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.

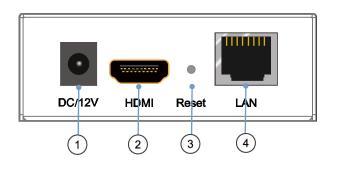
1. FEATURES

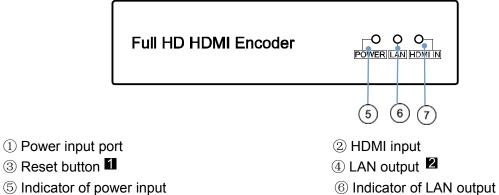
- Support H.264 encoding.
- Support UDP, HTTP, RTSP, RTMP, ONVIF protocol.
- Support MPEG1 Audio Layer 2.
- CBR/VBR rate: 16Kbps~16Mbps.
- > 100M network interface uses full duplex mode.
- Support up to 720p, 1080p@60HZ HD video input.
- Support image parameter settings.
- > WEB interface management 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





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.

Connect using:		I automatically if your network supports ed to ask your network administrator for
his connection uses the following items:	O Obtain an IP address autom	natically
QoS Packet Scheduler	Subsetthe following IP addres	\$:
Network Monitor Driver	IP address:	192 . 168 . 1 . 11
Internet Protocol (TCP/IP)	Subnet mask:	255 . 255 . 255 . 0
	Default gateway:	· · ·
Install Uninstall Properties	Obtain DNS server address	automatically
Transmission Control Protocol/Internet Protocol. The default	Use the following DNS serv	er addresses:
wide area network protocol that provides communication across diverse interconnected networks.	Preferred DNS server:	168 . 95 . 1 . 1
Show icon in notification area when connected	Alternate DNS server:	168 . 95 . 192 . 1
Notify me when this connection has limited or no connectivity		Advanced

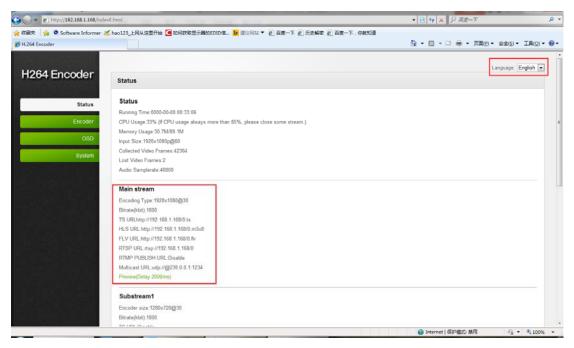
5.1.2 Login for configuration

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	
€	- № 4 🗙 🔛 百度搜索 🛛 🖓 -
🚖 收藏夹 🔘 正在连接	🏠 ▼ 🗟 ▼ 🖃 🖶 ▼ 页面(P)▼ 安全(S)▼ 工具(O)▼ 🕢 ▼
Windows 安全 位于 pbox 的服务器 192.168.1.168 引 警告:此服务器要求以不安全的方式发的基本认证)。 Image: Comparison of the system of the syst	
	确定 取消
等待 http://192.168.1.168/.	😜 Internet 保护模式: 启用 🋛 🖓 🔻 🔍 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	Арріу	
Substream2		
Substream3		
Audio <	ONVIF Audio	
Advanced		
OSD	G711A Over RTSP: Disable	·
System	Apply	

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
Encoder	TS once pack: [3-128]
Main stream	TS Password Enable: Disable 💌
Substream1	Apply
Substream2	
Substream3	
Audio	CSC
Advanced •	
	CSC: Disable 💌
OSD	Contrast: [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]
C Jeleni	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		🔓 マ 🗟 マ 🗔 🗮 マ 双重の マ 安全の
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:	減獎 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.

64 Encoder	Maturali		
	Network		
Status	internet access		
Encoder	DHCP:	Disable 💌	
OSD	IP:	192.168.0.168	
030	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	DNS1:	61.139.2.69	
Reset	DNS2:	8.8.8.8	
Reboot			
	Port		
	HTTP Port:	8080	[1-65500]
	RTSP Port:	8554	[1-65500]

8.2 Change password

System→Change password→Set your password→Apply

	H264 Encoder
Change p	
	Status
	Encoder
Confirm	OSD
	System
	Network
	Change password
	Serial to TCP
	Upgrade
	Reset
	Reboot

Change password	
Old password :	
New password:	
Confirm new password :	
	Apply

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

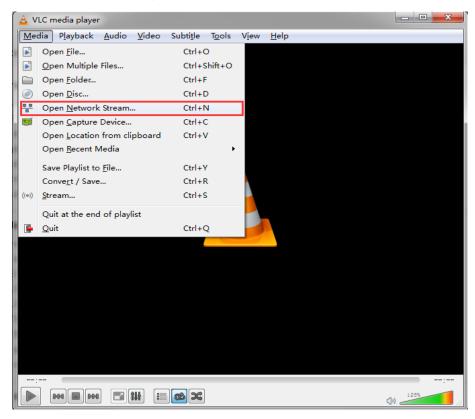
H1204 Encoder	(Coday: Mm)	• B + × P ==
会 図蔵美 · Gale Software Infor 愛 H.264 Encoder	mer 🔏 hao123 上现从这里开始 🥌 如何获取显示器的EDID信 😼 建心网站 🔹 副 百歲一下 🔊 历史解衷 🔊 百歲一下,你想知道	💁 • 🖾 • 🖾 🗰 • 页面包 • 安全的 • III (0) • 🚺
A Sugar Committee		
		Language: English 💌
H264 Encoder	Status	
	Status	
Status	Running Time:0000-00-00 00:33:06	
Encode		
	Memory Usage 30.7M/89.1M	
OSC	Input Size: 1920x1080p@60	
	Collected Video Frames 42364	
System	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:rtsp://192.168.1.168/0	
	RTMP PUBLISH URL:Disable	
	Multicast URL:udp //@238.0.0.1:1234	
	Proview(Detay 2000ms)	
	Substream1	
	Encoder size: 1280x720@30	
	Bitrate(kbit). 1800	
東皮	TO LOD DULING	Internet 保約期刊: M用

Belowing picture is the preview effect:

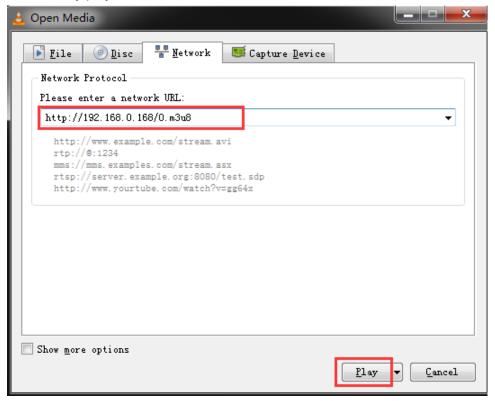
H 1264 Encoder	E hand	• D + X P ===
And and a second se	ここころの (hao123 上月从这里开始	
H.264 Encoder		
H264 Encoder	188	Language English 💌
	Status	
Status	Status FLV Preview	×
Encoder	CPU Usage 31% / Memory Usage 30	
	Inpat Size 1920x1	
Bysten .		
	Main stream	
		44.5
	ATEP URLINSE (
	RTMP PUBLISH U Mulicust URL were received to a TICM	
	Sec. at	
	Substream1	
电成	TRUE ROMA	● Internet 保护概念 禁用 《 * 弐 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.



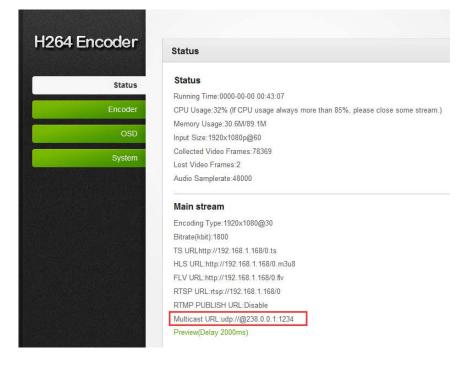


9.2 Multi Local User Application Multicast Way

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.

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	Bitrate control:	vbr 💌	
Audio			
Advanced	TS URL:	10.1-	5 . U
OSD			Enable -
	HLS URL:		Enable -
System	FLV URL:	/0.flv	Enable -
	RTSP URL:	/0	Enable 💌
	Multicast IP :	238.0.0.1	Enable 🝷
	Multicast port:	1234	[1-65535]
		rtmp://192.168.1.50/live/0	Enable -
		rtmp://ip/xxx/xxx or rtmp://user:pa	ss@ip/xxx/xxx
		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		
	man or our		
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 Substream1 Substream2	Apply
Substream3 Audio ≺	ONVIF Audio
Advanced	G711A Over RTSP: Disable
System	Арріу

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 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 <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 en coder after finishing the setting.

(++) LIVE STREAMIN	IG	
Stream now BE Events	This stream is OFFLINE	
	- OFFLINE	
CHANNEL	v	
III ANALYTICS	v	
CREATE	v	
Help and feedback	i i i i	* 0
	Create highlight Change thumbnail	
	BASIC INFO STREAM OPTIONS CARDS	
	Live	
	Add description	
	Schedule next stream	/
	Category	
	Gaming +	
	Game title (recommended)	
	Privacy	
	Public +	
	Adva	anced setting
	ENCODER SETUP	
	Server URL	
	rtmp://a.rtmp.youtube.com/live2	
	Stream name/key	
	of carriane, key	

🔏 H.264 Encoder			
H264 Encoder	/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:		
Substream3	Bitrate control:	vbr 💌	
Advanced			
OSD	TS URL:		Enable 💌
	HLS URL:		Enable -
System	RTSP URL:		Enable -
	Multicast IP :		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 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 Ne twork 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.