

H.265/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.

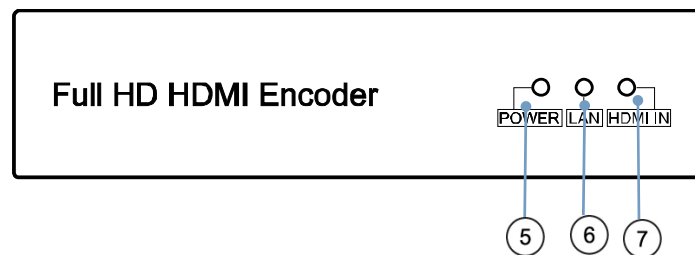
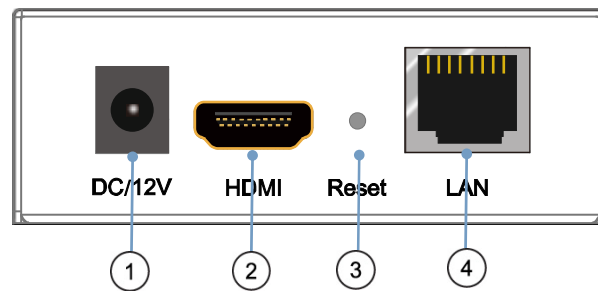
1. FEATURES

- Support H.265/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.265/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

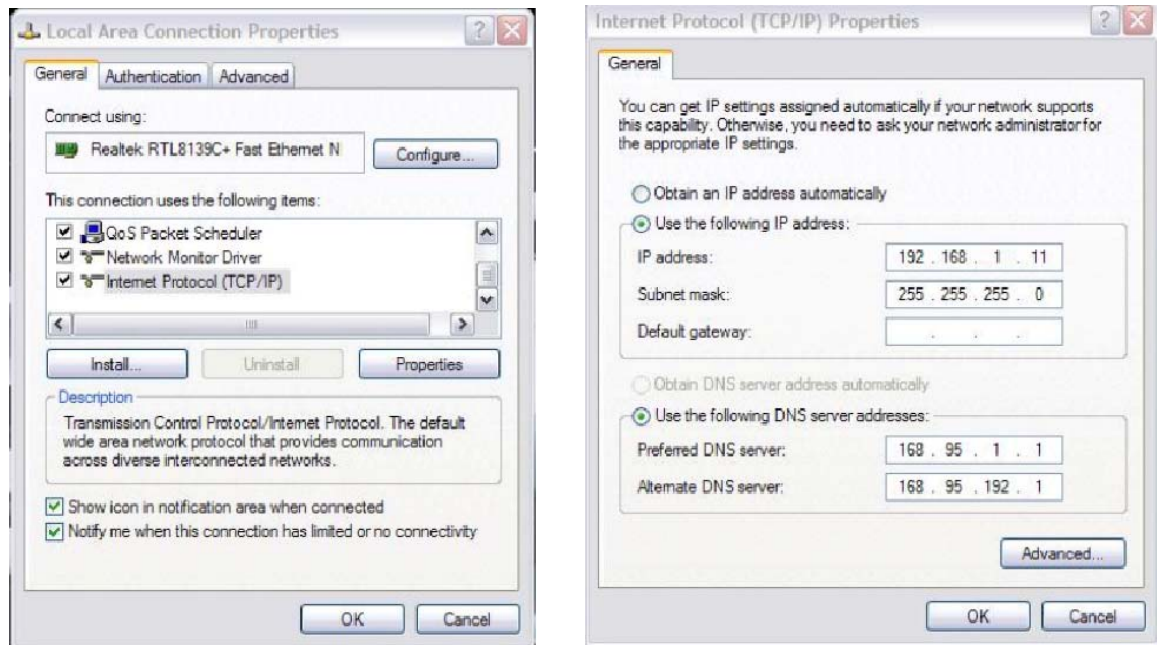


5. Environment Configuration

5.1 Software

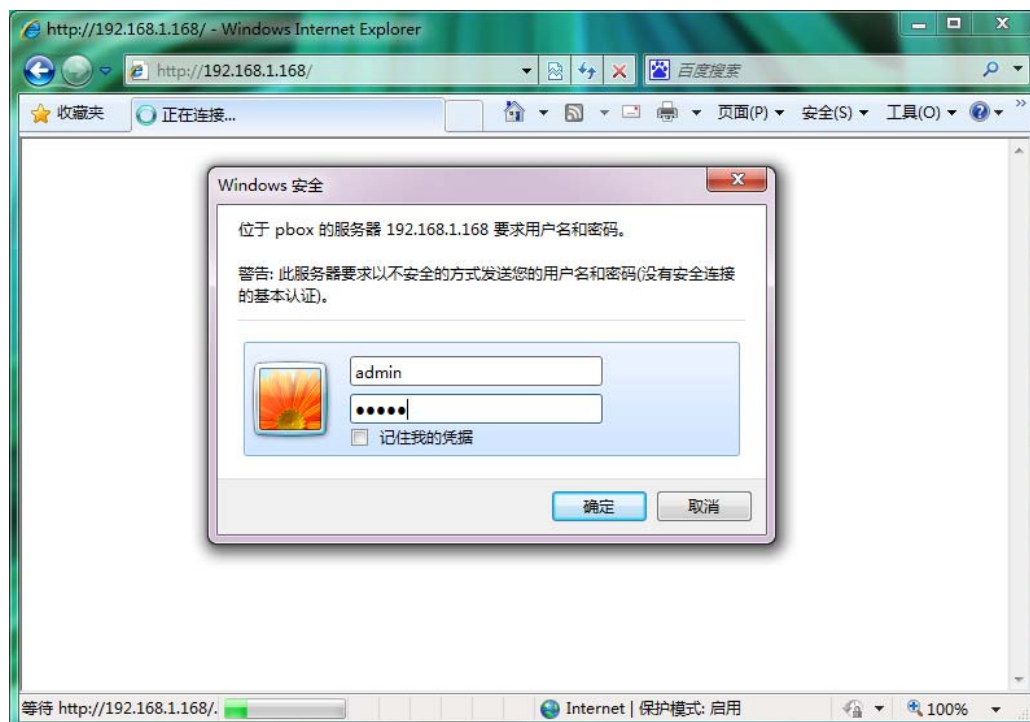
5.1.1 Change the IP Address of PC

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.

H.265/H.264 Encoder

Language: English

Status

Encoder

OSD

System

System status

Running Time:	0000-00-00 00:01:00
CPU Usage:	23%
Memory Usage:	39.0M/248.3M
Input Size:	1920x1080p@60
Collected Video Frames:	3470
Lost Video Frames:	5
Audio Samplerate:	48000

Main stream

Encoding Type:	H.265
Encoder size:	1920x1080@30
Bitrate(kbit):	1500
TS URL:	http://192.168.1.168/0.ts
HLS URL:	http://192.168.1.168/0.m3u8
RTSP URL:	rtsp://192.168.1.168/0
Multicast URL:	Disable

6. Encode Setting

6.1 Encode Setting

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

Status

Encoder

Main stream

Substream1

Substream2

Substream3

Audio

Advanced

OSD

System

Main stream

Encoding type:	H.265	
FPS:	30	[5-60]
GOP:	30	[5-300]
Bitrate(kbit):	1500	[32-32000]
Encoded size:	same as the input	
Bitrate control:	vbr	
TS URL:	/0.ts	Enable
HLS URL:	/0.m3u8	Enable
RTSP URL:	/0	Enable
Multicast IP:	238.0.0.1	Disable
Multicast port:	1234	[1-65535]

Apply

6.2 Audio setting

Click encode→Audio→Setting the parameters→Click apply

Status	Audio
Encoder	
Main stream	
Substream1	
Substream2	
Substream3	
Audio	
Advanced	
OSD	
System	

Audio Input:	HDMI	▼
Samplerate:	44100	▼
Encoder:	AAC+	▼
Bitrate:	48000	[24000~48000]
Analog Vol:	10	[-50~50]
Apply		

ONVIF Audio		
G711A Over RTSP:	Disable	▼
Apply		

6.3 Advanced

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

Status	Advanced
Encoder	
Main stream	
Substream1	
Substream2	
Substream3	
Audio	
Advanced	
OSD	
System	

Deinterlaced:	Both	▼
TS muxer:	Compatible with FFmpeg	▼
TS once pack:	128	[3-128]
TS password enable:	Disable	▼
Slice split enable:	Disable	▼
Slice size:	1024	[128-65535]
MIN_QP:	5	[1-35]
MAX_QP:	42	(MIN_QP-50]
SAR(H.264 Only):	Disable	▼
Apply		

CSC		
CSC:	Disable	▼
Luminance:	50	[0-100],Default:50
Contrast:	50	[0-100],Default:50
Hue:	50	[0-100],Default:50
Saturation:	50	[0-100],Default:50
Apply		

7. OSD Setting

7.1 Streaming OSD Setting

Click OSD→Network→Setting all the Parameter→Click apply

Status

Encoder

OSD

Main stream

Substream1

Substream2

Substream3

LOGO upload

System

Main stream

Alpha: 100 [0-128]

Text1: Hello Enable ▾

Font size: 36 [8-72]

X: 10 [0-1920]

Y: 10 [0-1080]

Text2: World Enable ▾

Font size: 36 [8-72]

X: 10 [0-1920]

Y: 62 [0-1080]

LOGO: logo2.bmp ▾ Enable ▾

X: 10 [0-1920]

Y: 114 [0-1080]

Apply

7.2 LOGO uploading

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

Status

Encoder

OSD

Main stream

Substream1

Substream2

Substream3

LOGO upload

System

LOGO upload

logo1.bmp: 浏览...

file size should < 500kbyte, 0xF1F1F1 is transparent color. The file name is logo1.bmp.

Upload

logo2.bmp: 浏览...

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, please follow up the real operation interface.

8. System

8.1 Network

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

Status	Network
Encoder	DHCP: <input type="text" value="Disable"/>
OSD	IP: <input type="text" value="192.168.1.168"/>
System	Netmask: <input type="text" value="255.255.255.0"/>
Network	Gateway: <input type="text" value="192.168.1.1"/>
Change password	MAC: <input type="text" value="00:13:14:15:3A:B7"/>
Serial to TCP	DNS
Upgrade	DNS1: <input type="text" value="61.139.2.69"/>
Reset	DNS2: <input type="text" value="8.8.8.8"/>
Reboot	Port
	HTTP Port: <input type="text" value="8080"/> [1-65535]
	RTSP Port: <input type="text" value="8554"/> [1-65535]
	<input type="button" value="Apply"/>

8.2 Change password

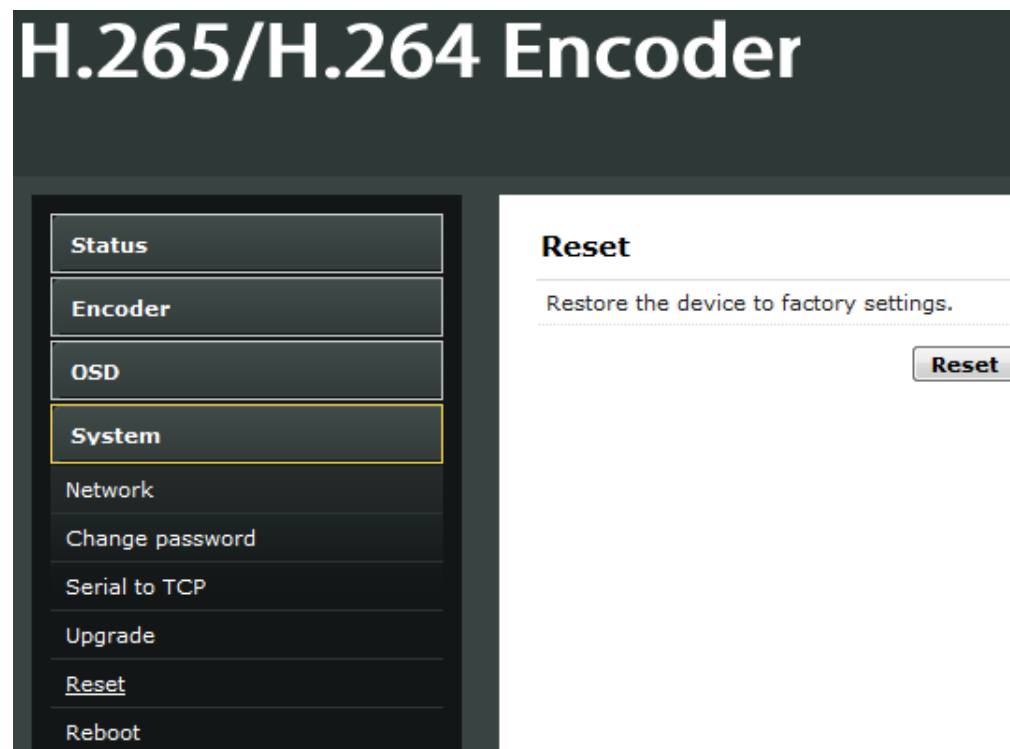
System→Change password→Set your password→Apply

H.265/H.264 Encoder

Status	Change password
Encoder	Old password: <input type="password" value="....."/>
OSD	New password: <input type="password" value="....."/>
System	Confirm new password: <input type="password" value="....."/>
Network	<input type="button" value="Apply"/>
Change password	
Serial to TCP	
Upgrade	
Reset	
Reboot	

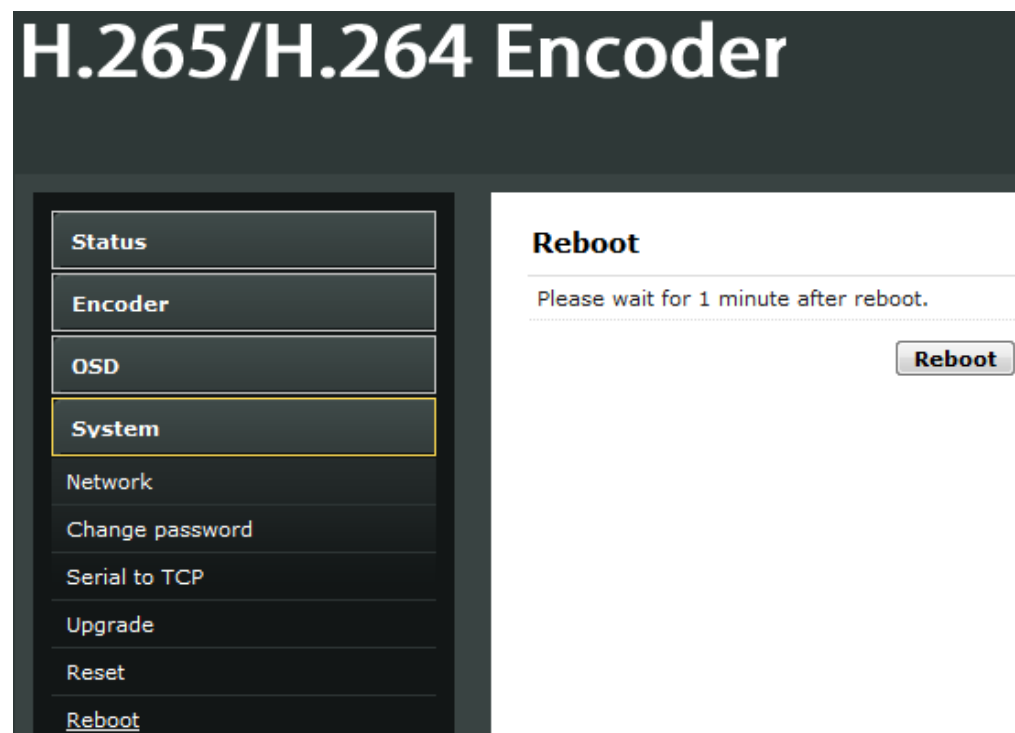
8.3 Reset

System→Reset→Reset



8.4 Reboot

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



9. Application

9.1 User Application Example

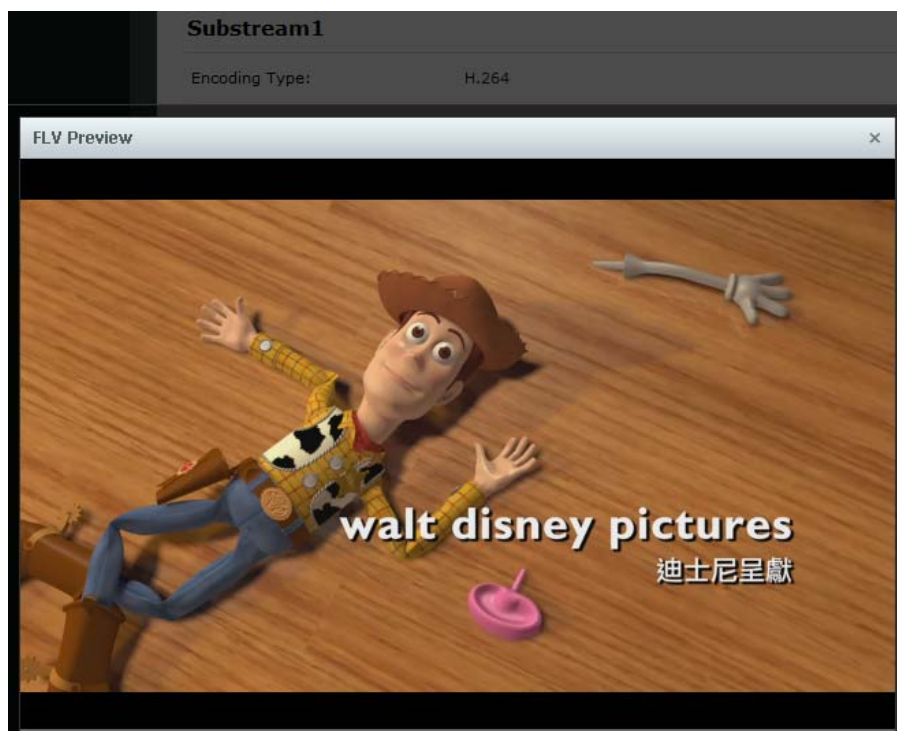
9.1.1 Web Video Preview

Status→Main stream→Preview

Substream1

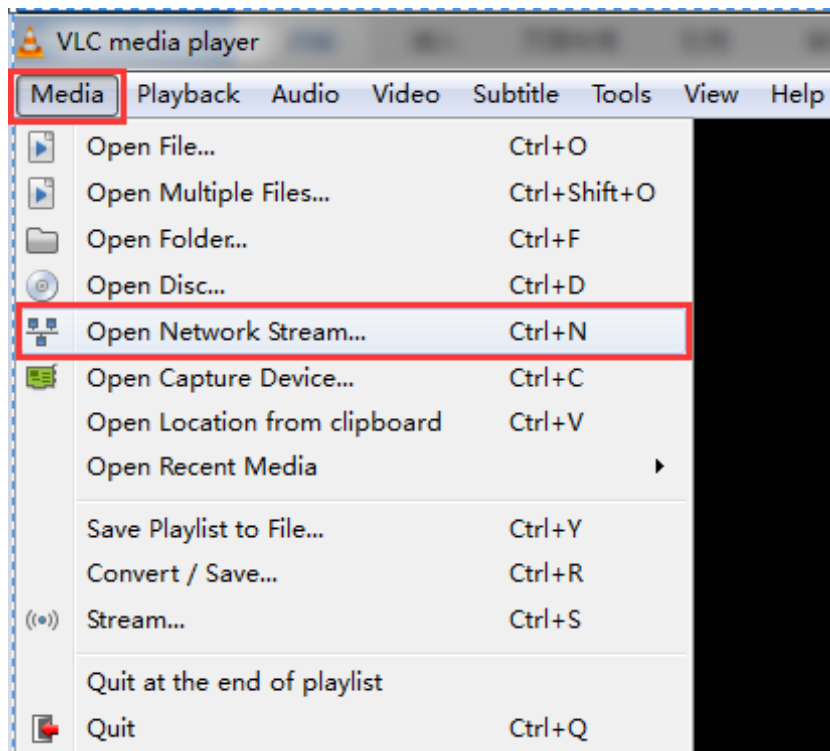
Encoding Type:	H.264
Encoder size:	1280x720@30
Bitrate(kbit):	1800
TS URL:	http://192.168.1.168/1.ts
HLS URL:	http://192.168.1.168/1.m3u8
FLV URL:	http://192.168.1.168/1.flv
RTSP URL:	rtsp://192.168.1.168/1
RTMP PUBLISH URL:	Disable
Multicast URL:	Disable
Preview(Delay 1000ms)	

Belowing picture is the preview effect:

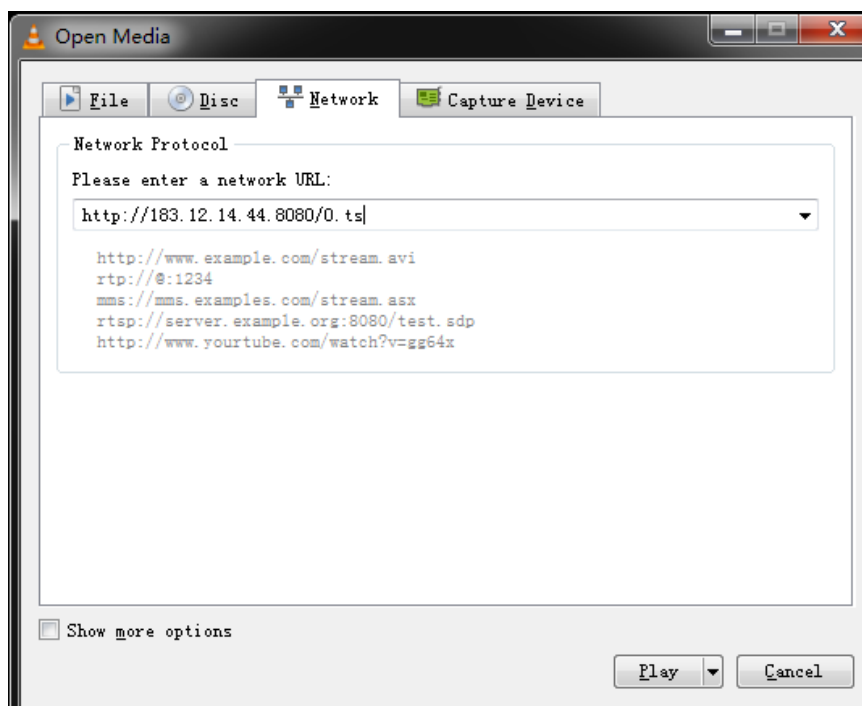


9.1.2 VLC Play

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.



Status

Encoder

OSD

System

System status

Running Time:	0000-00-00 00:37:23
CPU Usage:	38%
Memory Usage:	66.8M/248.3M
Input Size:	1920x1080p@60
Collected Video Frames:	134307
Lost Video Frames:	5
Audio Samplerate:	48000

Main stream

Encoding Type:	H.265
Encoder size:	1920x1080@20
Bitrate(kbit):	2000
TS URL:	http://192.168.1.168/0.ts
HLS URL:	http://192.168.1.168/0.m3u8
RTSP URL:	rtsp://192.168.1.168/0
Multicast URL:	udp://@238.0.0.1:1234

9.3 Local Surveillance System Application NVR Connection

1. Confirm if NVR support H.265/H.264 decoder. Since using ONVIF, you need enable Set the “Encoding type” according to the encoder type.

H.265/H.264 Encoder

Language: English

Status

Encoder

Main stream

Substream1

Substream2

Substream3

Audio

Advanced

OSD

System

Main stream

Encoding type:	<div style="border: 1px solid #ccc; padding: 2px; display: inline-block;"> <div style="background-color: white; color: black; padding: 2px; margin-bottom: 2px;">H.265</div> <div style="background-color: #007bff; color: white; padding: 2px;">H.264</div> <div style="background-color: #6c757d; color: white; padding: 2px;">AV1</div> </div>	
FPS:	<input type="text" value="60"/>	[5-60]
GOP:	<input type="text" value="60"/>	[5-300]
Bitrate(kbit):	<input type="text" value="2000"/>	[32-32000]
Encoded size:	<input type="text" value="same as the input"/>	
Bitrate control:	<input type="text" value="vbr"/>	
TS URL:	<input type="text" value="/0.ts"/>	Enable <input type="checkbox"/>
HLS URL:	<input type="text" value="/0.m3u8"/>	Enable <input type="checkbox"/>
RTSP URL:	<input type="text" value="/0"/>	Enable <input type="checkbox"/>
Multicast IP:	<input type="text" value="238.0.0.1"/>	Enable <input type="checkbox"/>
Multicast port:	<input type="text" value="1234"/>	[1-65535]

2. Since using ONVIF, you need enable the “RTSP” function as below picture.

The screenshot shows the 'Main stream' configuration page of the H.265/H.264 Encoder. The left sidebar contains a menu with 'Encoder' selected. The main area has the following settings:

Parameter	Value	Range/Options
Encoding type	H.265	
FPS	30	[5-60]
GOP	60	[5-300]
Bitrate(kbit)	2000	[32-32000]
Encoded size	same as the input	
Bitrate control	vbr	
TS URL	/0.ts	Disable
HLS URL	/0.m3u8	Disable
RTSP URL	/0	Enable
Multicast IP	238.0.0.1	Disable
Multicast port	1234	[1-65535]

An 'Apply' button is at the bottom. The 'RTSP URL' dropdown is circled in red.

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

The screenshot shows the 'Audio' configuration page of the H.265/H.264 Encoder. The left sidebar contains a menu with 'Encoder' selected. The main area has the following settings:

Parameter	Value	Range/Options
Audio Input	HDMI	
Samplerate	44100	
Encoder	AAC+	
Bitrate	48000	[24000~48000]
Analog Vol	10	[-50~50]

An 'Apply' button is below the audio settings. The 'ONVIF Audio' section has the following setting:

Parameter	Value
G711A Over RTSP	Enable

An 'Apply' button is at the bottom. The 'G711A Over RTSP' dropdown is circled in red.

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 location need watch the source of the same HD Encoder, we suggest you use RTMP.

Our product support belowing Free platform: NGINX, RED5 MEDIA SERVER etc.

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

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

The screenshot displays a live streaming control panel. On the left is a sidebar with navigation options: 'LIVE STREAMING' (with a 'Stream now BETA' button), 'Events', 'COMMUNITY', 'CHANNEL', 'ANALYTICS', 'CREATE', and 'Help and feedback'. The main area features a video player showing 'OFFLINE'. Below the player are buttons for 'Create highlight' and 'Change thumbnail'. A tabbed interface shows 'BASIC INFO', 'STREAM OPTIONS', and 'CARDS'. The 'BASIC INFO' tab is active, containing fields for 'Live' status, a description box, a 'Schedule next stream' checkbox, a 'Category' dropdown (set to 'Gaming'), a 'Game title (recommended)' field, and a 'Privacy' dropdown (set to 'Public'). An 'Advanced settings' link is at the bottom right of this section. Below is the 'ENCODER SETUP' section, which includes a 'Server URL' field (containing 'rtmp://a.rtmp.youtube.com/live2') and a 'Stream name/key' field (with a 'Reveal' button).

Status

Encoder

OSD

Main stream

Substream1

Substream2

Substream3

LOGO upload

System

Main stream

Alpha:	<input type="text" value="100"/>	[0-128]
Text1:	<input type="text" value="Hello"/>	Enable <input type="button" value="v"/>
Font size:	<input type="text" value="36"/>	[8-72]
X:	<input type="text" value="10"/>	[0-1920]
Y:	<input type="text" value="10"/>	[0-1080]
Text2:	<input type="text" value="World"/>	Enable <input type="button" value="v"/>
Font size:	<input type="text" value="36"/>	[8-72]
X:	<input type="text" value="10"/>	[0-1920]
Y:	<input type="text" value="62"/>	[0-1080]
LOGO:	<input type="text" value="logo2.bmp"/> <input type="button" value="v"/>	Enable <input type="button" value="v"/>
X:	<input type="text" value="10"/>	[0-1920]
Y:	<input type="text" value="114"/>	[0-1080]

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)

H.265/H.264 Encoder

Language:

Status

Encoder

OSD

System

System status

Running Time:	0000-00-00 00:01:00
CPU Usage:	23%
Memory Usage:	39.0M/248.3M
Input Size:	1920x1080p@60
Collected Video Frames:	3470
Lost Video Frames:	5
Audio Samplerate:	48000

Main stream

Encoding Type:	H.265
Encoder size:	1920x1080@30
Bitrate(kbit):	1500
TS URL:	http://192.168.1.168/0.ts
HLS URL:	http://192.168.1.168/0.m3u8
RTSP URL:	rtsp://192.168.1.168/0
Multicast URL:	Disable

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, maladjustment of consumer controls, improper maintenance, power line surge, lightning damage, modification, or service by anyone other than a Factory Service center or other Authorized Service, 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.