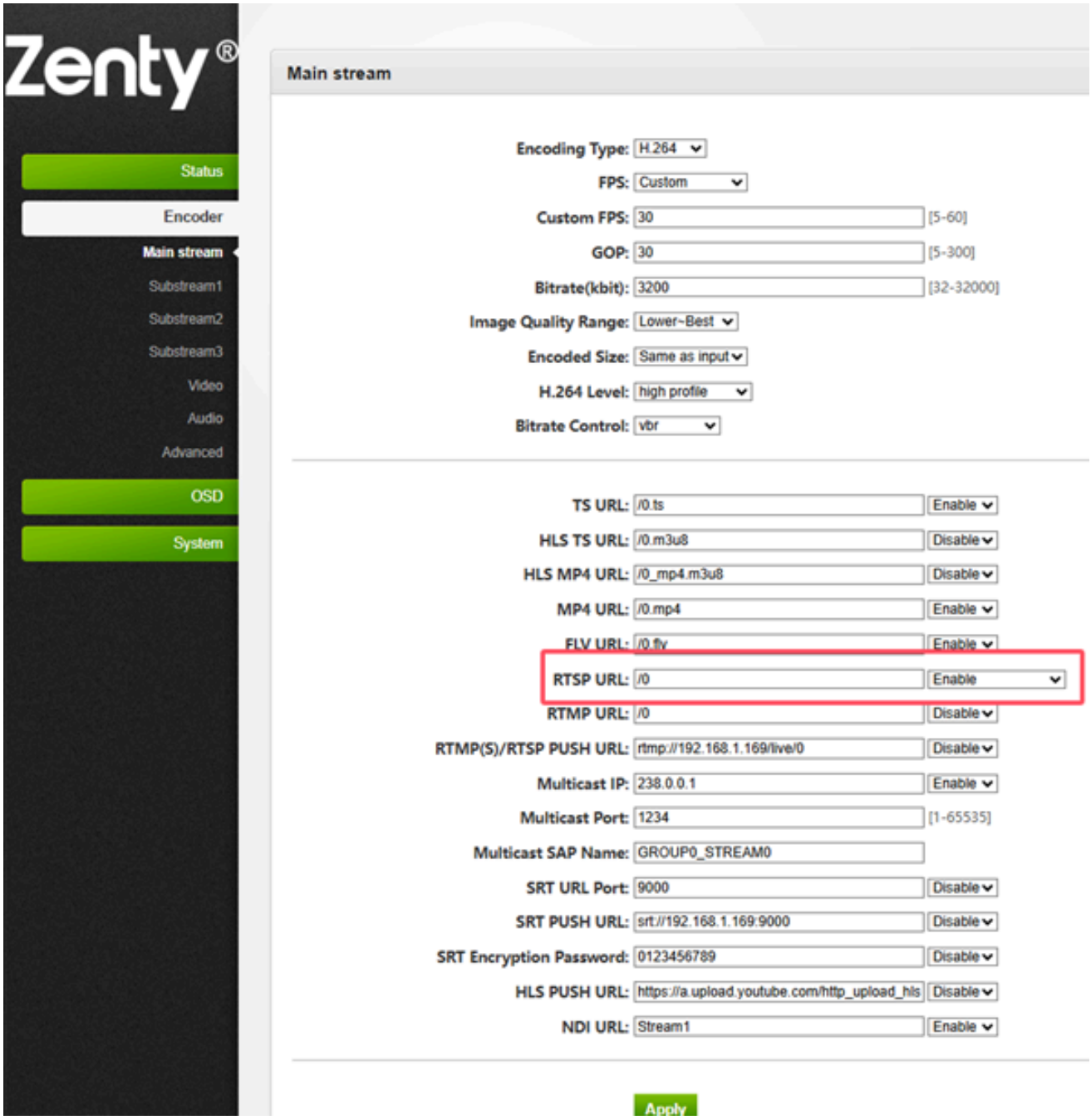


After the reboot, copy the multicast IP address from the Status page, and paste the IP address into VLC Player. This stream can be viewed by more than
one user at the same time.

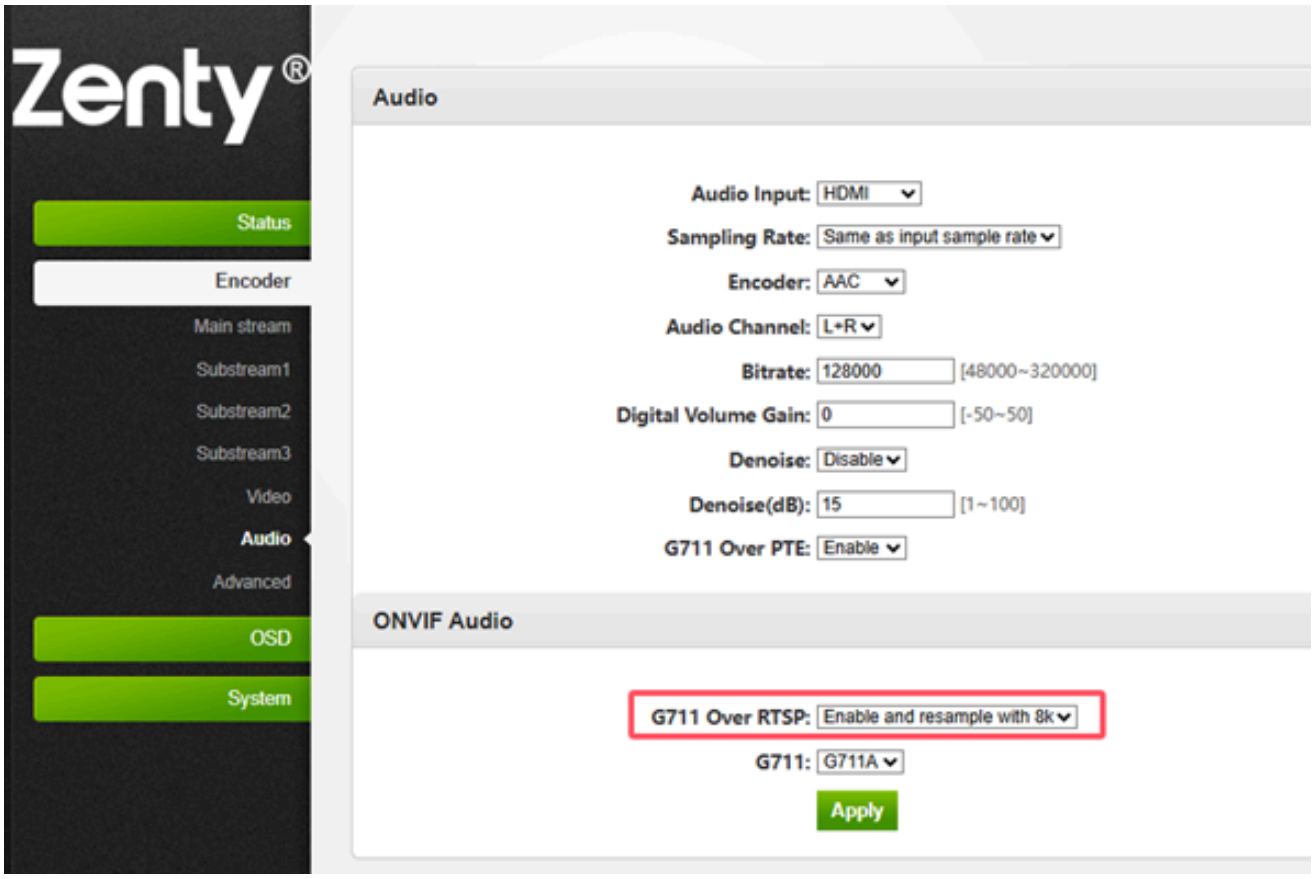


10.4 Local Surveillance System Application NVR Connection

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.



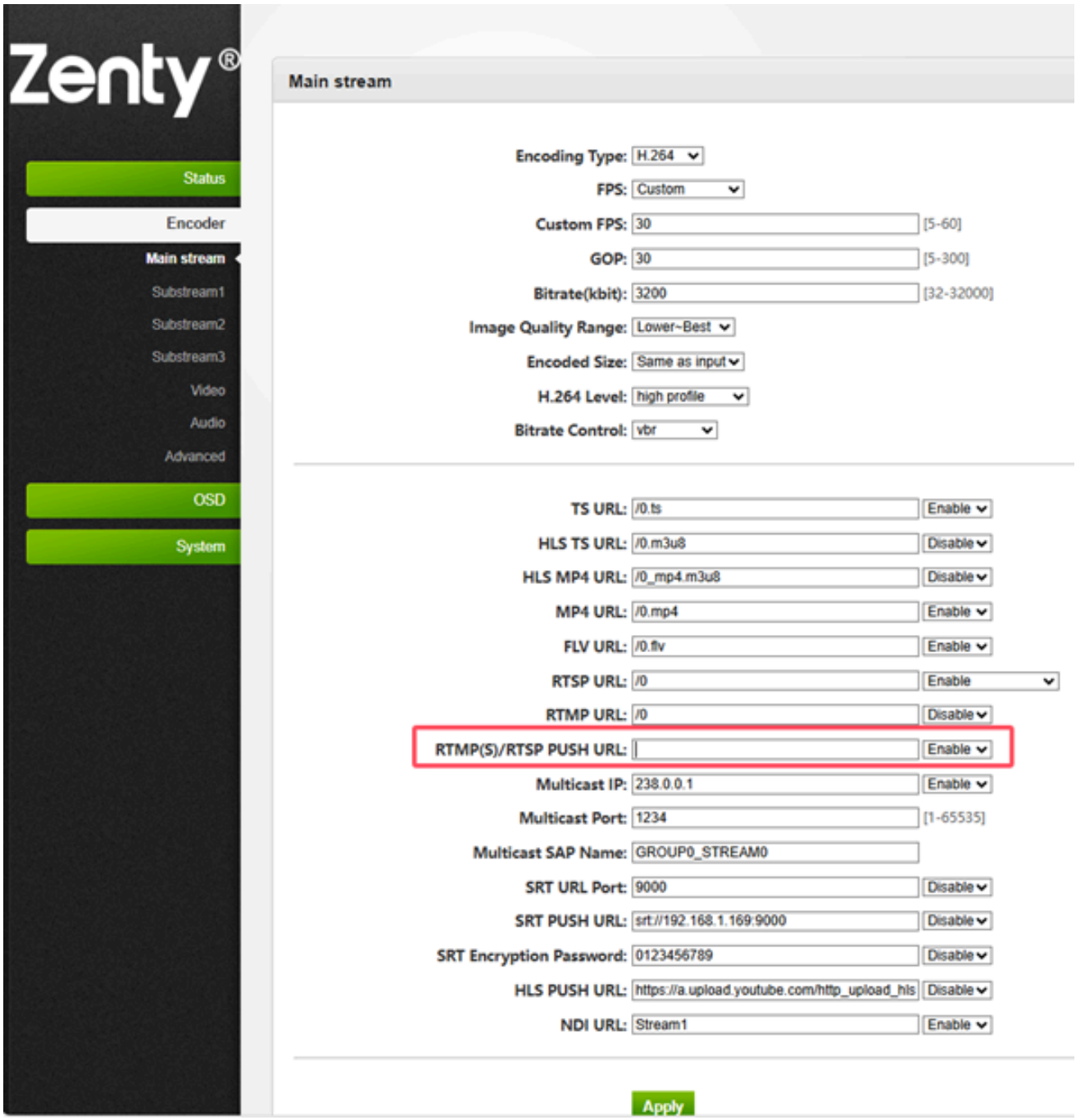
2. If you need the NVR to recognize the audio of the HD Encoder, you will need to enable the Audio as below picture:



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

10.5 Remote Multi User: RTMP Connection

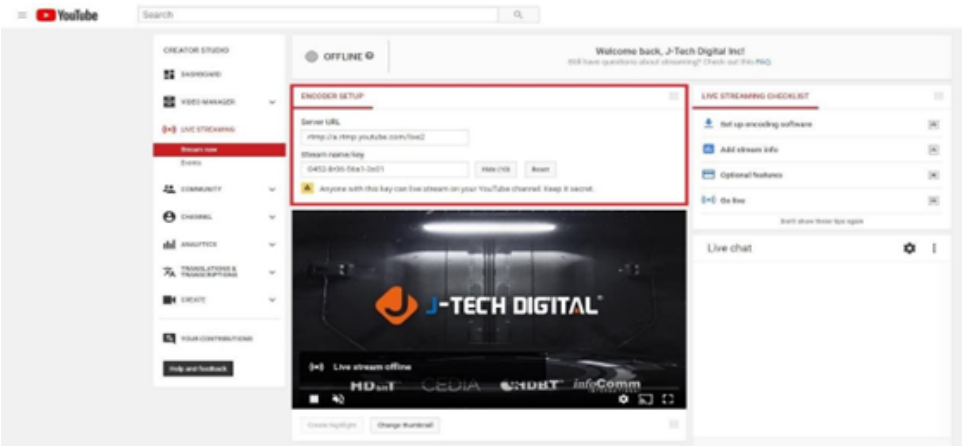
To stream over the web, to multiple locations, you may use RTMP. This encoder supports multiple platforms, including: YouTube Live, Facebook Live, DaCast, Red5, etc.



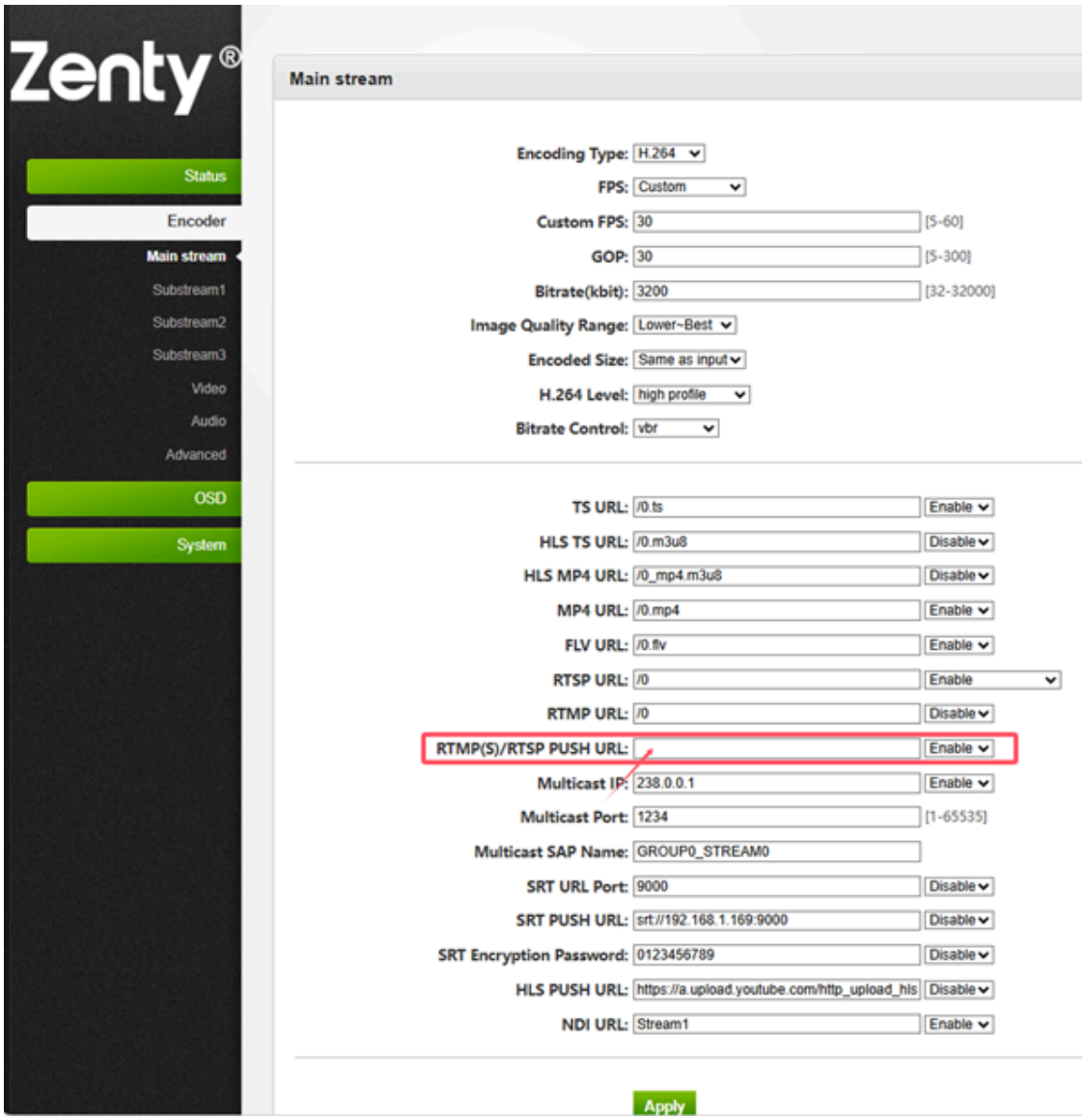
10.6 RTMP: Stream to Youtube Live

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).

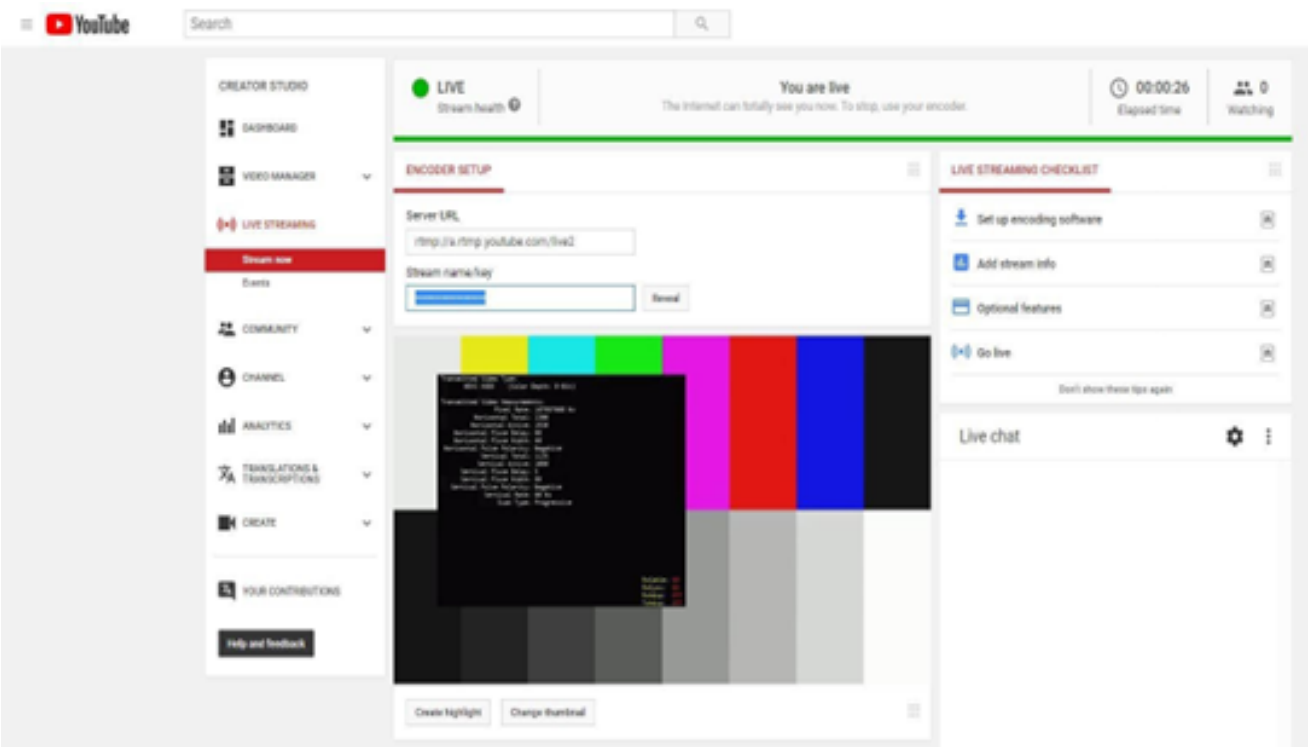
Full RTMP URL Example: rtmp://a.rtmp.youtube.com/live2/zc3e-yw22-bbdw-baeg



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



Check “Stream Health” in YouTube and adjust settings accordingly, per your specifics 1. 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.



11. Maintenance

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

12. Product Service

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

(a)The DC power supply cord or AC adaptor 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.

13. Warranty

If your product does not work properly because of a defect in materials of workmanship, our company (referred to as "the warrantor") will, for the length of the period indicated as below, "Parts and Labor (5) Years", 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 or 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 products purchased as new. A purchase receipt or other proof of original purchase date is required for Limited Warranty service.

14. 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 daytime phone and/or email address where you can be reached phone and/or email address where you can be reached.

15. Limited Warranty Limits and Exclusions

This Limited Warranty ONLY COVERS failures due to defects in material 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, mis-adjustment 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 attributed 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 this limited warranty, are your responsibility.

HIGH-DEFINITION MULTIMEDIA INTERFACE

The terms HDMI and HDMI High-Definition Multimedia interface, and the HDMI Logo are trademarks or registered trademarks of HDMI Licensing LLC in the United States and other countries.

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