# H.264 HD HDMI Encoder for IP TV

# **Operation Instructions**



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VVA	WARRANT F				

# **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.

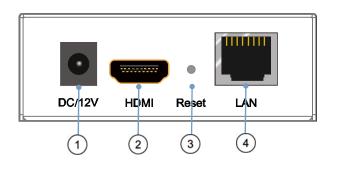
# 1. FEATURES

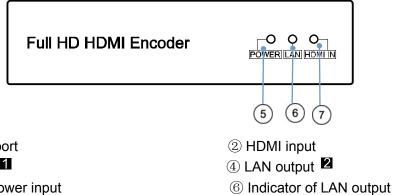
- Support H.264 encoding.
- Support UDP, HTTP, RTSP, RTMP, ONVIF protocol.
- Support MPEG1 Audio Layer 2.
- CBR/VBR rate: 16Kbps~16Mbps.
- > 1000M network interface uses full duplex mode.
- Support up to 720p, 1080p@60HZ HD video input.
- Support image parameter settings.
- > WEB interface management 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
- 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"  $\rightarrow$  "Network Connections"  $\rightarrow$  "Local Area Connections Status"  $\rightarrow$  "Properties"  $\rightarrow$  "Internet Protocol (TCP/IP)"  $\rightarrow$  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.

onnect using: IIII Realtek RTL8139C+ Fast Ethemet N		<sup>o</sup> settings assigned automatical Otherwise, you need to ask yo a IP settings.	
his connection uses the following items:	O Obtain ar	IP address automatically	
QoS Packet Scheduler	S Use the f	ollowing IP address:	
ST Network Monitor Driver	IP address:	192	2 . 168 . 1 . 11
✓ To Internet Protocol (TCP/IP)	Subnet mas	ik: 255	5 . 255 . 255 . 0
<]	Default gate	eway:	
Install Uninstall Pr	Obtain D	NS server address automatical	ly
Transmission Control Protocol/Internet Protocol. The	default	ollowing DNS server addresses	SC
wide area network protocol that provides communic across diverse interconnected networks.	stion Preferred D	NS server: 168	3.95.1.1
Show icon in notification area when connected	Alternate D	NS server: 168	3 . 95 . 192 . 1
<ul> <li>Notify me when this connection has limited or no co</li> </ul>	nnectivity		Advanced

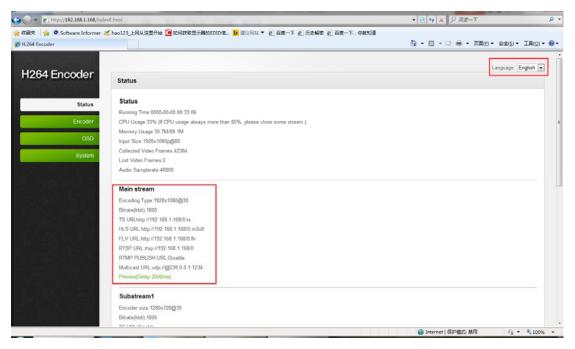
#### 5.1.2 Login for configuration

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.

Attp://192.168.1.168/ - Windows Internet Explorer	
G → http://192.168.1.168/	+ ۹
☆ 收藏夹 ○ 正在连接 ○ 正在连接 ③ ▼ ◎ ▼ □ ● ▼ 页面(P) ▼ 安:	全(S) ▼ 工具(O) ▼ 🕡 ▼ <sup>≫</sup>
Windows 安全         工           位于 pbox 的服务器 192.168.1.168 要求用户名和密码。            答告: 此服务器要求以不安全的方式发送您的用户名和密码(没有安全连接的基本认证)。            idemin            idemin            idextioutle            idextioutle	*
确定 取消	*
等待 http://192.168.1.168/. 📷	🖓 🔻 🍕 100% 🔻 🖉

#### 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

🏉 H.264 Encoder			
H264 Encoder			
M	ain stream		
Status	FPS:	30	[5-60]
Encoder	GOP:	30	[5-300]
Main stream 🔸	Bitrate(kbit):	1800	[32-32000]
Substream1	Encoded size:	same as the input 💌	
Substream2	H.264 Level:	high profile	
Substream3	Bitrate control:	vbr 💌	
Audio			
Advanced	TS URL:	/0.ts	Enable 💌
OSD	HLS URL:	/0.m3u8	Enable 💌
System	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:pas	s@ip/xxx/xxx
		Арріу	

# 6.2 Audio setting

Click encode  $\rightarrow$  Audio  $\rightarrow$  Setting the parameters  $\rightarrow$  Click apply

🔾 H.264 Encoder	
H264 Encoder	Audio
Status	Samplerate: 44100 💌
Encoder	Encoder: AAC 💌
Main stream	Bitrate:
Substream1	Apply
Substream2	
Substream3	
Audio 🖣	ONVIF Audio
Advanced	
OSD	G711A Over RTSP: Disable
	Apply
System	

# 6.3 Advanced

Click Encoder $\rightarrow$ Advanced $\rightarrow$ Setting all the parameter $\rightarrow$ Click apply.

🖉 H.264 Encoder	
H264 Encoder	Audio
Status	TS Muxer: Compatible with VLC  TS once pack: [3-128]
Main stream	TS Password Enable: Disable V
Substream1 Substream2	Apply
Substream3 Audio	CSC
Advanced  OSD	CSC: Disable  [0-255],Default:64
System	Apply

# 7. OSD Setting

# 7.1 Streaming OSD Setting

Click OSD $\rightarrow$ Network $\rightarrow$ Setting all the Parameter $\rightarrow$ Click apply, as below picture show

264 Encoder	Main stream		
Status	Alpha:	100	[0-128]
Encoder	Text1:		Disable 💌
OSD	Font size:	36	[8-72]
Main stream	X:	10	[0-1920]
Substream1	Y:	10	[0-1080]
Substream2	Text2:		Disable 💌
Substream3	Font size:	36	[8-72]
LOGO upload	X:	10	[0-1920]
System	Y:	62	[0-1080]
	LOGO:	▼ Disable ▼	
	X:	10	[0-1920]
	Y:	114	[0-1080]

# 7.2 LOGO uploading

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

🙆 H.264 Encoder		🏠 - 🗟 - 三 🖶 - 页面の - 安全(3)
H264 Encoder	LOGO upload	Langua
Status		
Encoder	logo1.bmp:	減貨 file size should < 500kbyte, 0xF1F1F1 is transparent color. The file name is logo1.bmp.
OSD	Upload	
Main stream	logo2.bmp:	減近 file size should < 500kbyte, 0xF1F1F1 is transparent color. The file name is logo2.bmp.
Substream1	Upload	
Substream2		
Substream3		
LOGO upload		
System		

\*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

 $Click \ system \rightarrow Network \rightarrow Setting \ all \ the \ parameter \rightarrow Click \ apply.$ 

H.264 Encoder	
H264 Encoder	Network
Status	internet access
Encoder	DHCP: Disable 💌
OSD	IP: 192.168.0.168
USD	Netmask: 255.255.255.0
System	Gateway: 192.168.0.1
Network <	MAC: 00:13:14:15:2E:97
Change Password	
Serial to TCP	DNS
Upgrade Reset	DNS1: 61.139.2.69
Reset	DNS2: 8.8.8.8
	Port
	HTTP Port: 8080 [1-65500]
	<b>RTSP Port:</b> 8554 [1-65500]
	Apply

# 8.2 Change password

System $\rightarrow$ Change password $\rightarrow$ Set your password $\rightarrow$ Apply

H264 Encoder	Change password	
Status Encoder OSD	Old password : New password : Confirm new password :	
System	Apply	
Network		
Change password		
Serial to TCP		
Upgrade		
Reset		
Reboot		

# 8.3 Reset

System→Reset→Reset

H264 Encoder	Reset
Status Encoder	Click this button to reset all settings of the encoder to the default state of the factory Reset
OSD	
System	
Network	
Change Password	
Serial to TCP	
Upgrade	
Reset •	
Reboot	

#### 8.4 Reboot

System $\rightarrow$ Reboot $\rightarrow$ Reboot (please refresh the web after 1 minute)

H264 Encoder	Reboot
Status	Click on the button to reboot the encoder.
Encoder	Reboot
OSD	
System	
Network	
Change password	
Upgrade	
Reset	
Reboot	

# 9. Application

9.1 User Application Example

### 9.1.1 Web Video Preview

Status→Main stream→Preview

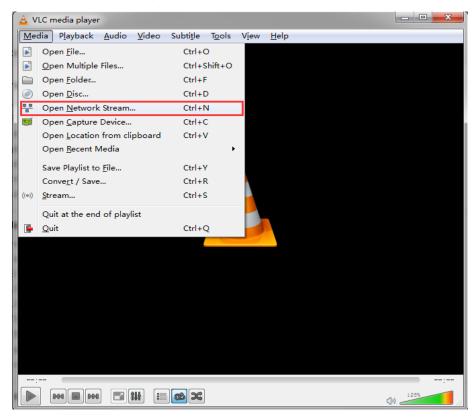
H 204 Encoder	In succession to success the sub-state in succession in the sub-state in the sub-	
🚱 🔵 🔻 🔊 http://192.168.1.1		• B 4 × P == -T P ·
🚖 收藏夹 🛛 🚕 🔍 Software Info	ormer 🔏 hao123 上网从这里开始 🥶 如何获取显示器的EDID值 🚺 建议网站 🔻 🚽 百食一下 🖉 历史解密 🚽 百食一下,你吃饭道	
AL264 Encoder		💁 • 🖾 • 🖾 🖷 • 页面包 • 安全(S) • III(Q) • 🚱 •
A Della Committee		
		Language: English 💌
H264 Encode	Status	
State	Status	
Stati	Running Time:0000-00-00 00:33:06	
Encod	CPU Usage:33% (If CPU usage always more than 85%, please close some stream.)	
	Memory Usage: 30.7M/89.1M	
05	SD Input Size.1920x1080p@60	
Syste	Collected Video Frames:42364	
Зум	Lost Video Frames 2	
	Audio Samplerate:48000	
	Main stream	
	Encoding Type: 1920x1080@30	
	Bitrate(kbit) 1800	
	TS URLhttp://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:ttsp://192.168.1.168/0	
	RTMP PUBLISH URL Disable	
	Multicast URL udp //@238 0.0.1.1234	
	Preview(Delay 2000ms)	
	Substream1	
· 승규는 김 (쇼프레	Encoder size 1280x720@30	
	Bitrate(kbit):1800	
· · · · · · · · · · · · · · · · · · ·	The Land Ave. Lat.	Internet   伊助規元 展用

Belowing picture is the preview effect:

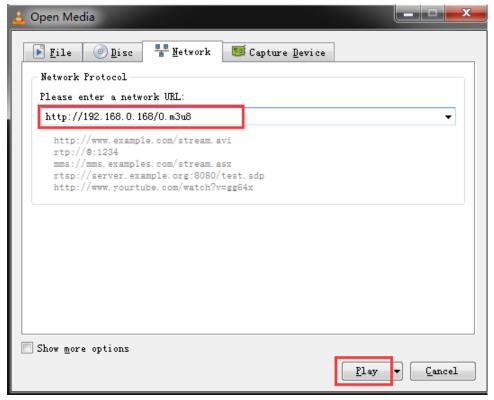
H.264 Encoder	of bind	• B + x P ==
H.264 Encoder		🚡 • 🖸 - 🖾 🖶 • 🏛 🖢 • 🕬 • 🕬
H264 Encoder		Lunguage English 💌
	Status	-
Status	Status FLV Preview	×
Eocoder	CPU Unage 33% ( Memory Usage 30)	
OSD.	hund Saw 1920x	
Bysten		
- Protein		
	Main stream	
	Multicast URL copyright 8.6 milest	
	Substream1	
电成	TRUDY DOUBLE	😝 Internet   保护概论: 禁用 🍕 🔹 💐 100% 🔹

### 9.1.2 VLC Play

Connect HDMI source to the HD encoder, open VLC media player (Download website: <u>http://www.videolan.org/</u>), 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.



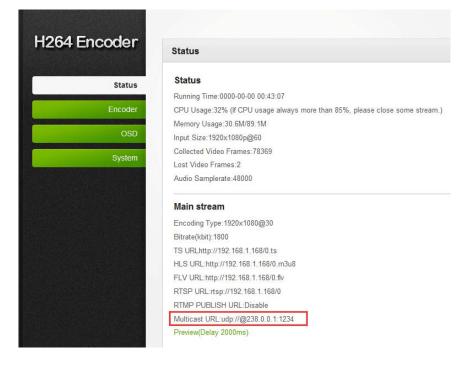


#### 9.2 Multi Local User Application Multicast Way

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.

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
		Enable
		Enable
		Enable
Multicast IP :	238.0.0.1	Enable
Multicast port :	1234	[1-65535]
RTMP PUBLISH URL:	rtmp://192.168.1.50/live/0	Enable
		i alla protocolo del
	GOP: Bitrate(kbit): Encoded size: H.264 Level: Bitrate control: TS URL: HLS URL: FLV URL: RTSP URL: Multicast IP: RTMP PUBLISH URL:	FPS:       30         GOP:       30         Bitrate(kbit):       1800         Encoded size:       same as the input ▼         H.264 Level:       high profile         Bitrate control:       vbr ▼         Bitrate control:       vbr ▼         TS URL:       /0.ts         HLS URL:       /0.m3u8         FLV URL:       /0.fiv         RTSP URL:       /0         Multicast IP:       238.0.0.1         Multicast port:       1234         RTMP PUBLISH URL:       rtmp://192.168.1.50/live/0         rtmp://ip/xxxx/xxx or rtmp://user:pass         Apply

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



#### 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.

1264 Encoder	Main stream		
Status			
	FPS:	30	[5-60]
Encoder	GOP:	30	[5-300]
Main stream	Bitrate(kbit):	1800	[32-32000]
Substream1	Encoded size:	same as the input 💌	
Substream2	H.264 Level:	high profile	
Substream3	Bitrate control:	vbr 💌	
Audio			
Advanced			
	TS URL:	/0.ts	Enable 💌
OSD	HLS URL:	/0.m3u8	Enable 💌
System	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 🔻

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

O H.264 Encoder	
H264 Encoder	Audio
Status	Samplerate: 44100
Encoder	Encoder: AAC 💌
Main stream	Bitrate :
Substream1	Apply
Substream2	
Substream3	0111/15 4 1
Audio <	ONVIF Audio
Advanced	
OSD	G711A Over RTSP: Disable
	Apply
System	

Note: If you've finished above setting and still can't open the video , we suggest you dow nload the standard testing tool to test the ONVIF function of HD Encoder ( Down load ad dress <a href="http://url.cn/2ESQRcn">http://url.cn/2ESQRcn</a>)

#### 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 <u>http://mudu.tv/</u> etc.

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

Stream now BET/ Events	This stre	
	OFFL	LINE
<b>O</b> CHANNEL	~	
III ANALYTICS	~	
CREATE	~	
Help and feedback	Create hi	
	BASIC INF	FO STREAM OPTIONS CARDS
	Live	
	Add desc	scription
	Schedu Category	ule next stream
	Category Gaming Game tit	
	Category Gaming	
	Category Gaming Game titl Privacy	)
	Category Gaming Game titl Privacy	• itle (recommended) • Advanced settin
	Category Gaming Game titl Privacy Public	rtile (recommended)   Advanced settin  R SETUP
	Category Gaming Game titl Privacy Public ENCODER Server URL	rtile (recommended)   Advanced settin  R SETUP
	Category Gaming Game titl Privacy Public ENCODER Server URL	tile (recommended)  Advanced settin  R SETUP  RL artmp.youtube.com/live2

🔏 H.264 Encoder			
H264 Encoder	Main stream		
Status	FPS:	30	[5-60]
Encoder	GOP:	30	[5-300]
Main stream 🔸	Bitrate(kbit):	1800	[32-32000]
Substream1	Encoded size:	same as the input 💌	
Substream2	H.264 Level:	high profile	
Substream3 Audio	Bitrate control:	vbr 💌	
Audio			
	TS URL:		Enable -
OSD	HLS URL:		Enable -
System	FLV URL:		Enable 💌
	RTSP URL:		Enable 💌
	Multicast IP : Multicast port :		Enable •
	Muticast port:	1234	[1-00000]
	RTMP PUBLISH URL :	ten://100.150.1.50/live/0	Disable 💌
		rtmp://ip/xxx/xxx or rtmp://user:pa	
		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 connectio n 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 Net work setting is correct (You need set the IP Address to have access to the internet)

H264 Encoder	Status
Status	Status
	Running Time:0000-00-00 00:14:22
Encoder	CPU Usage:32% (If CPU usage always more than 85%, please close some s
	Memory Usage:30.2M/89.1M
OSD	Input Size:1920x1080p@60
	Collected Video Frames:51588
System	Lost Video Frames:2
	Audio Samplerate:48000
	Main stream
	Encoding Type:1920x1080@30
	Bitrate(kbit):1800
	TS URLhttp://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 of benzine 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 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.

#### 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 WARRNTY. (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.