



Zenty | Professional A/V Solution Provider

User Manual [v1.0]



IPTV H.264 Encoder

ZT-102 | ZT-EN200

ZENTY®

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HDMI™
HIGH DEFINITION MULTIMEDIA INTERFACE



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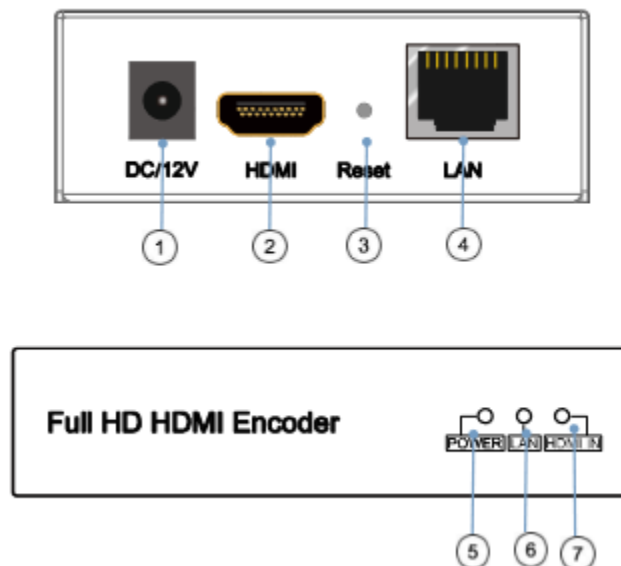
1. Features

- Supports H.264 encoding.
- Supports UDP, HTTP, RTSP, RTMP, ONVIF protocol.
- Supports MPEG1 Audio Layer 2.
- CBR/VBR rate: 16Kbps~16Mbps.
- 1000M network interface uses 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 Main Unit. H.264 HD HDMI Encoder
- (1) x Power adapter DC 12V 1A
- (1) x Operating Instruction manual

3. Hardware Description



- ① Power input port
- ② HDMI input
- ③ Reset button ❶
- ④ LAN output ❷
- ⑤ Indicator of power input
- ⑥ Indicator of LAN output
- ⑦ Indicator of HDMI input

Note: ❶. Reset to the factory default setting: press "Reset" for 10 seconds till all three indicators go out.

❷. LAN: default IP is **192.168.1.168** for the unit.

4. Typical Application

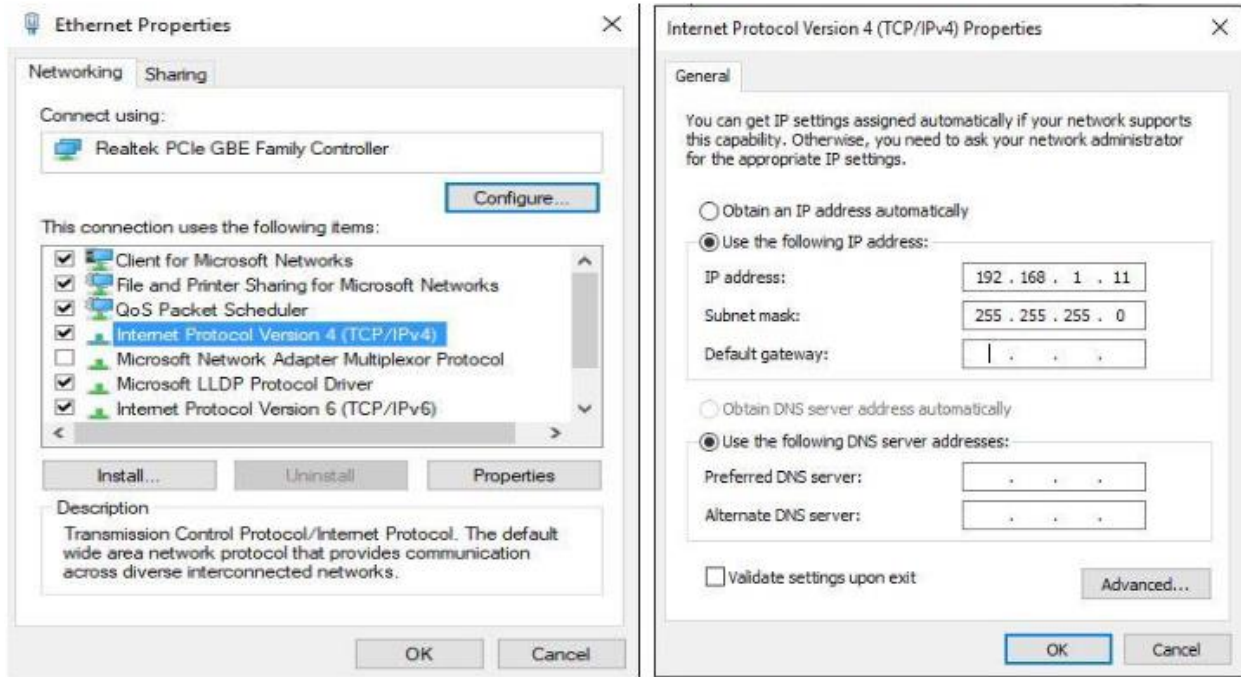


5. Connection Configuration

5.1 Software

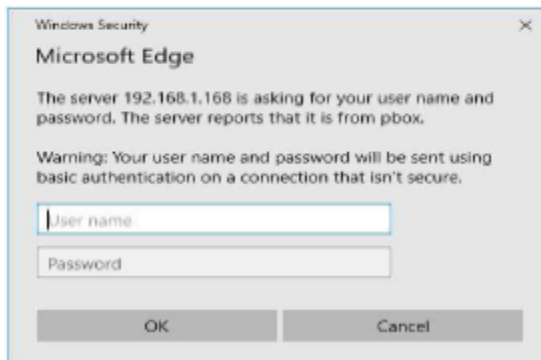
5.1.1 Change the IP Address of PC

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



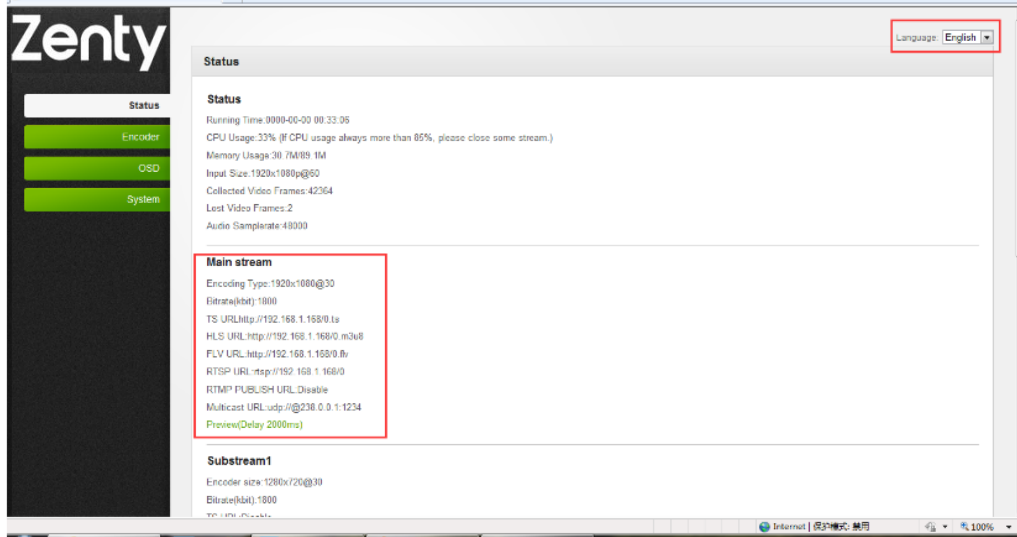
5.1.2 Login for Configuration

Enter the unit IP 192.168.1.168 in your browser, to open the web GUI. Login with the default user name and pass word as **admin**.



5.1.3 Check the Stream Address

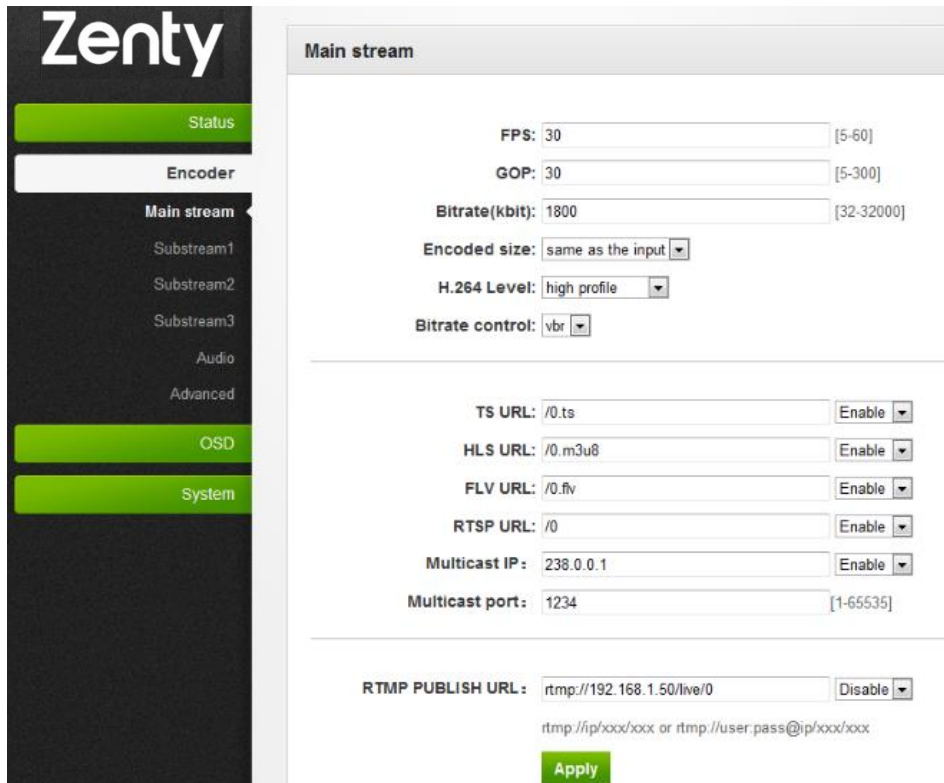
As below, the stream address is in the red frame.



6. Encoder Setting

6.1 Encoder Setting

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



6.2 Audio Setting

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

The screenshot shows the Zenty web interface. On the left is a navigation sidebar with the Zenty logo at the top. Below the logo are menu items: Status (highlighted in green), Encoder (highlighted in white), Main stream, Substream1, Substream2, Substream3, Audio (highlighted in white with a left-pointing arrow), and Advanced. Below these are OSD and System, both highlighted in green. The main content area is titled 'Audio' and contains three settings: 'Samplerate:' with a dropdown menu set to '44100', 'Encoder:' with a dropdown menu set to 'AAC', and 'Bitrate:' with an empty text input field. A green 'Apply' button is positioned below the Bitrate field. Below the Audio section is another section titled 'ONVIF Audio' containing 'G711A Over RTSP:' with a dropdown menu set to 'Disable' and another green 'Apply' button below it.

6.3 Advanced

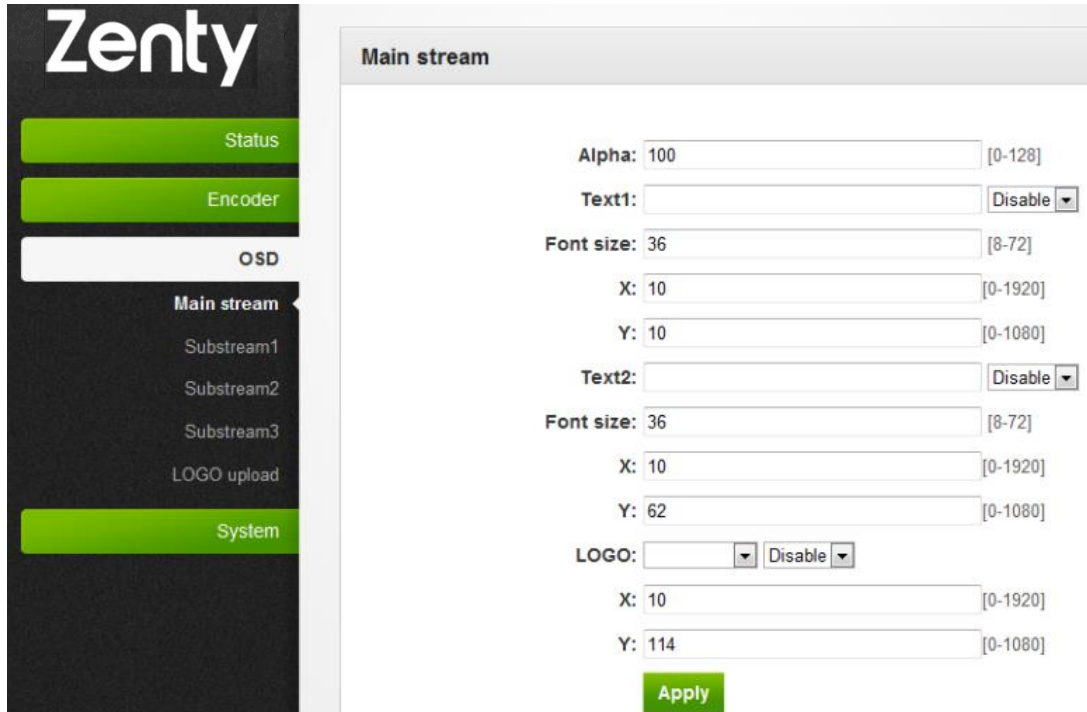
Click “Encoder” → “Advanced” → Configure your settings → Click “Apply”.

The screenshot shows the Zenty web interface. The navigation sidebar is identical to the previous screenshot, but 'Advanced' is now highlighted in white with a left-pointing arrow. The main content area is titled 'Audio' and contains three settings: 'TS Muxer:' with a dropdown menu set to 'Compatible with VLC', 'TS once pack:' with an empty text input field and '[3-128]' to its right, and 'TS Password Enable:' with a dropdown menu set to 'Disable'. A green 'Apply' button is positioned below the TS Password Enable field. Below the Audio section is another section titled 'CSC' containing 'CSC:' with a dropdown menu set to 'Disable' and 'Contrast:' with an empty text input field and '[0-255], Default: 64' to its right. A green 'Apply' button is positioned below the Contrast field.

7. OSD Setting

7.1 Stream OSD Setting

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



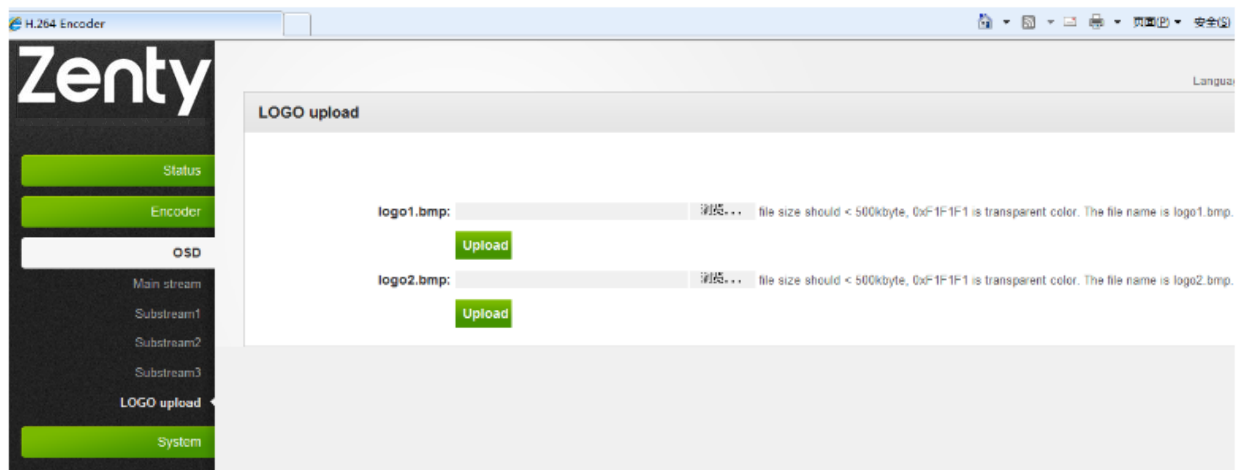
The screenshot shows the Zenty OSD settings interface. On the left is a navigation menu with options: Status, Encoder, OSD (selected), Main stream (selected), Substream1, Substream2, Substream3, LOGO upload, and System. The main content area is titled "Main stream" and contains the following settings:

- Alpha: 100 [0-128]
- Text1: [] Disable
- Font size: 36 [8-72]
- X: 10 [0-1920]
- Y: 10 [0-1080]
- Text2: [] Disable
- Font size: 36 [8-72]
- X: 10 [0-1920]
- Y: 62 [0-1080]
- LOGO: [] Disable
- X: 10 [0-1920]
- Y: 114 [0-1080]

An "Apply" button is located at the bottom of the settings area.

7.2 LOGO Uploading

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



The screenshot shows the Zenty LOGO upload interface. On the left is the same navigation menu as in the previous screenshot, with "LOGO upload" selected. The main content area is titled "LOGO upload" and contains two upload fields:

- logo1.bmp: [] file size should < 500kbyte, 0xF1F1F1 is transparent color. The file name is logo1.bmp. [Upload]
- logo2.bmp: [] file size should < 500kbyte, 0xF1F1F1 is transparent color. The file name is logo2.bmp. [Upload]

※Note: The screenshots might have some difference with actual operation interface due to software upgrade, all the screenshots are for reference only.

8. System Setting

8.1 Network

Click system → Network → Modify the network settings to match those of your network → Click apply.

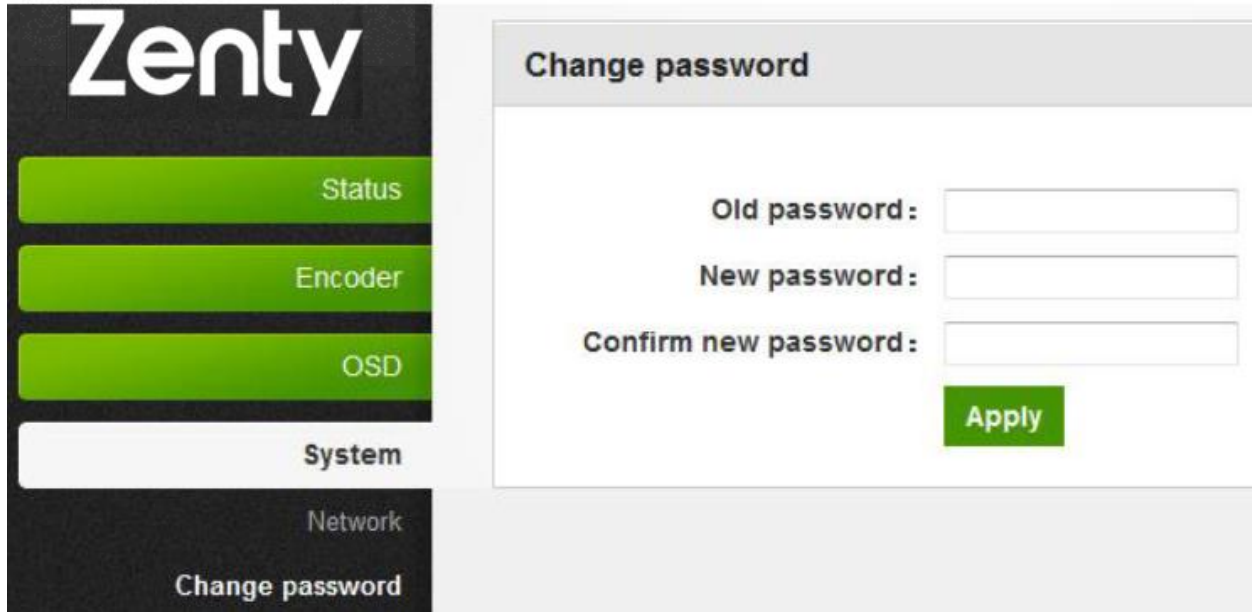
Note: Please change your DNS server to use Google's DNS servers. (Provided in the picture below.)

The screenshot displays the Zenty Network configuration interface. On the left is a dark sidebar with the Zenty logo at the top. Below the logo are menu items: Status, Encoder, OSD, System, Network (highlighted), Change Password, Serial to TCP, Upgrade, Reset, Reboot, and Schedule Restart. The main content area is titled 'Network' and is divided into three sections: 'internet access', 'DNS', and 'Port'. In the 'internet access' section, DHCP is set to 'Disable', IP is '192.168.1.168', Netmask is '255.255.255.0', Gateway is empty, and MAC is '00:13:14:15:72:71'. The 'DNS' section shows DNS1 as '8.8.4.4' and DNS2 as '8.8.8.8'. The 'Port' section shows HTTP Port as '8080' and RTSP Port as '8554', both with a range of [1-65500]. A green 'Apply' button is located at the bottom of the configuration area.

Section	Parameter	Value
internet access	DHCP	Disable
	IP	192.168.1.168
	Netmask	255.255.255.0
	Gateway	
	MAC	00:13:14:15:72:71
DNS	DNS1	8.8.4.4
	DNS2	8.8.8.8
Port	HTTP Port	8080 [1-65500]
	RTSP Port	8554 [1-65500]

8.2 Change Password

System → Change password → Set your password → Apply



Zenty

- Status
- Encoder
- OSD
- System**
- Network
- Change password

Change password

Old password :

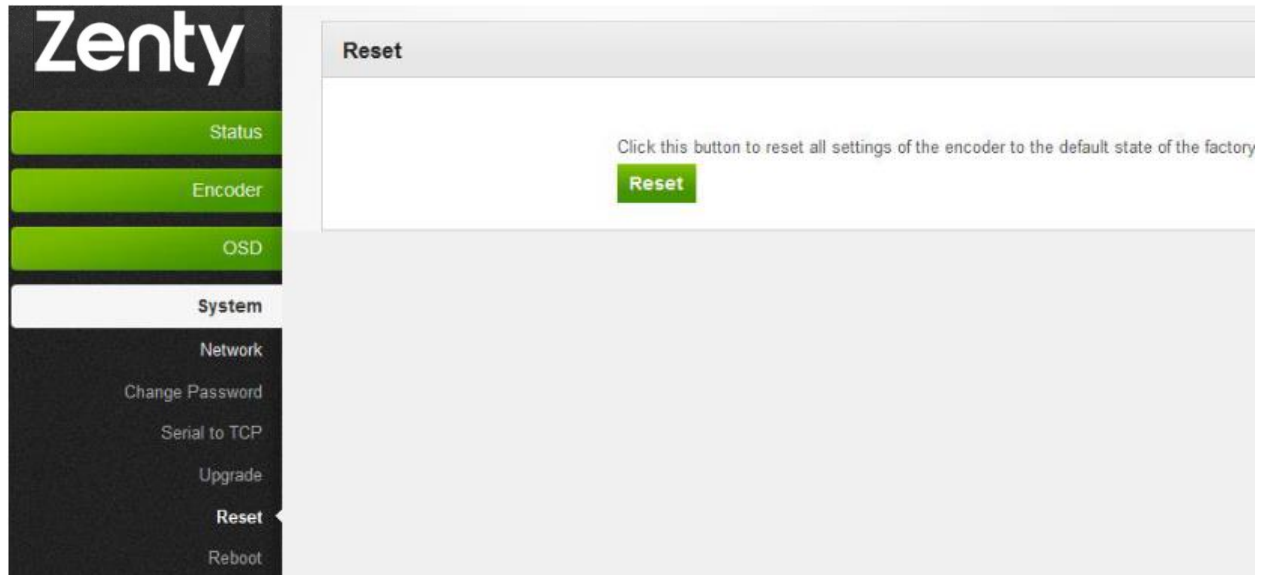
New password :

Confirm new password :

Apply

8.3 Reset

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



Zenty

- Status
- Encoder
- OSD
- System**
- Network
- Change Password
- Serial to TCP
- Upgrade
- Reset**
- Reboot

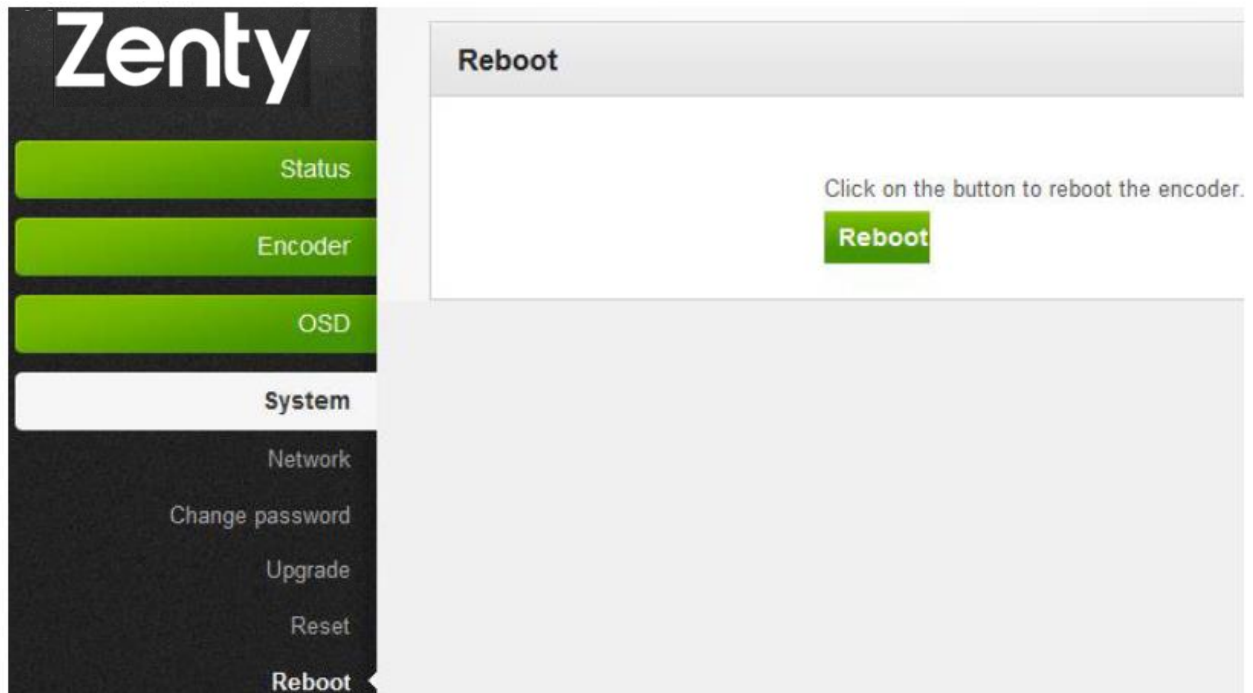
Reset

Click this button to reset all settings of the encoder to the default state of the factory

Reset

8.4 Reboot

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



9. Application

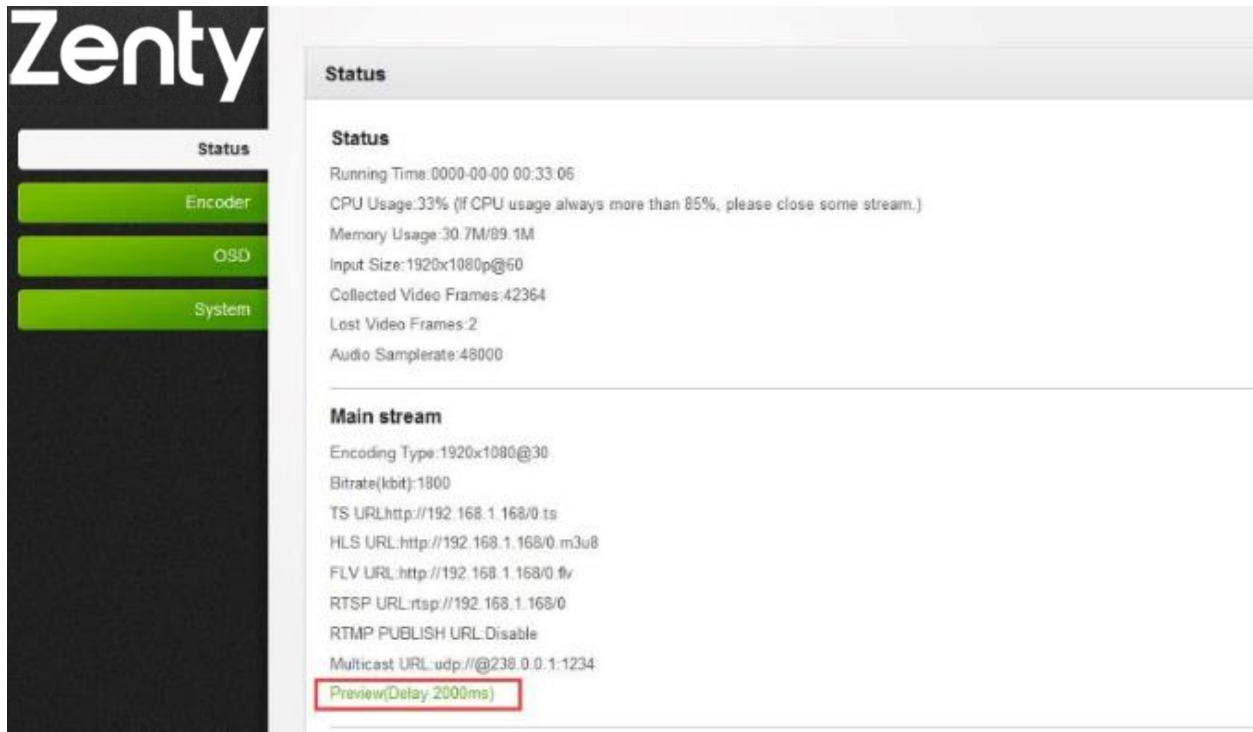
9.1 User Application Example

9.1.1 Web Video Preview

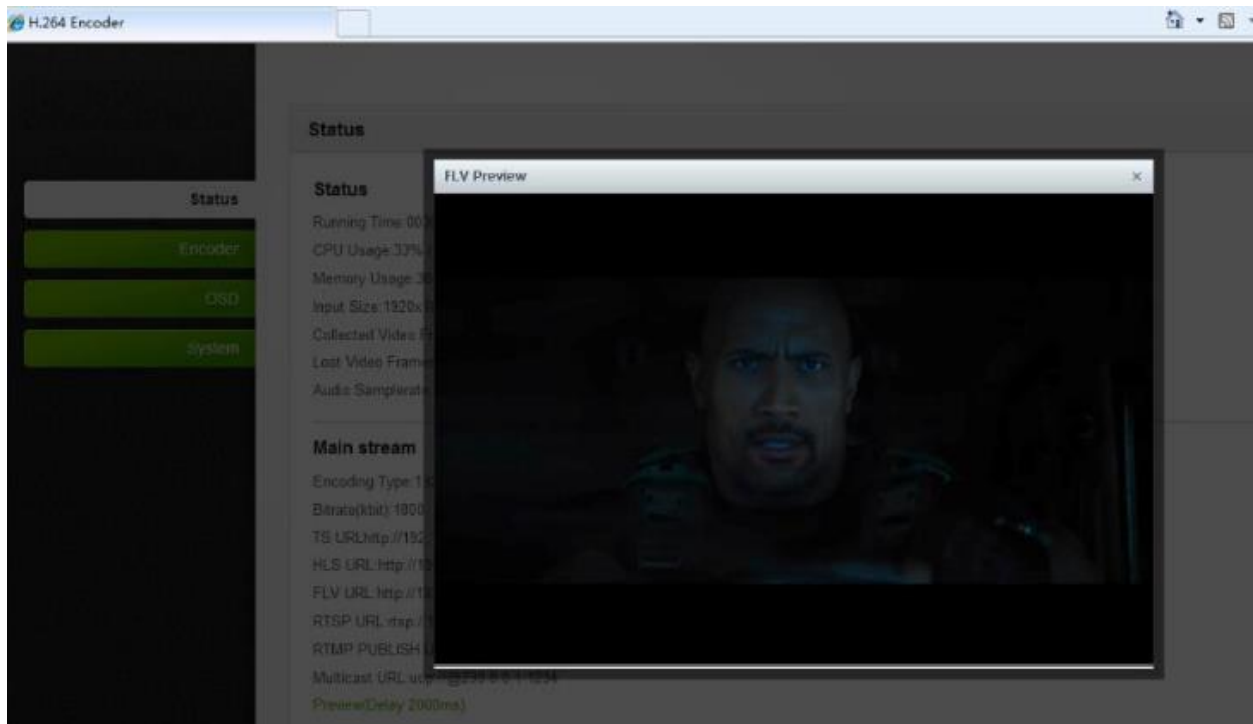
Status → Main stream → Preview

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.

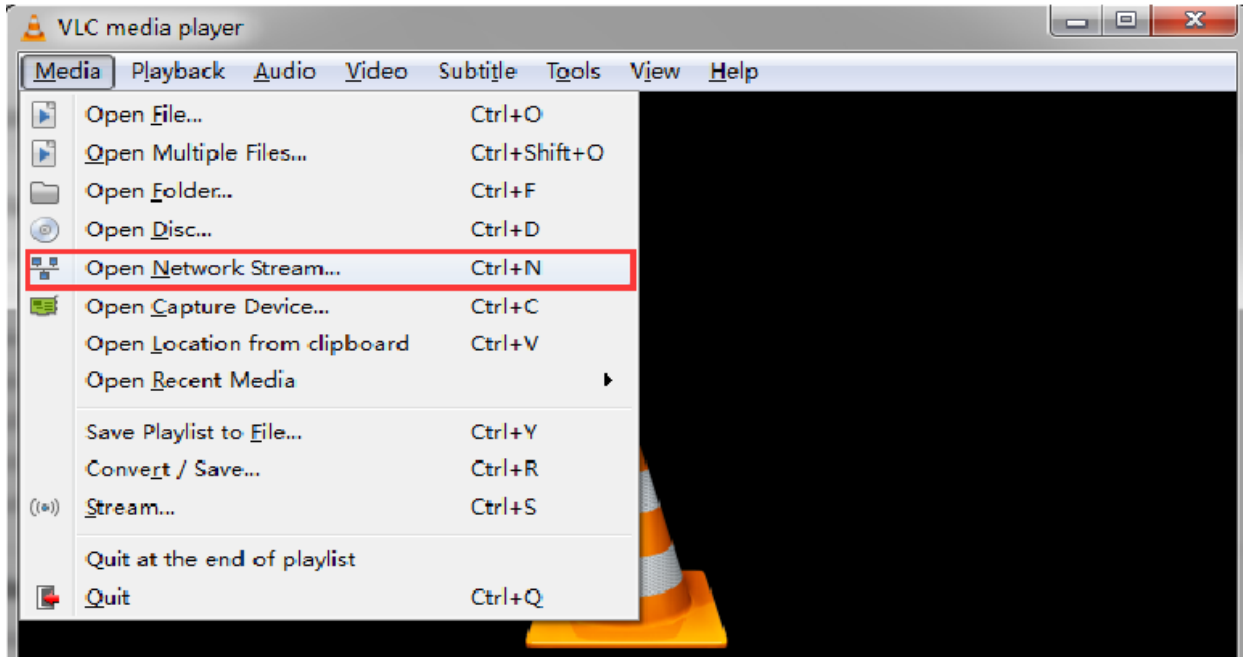


Below picture shows the preview effect:

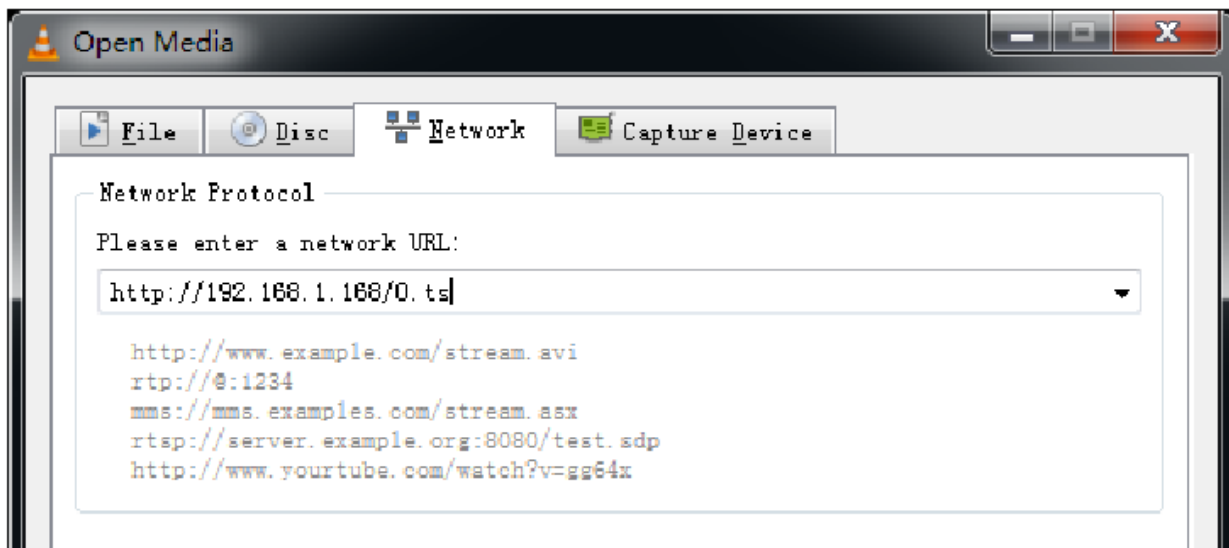


9.1.2 VLC Play

Connect a HDMI source to the HD 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.**

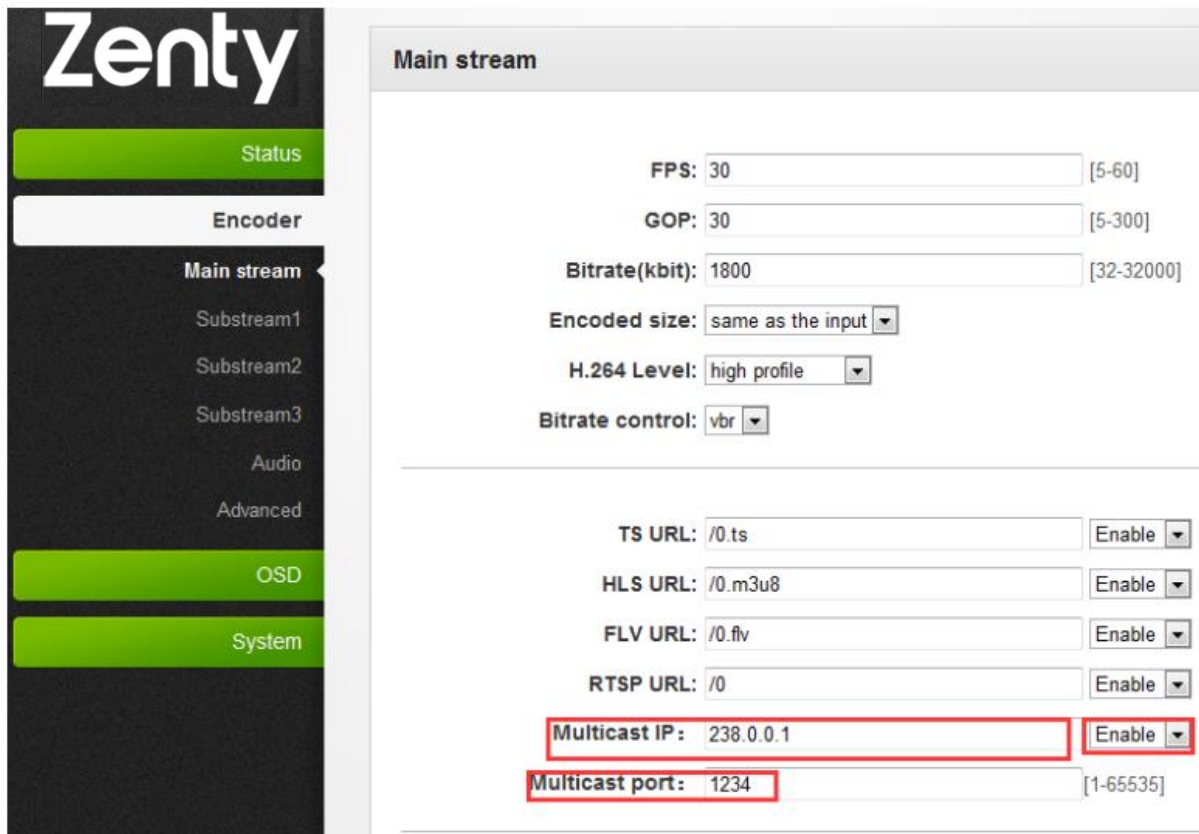


VLC Example:



9.2 Multi-Local User Application Multicast Way

If more than one local user needs to stream the video, of the same HD encoder, at the same time. You may enable multicast IP, then reboot the HD encoder.



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

Zenty

Status

Status

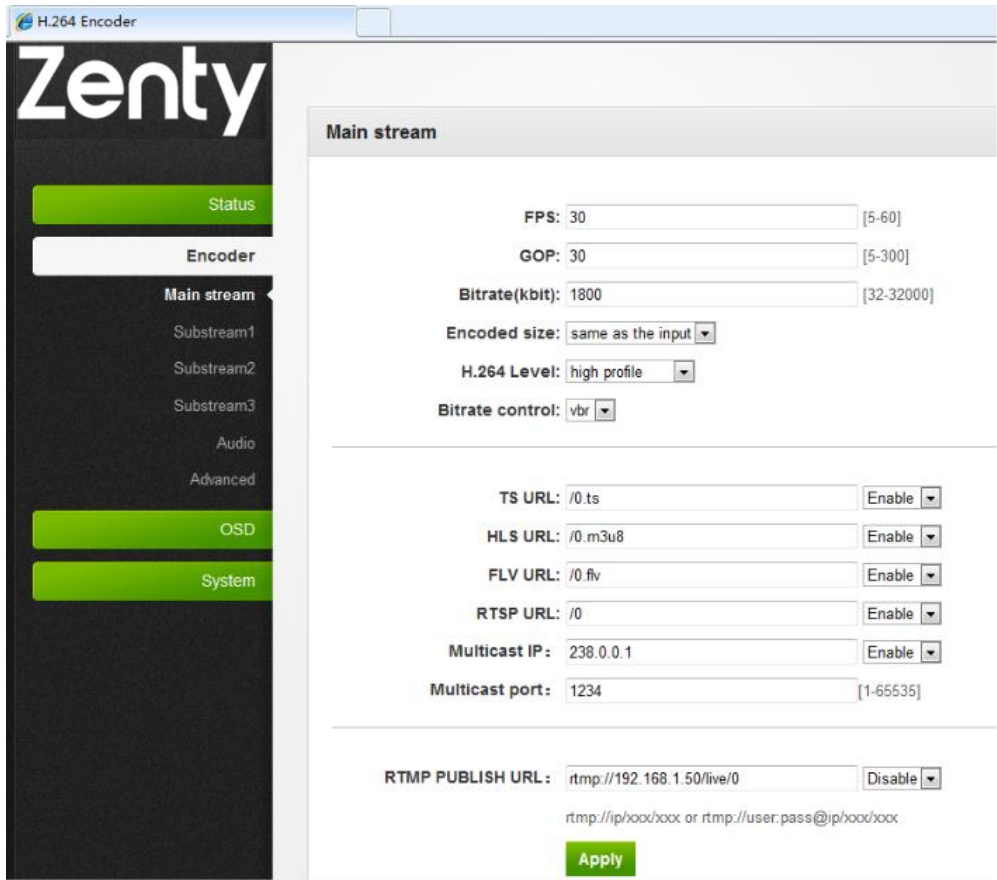
Running Time:0000-00-00 00:43:07
CPU Usage:32% (If CPU usage always more than 85%, please close some stream.)
Memory Usage:30.6M/89.1M
Input Size:1920x1080p@60
Collected Video Frames:78369
Lost Video Frames:2
Audio Samplerate:48000

Main stream

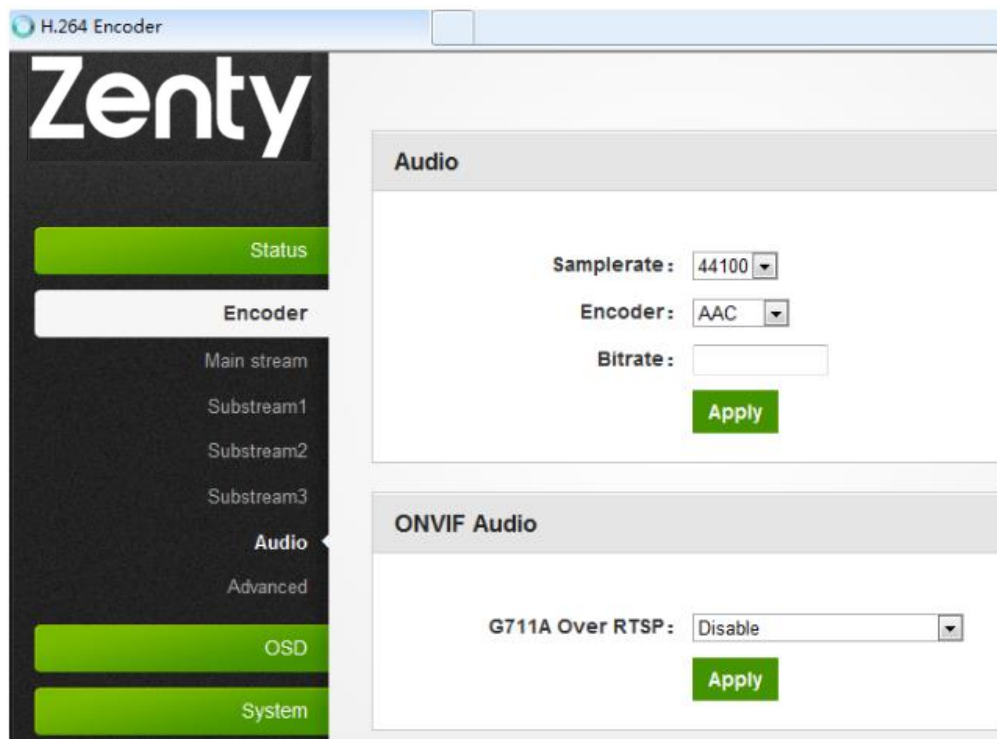
Encoding Type:1920x1080@30
Bitrate(kbit):1800
TS URL:http://192.168.1.168/0.ts
HLS URL:http://192.168.1.168/0.m3u8
FLV URL:http://192.168.1.168/0.flv
RTSP URL:rtsp://192.168.1.168/0
RTMP PUBLISH URL:Disable
Multicast URL:udp://@238.0.0.1:1234
Preview(Delay 2000ms)

9.3 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.



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.

9.4 Remote Multi-User Application 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.

The screenshot shows the Zenty encoder interface. On the left is a navigation menu with 'Main stream' selected. The main area is titled 'Main stream' and contains several configuration fields:

- FPS: 30 [5-60]
- GOP: 30 [5-300]
- Bitrate(kbit): 1800 [32-32000]
- Encoded size: same as the input
- H.264 Level: high profile
- Bitrate control: vbr

Below these are URL and IP settings:

- TS URL: /0.ts [Enable]
- HLS URL: /0.m3u8 [Disable]
- FLV URL: /0.flv [Enable]
- RISP URL: /0 [Enable]
- Multicast IP: 238.0.0.1 [Disable]
- Multicast port: 1234 [1-65535]

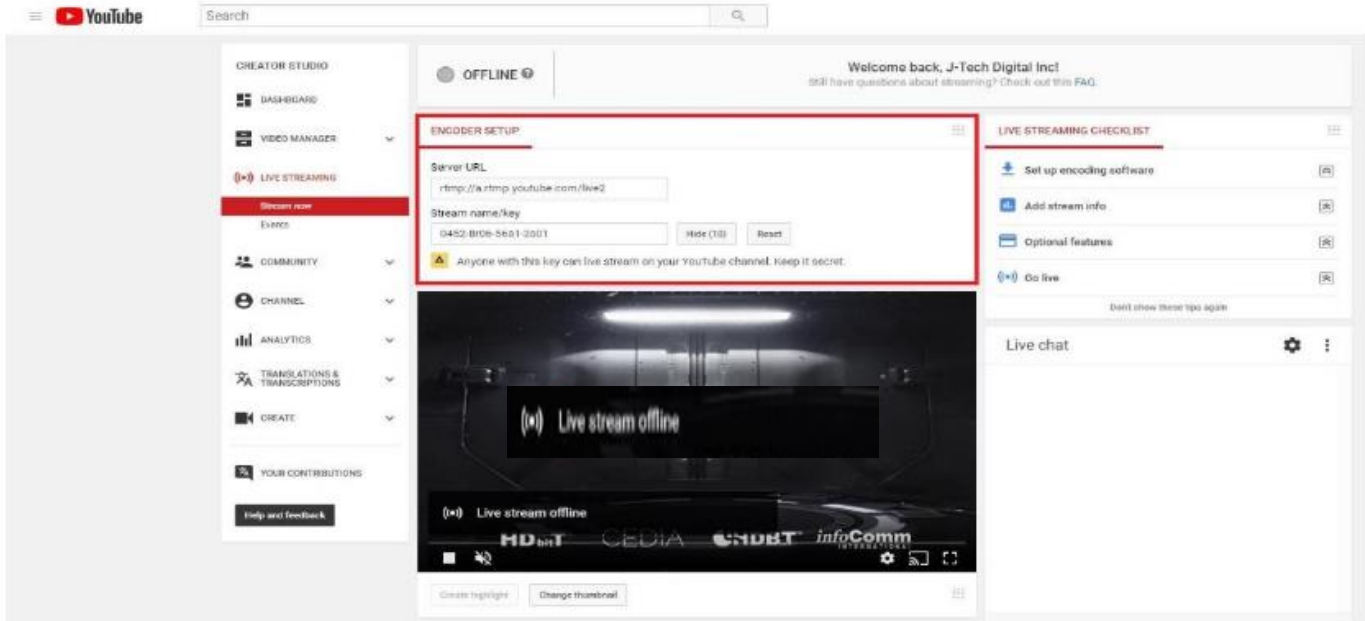
The RTMP PUBLISH URL section is highlighted with a red box:

- RTMP PUBLISH URL: rtmp://192.168.1.50/live/0 [Disable]
- Example: rtmp://ip/xxx/xxx or rtmp://user:pass@ip/xxx/xxx
- Apply button

9.4.1 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`



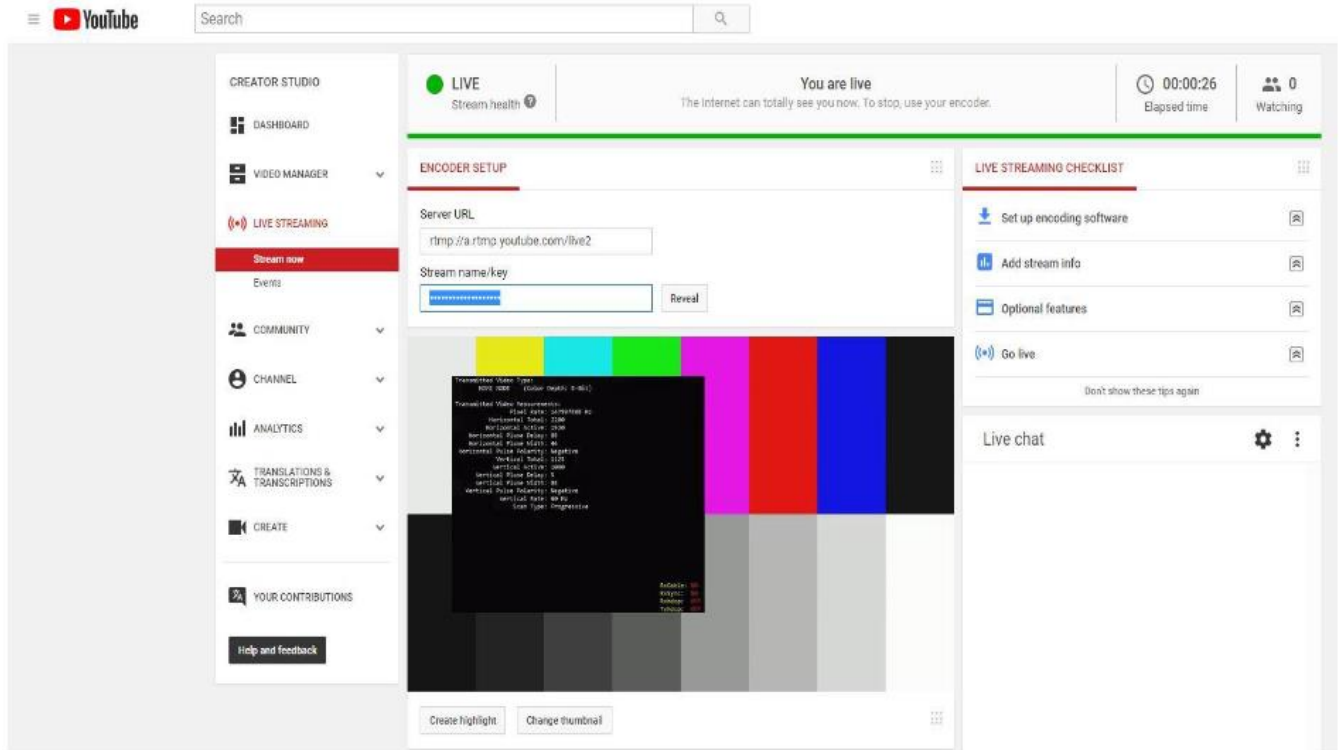
2. Enter the full RTMP URL into the “RTMP PUBLISH URL” setting of your J-Tech Digital Encoder; apply and reboot.

Note: For best results, check that “TS muxer” is set to “Compatible with FFMPEG”



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.



10. Maintenance

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

11. 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 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.

12. 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.

13. 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.



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