

H.264 HD HDMI Encoder for IP TV

Operation Instructions



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Dear Customer

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

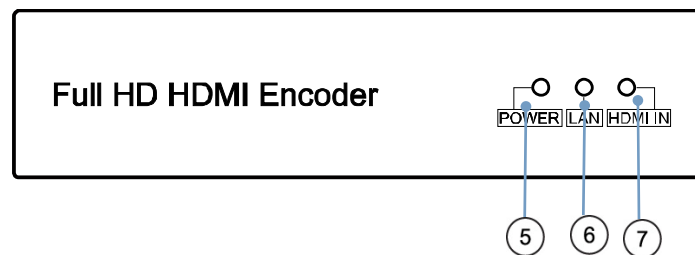
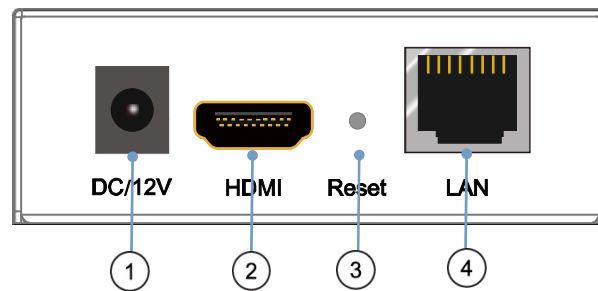
1. FEATURES

- Support H.264 encoding.
- Support UDP, HTTP, RTSP, RTMP, ONVIF protocol.
- Support MPEG1 Audio Layer 2.
- CBR/VBR rate: 16Kbps~16Mbps.
- 1000M network interface uses full duplex mode.
- Support up to 720p, 1080p@60HZ HD video input.
- Support image parameter settings.
- WEB interface management authority.
- Support remote management in WAN (WEB).
- Support resolution customized settings.
- Support one key to restore the factory configuration.

2. PACKAGE CONTENTS

- 1). Main Unit. H.264 HD HDMI Encoder
- 2). 1x Power adapter DC 12V
- 3). Operating Instruction manual

3. HARDWARE DESCRIPTION



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

Note: **1**. Reset to the factory default setting: press “Reset” for 10 seconds till all three indicators go out.

2. LAN: default IP is 192.168.1.168 for the unit.

4. Typical Application

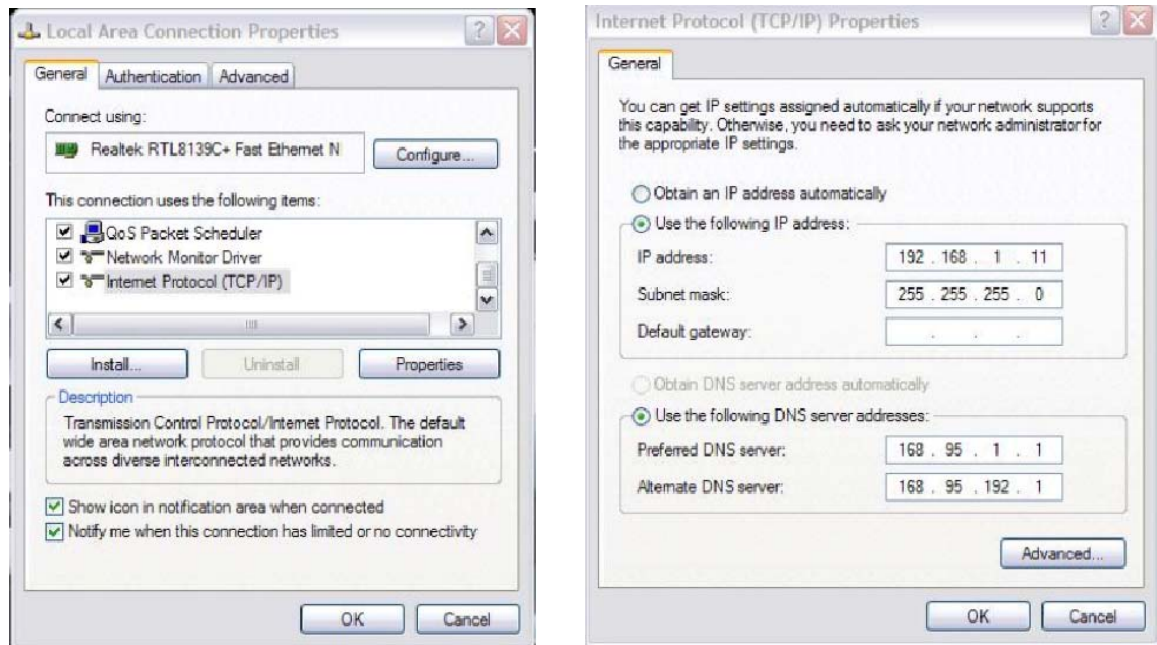


5. Environment Configuration

5.1 Software

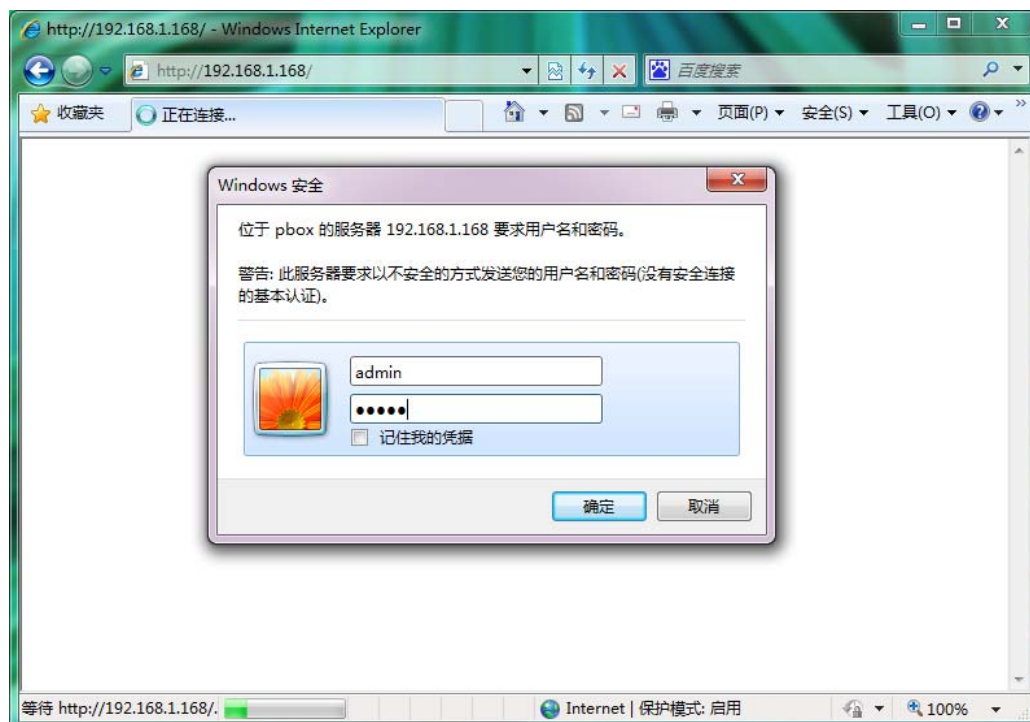
5.1.1 Change the IP Address of PC

Assign the PC (or laptop) IP address on the computer: “Control Panel”→ “Network Connections”→ “Local Area Connections Status”→ “Properties”→ “Internet Protocol (TCP/IP)”→Type the IP address with 192.168.1.XX (0-255) and Subnet mask with 255.255.255.0. After that press OK to save the configuration.



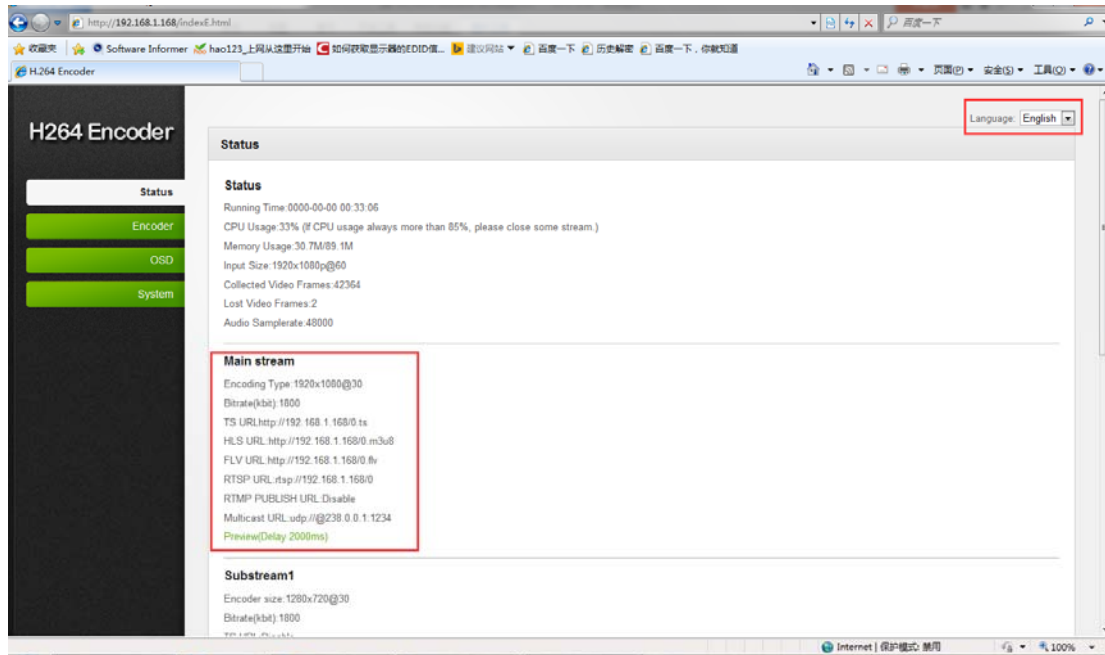
5.1.2 Login for configuration

Enter the unit IP 192.168.1.168 on browser, to open the web GUI. Login with default user name and pass word as admin. Like below, into the home page.



5.1.3 Check the stream address

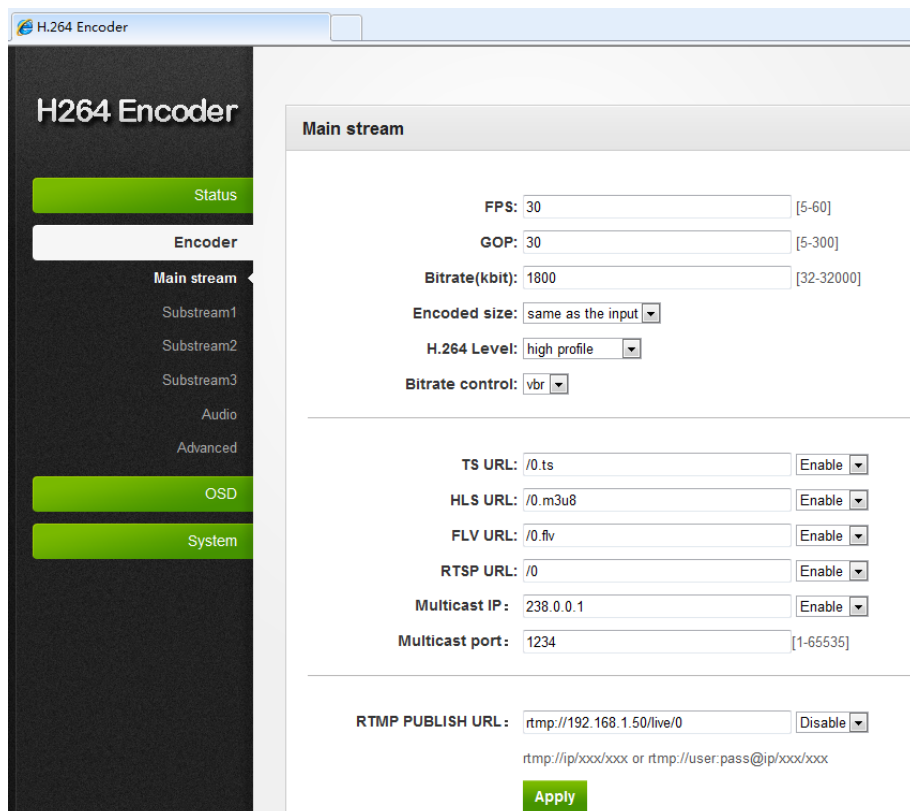
As below, the stream address is in the red frame.



6. Encode Setting

6.1 Encode Setting

Click Encode setting→Main stream→Setting the parameters→Click Apply



6.2 Audio setting

Click encode→Audio→Setting the parameters→Click apply

The screenshot shows the 'H264 Encoder' web interface. On the left is a dark sidebar with a menu: 'Status' (highlighted in green), 'Encoder' (white), 'Main stream', 'Substream1', 'Substream2', 'Substream3', 'Audio' (highlighted with a white arrow), 'Advanced', 'OSD' (green), and 'System' (green). The main content area has a light blue header with 'H.264 Encoder' and a tab bar. The 'Audio' tab is selected, showing settings for 'Samplerate' (44100), 'Encoder' (AAC), and 'Bitrate' (empty). An 'Apply' button is at the bottom. Below this is the 'ONVIF Audio' section with 'G711A Over RTSP' set to 'Disable' and another 'Apply' button.

6.3 Advanced

Click Encoder→Advanced→Setting all the parameter→Click apply.

The screenshot shows the 'H264 Encoder' web interface with the 'Advanced' tab selected in the sidebar. The main content area has a light blue header with 'H.264 Encoder' and a tab bar. The 'Advanced' tab is selected, showing settings for 'TS Muxer' (Compatible with VLC), 'TS once pack' (empty, with '[3-128]' hint), and 'TS Password Enable' (Disable). An 'Apply' button is at the bottom. Below this is the 'CSC' section with 'CSC' set to 'Disable' and 'Contrast' (empty, with '[0-255], Default: 64' hint). Another 'Apply' button is at the bottom.

7. OSD Setting

7.1 Streaming OSD Setting

Click OSD→Network→Setting all the Parameter→Click apply, as below picture show

The screenshot shows the 'H.264 Encoder' web interface. On the left is a sidebar with a menu: 'Status', 'Encoder', 'OSD' (highlighted), 'Main stream' (sub-menu), 'Substream1', 'Substream2', 'Substream3', 'LOGO upload', and 'System'. The 'Main stream' sub-menu is active, displaying the 'Main stream' settings panel. This panel contains the following fields: 'Alpha' (100, range [0-128]), 'Text1' (empty, dropdown 'Disable'), 'Font size' (36, range [8-72]), 'X' (10, range [0-1920]), 'Y' (10, range [0-1080]), 'Text2' (empty, dropdown 'Disable'), 'Font size' (36, range [8-72]), 'X' (10, range [0-1920]), 'Y' (62, range [0-1080]), 'LOGO' (empty, dropdown 'Disable'), 'X' (10, range [0-1920]), and 'Y' (114, range [0-1080]). An 'Apply' button is at the bottom.

7.2 LOGO uploading

Click logo upload→provide the logo picture as the requirements→Click Apply

The screenshot shows the 'H.264 Encoder' web interface with the 'LOGO upload' panel selected in the sidebar. The panel contains two upload sections: 'logo1.bmp' and 'logo2.bmp'. Each section has a file selection button (labeled '浏览...'), a file size constraint ('file size should < 500kbyte, 0xF1F1 is transparent color. The file name is logo1.bmp.'), and an 'Upload' button. A 'Language' dropdown is visible in the top right corner.

8. System

8.1 Network

Click system→Network→Setting all the parameter→Click apply.

The screenshot shows the 'H264 Encoder' web interface. On the left is a dark sidebar with a menu: 'Status', 'Encoder', 'OSD', 'System' (highlighted), 'Network' (sub-highlighted), 'Change Password', 'Serial to TCP', 'Upgrade', 'Reset', and 'Reboot'. The main content area is titled 'Network' and contains three sections: 'internet access', 'DNS', and 'Port'. In the 'internet access' section, 'DHCP' is set to 'Disable' (dropdown), 'IP' is '192.168.0.168', 'Netmask' is '255.255.255.0', 'Gateway' is '192.168.0.1', and 'MAC' is '00:13:14:15:2E:97'. The 'DNS' section has 'DNS1' as '61.139.2.69' and 'DNS2' as '8.8.8.8'. The 'Port' section has 'HTTP Port' as '8080' and 'RTSP Port' as '8554', both with a range of '[1-65500]'. A green 'Apply' button is at the bottom.

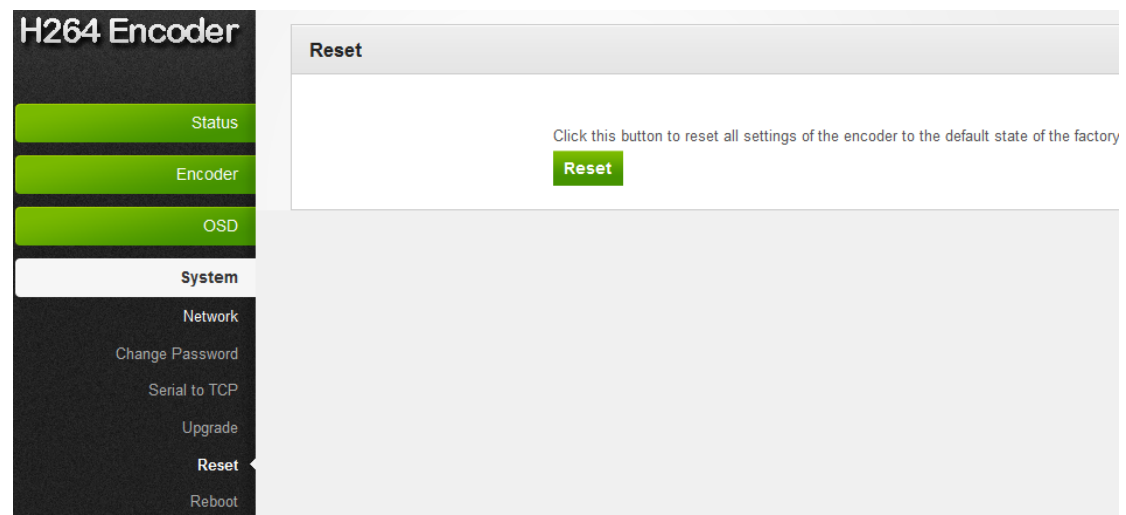
8.2 Change password

System→Change password→Set your password→Apply

The screenshot shows the 'H264 Encoder' web interface with the 'Change password' page. The left sidebar is the same as in the previous screenshot, but 'Change password' is now highlighted under the 'System' menu. The main content area is titled 'Change password' and contains three input fields: 'Old password:', 'New password:', and 'Confirm new password:'. A green 'Apply' button is located below the input fields.

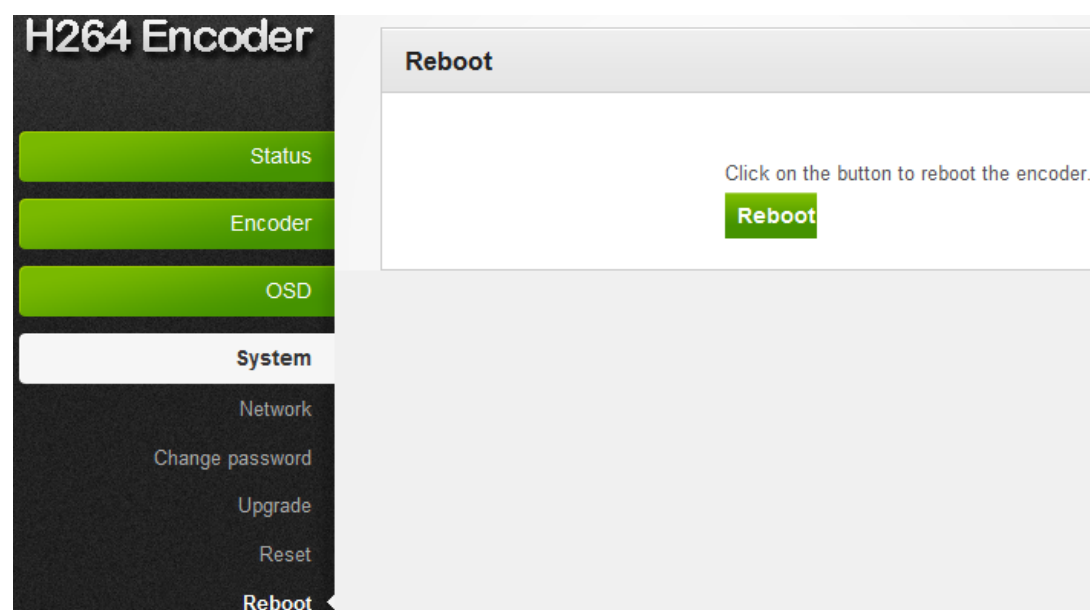
8.3 Reset

System→Reset→Reset



8.4 Reboot

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

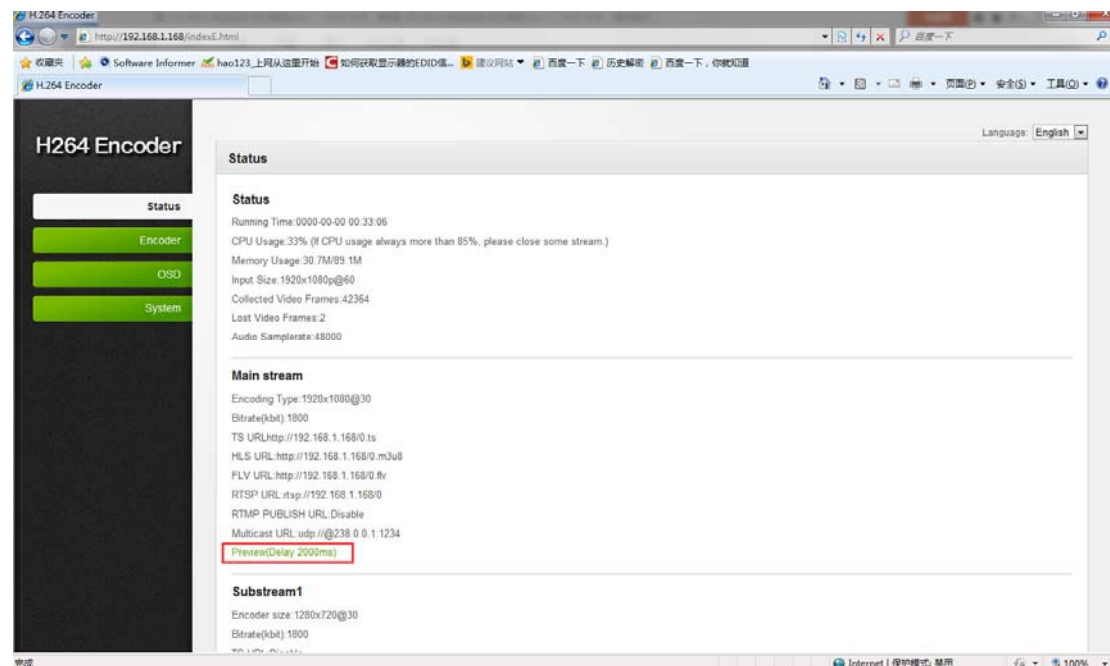


9. Application

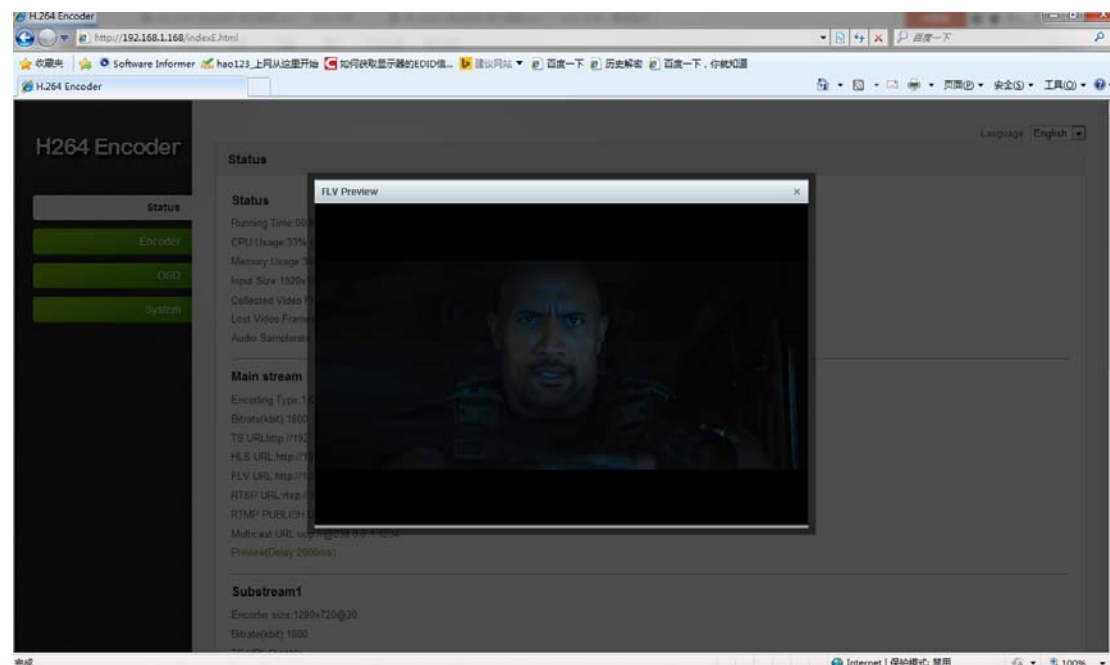
9.1 User Application Example

9.1.1 Web Video Preview

Status→Main stream→Preview

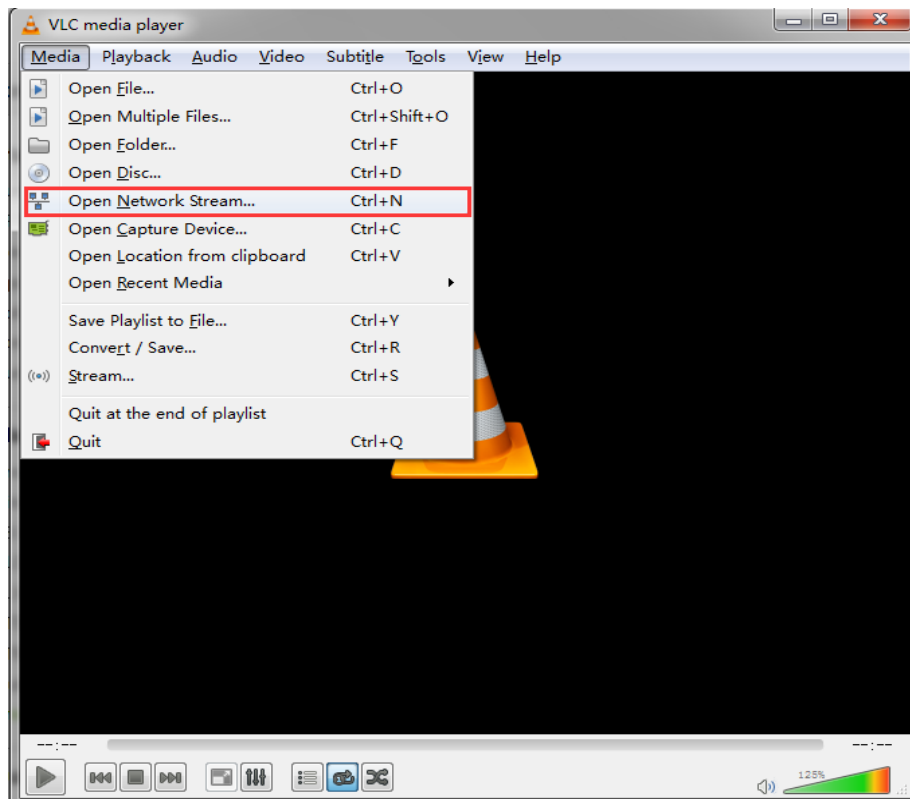


Belowing picture is the preview effect:

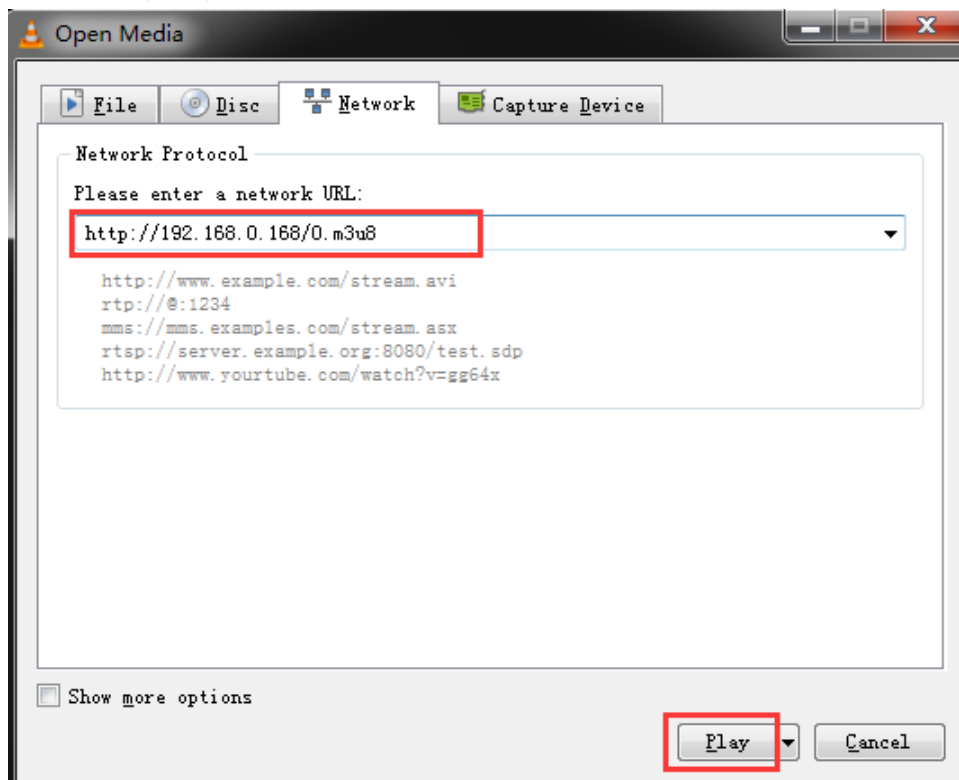


9.1.2 VLC Play

Connect HDMI source to the HD encoder, open VLC media player (Download website: <http://www.videolan.org/>), Click “Media”, then click “Open Network Stream”.



Enter Stream URL which showed from the page of Main stream. Click “play”, You can successfully play the video stream encoded from this device.





9.2 Multi Local User Application Multicast Way

If many local users need watch the video of same HD encoder at the same time, we suggest using multicast. Enable the multicast IP, then re-power the HD encoder.

H264 Encoder

Status

Encoder

Main stream

Substream1

Substream2

Substream3

Audio

Advanced

OSD

System

Main stream

FPS:

[5-60]

GOP:

[5-300]

Bitrate(kbit):

[32-32000]

Encoded size:

H.264 Level:

Bitrate control:

TS URL:

HLS URL:

FLV URL:

RTSP URL:

Multicast IP:

Multicast port:

[1-65535]

RTMP PUBLISH URL:

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

There is a multicast URL in the Status page, copy it into the VLC Player.
This address can be visited by many visitors at the same time

H264 Encoder

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 NVR support H.264 decoder. Since using ONVIF, you need enable the "RTSP" function as below picture.

H264 Encoder

Main stream

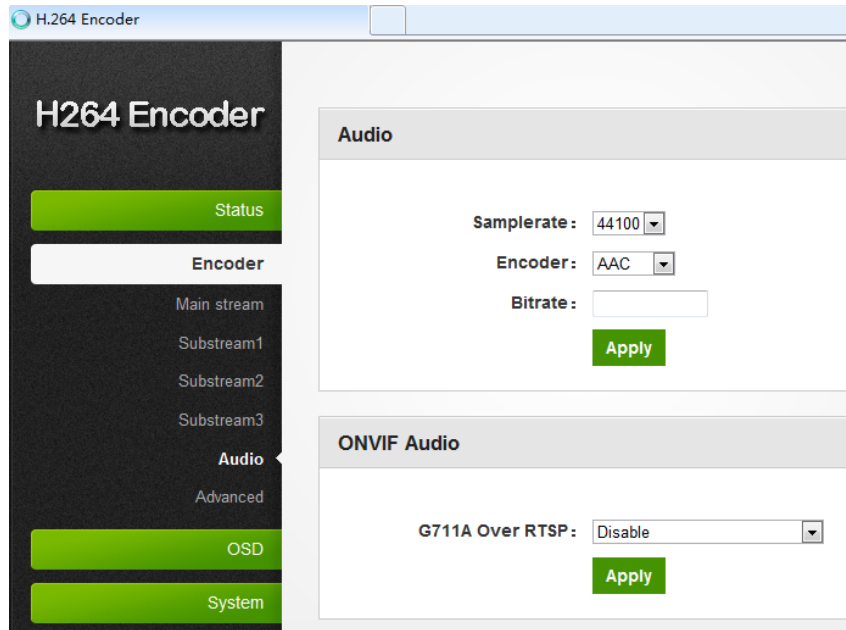
FPS: 30 [5-60]
 GOP: 30 [5-300]
 Bitrate(kbit): 1800 [32-32000]
 Encoded size: same as the input
 H.264 Level: high profile
 Bitrate control: vbr

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

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

Apply

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



Note: If you've finished above setting and still can't open the video, we suggest you download the standard testing tool to test the ONVIF function of HD Encoder (Download address <http://url.cn/2ESQRcn>)

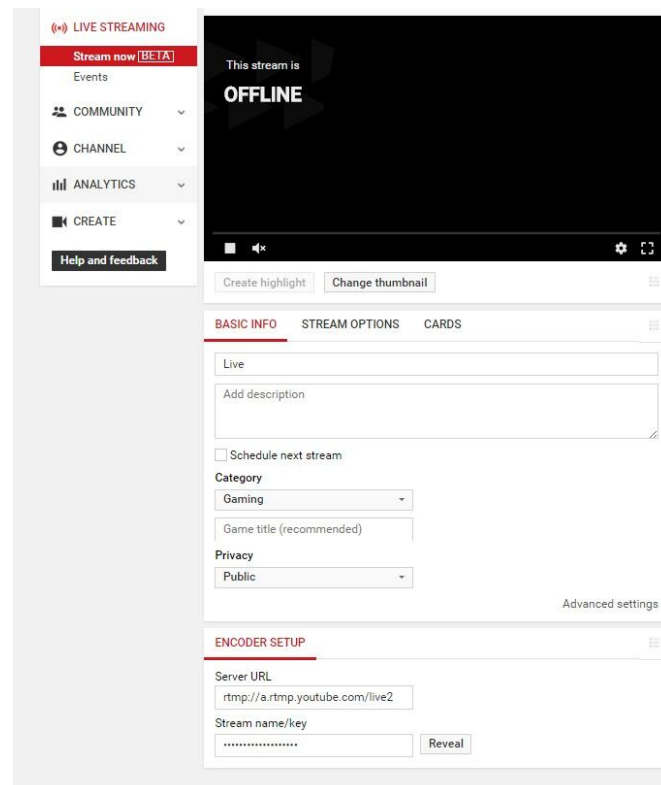
9.4 Remote Multi User Application RTMP Connection

If many users from different locations need to watch the source of the same HD Encoder, we suggest you use RTMP.

Our product supports the following free platform: NGINX, RED5 MEDIA SERVER etc.

Charged platform: ADOBE MEDIA SERVER5 and <http://mudu.tv/> etc.

Since the current RTMP protocol only supports H.264 function, you need to set the HD Encoder as H.264, set the RTMP Address and enable it as in the below picture. Re-start the HD encoder after finishing the setting.



H264 Encoder

Main stream

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

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

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

Apply

Note: If you have finished above setting and still can't open the video, please check as below:

1. Check the collected data of HD Encoder, if it shows 0, then the HD Encoder connection is failed; you need check if the hardware connection is correct.
2. Check the RTMP connection status, if it shows unconnected, you need check if the Network setting is correct (You need set the IP Address to have access to the internet)

H264 Encoder

Status

Running Time:0000-00-00 00:14:22
 CPU Usage:32% (If CPU usage always more than 85%, please close some :
 Memory Usage:30.2M/89.1M
 Input Size:1920x1080p@60
 Collected Video Frames:51588
 Lost Video Frames:2
 Audio Samplerate:48000

Main stream

Encoding Type:1920x1080@30
 Bitrate(kbit):1800
 TS URL:http://192.168.0.168/0.ts
 HLS URL:http://192.168.0.168/0.m3u8
 FLV URL:http://192.168.0.168/0.flv
 RTSP URL:rtsp://192.168.0.168/0
 RTMP PUBLISH URL(Not Connected):rtmp://192.168.1.50/live/0
 Multicast URL:udp://@238.0.0.1:1234
 Preview(Delay 2000ms)

MAINTENANCE

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

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.

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(2)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 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 product purchased as new. A purchase receipt or other proof of original purchase date is required for Limited Warranty service.

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.

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 THIS LIMITED WARRANTY, ARE YOUR RESPONSIBILITY.