

H.265/H.264 HD HDMI Encoder for IP TV

Operation Instructions



Table of Contents

1.	Features		
2.	Package Contents		
3.	Hardw	vare Description	4
4.	Туріса	al Application	4
5.	Enviro	nment Configuration	5
5.1.		Software	
5.1. 5.1.		Change the IP Address of PC	
5.1.		Check the stream address	
6.	Encod	ler Setting	6
6.1.		Encoder Setting	6
6.2.		Audio Setting	
6.3.		Advanced	7
7.	OSD S	Setting	8
7.1.		Stream OSD Setting	8
7.2.		LOGO Uploading	8
8.	Syster	n Setting	9
8.1.		Network	9
8.2.		Change password	
8.3. 8.4.		Reset1 Reboot	
-			
9.	•••	ation	
9.1.		User Application Example	
9.1.		Web Video Preview	
9.1. 9.2.		VLC Play 1 Multi Local User Application Multicast Way	
9.3.		Local Surveillance System Application NVR Conncetion	
9.4.		Remote Multi User Application RTMP Connection 1	
WA	RRAN	ΓΥ1	6

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.

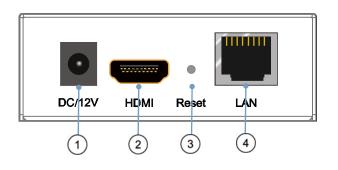
1. FEATURES

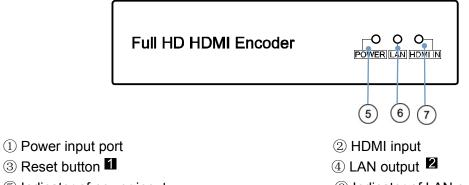
- Support H.265/H.264 encoding.
- Support UDP, HTTP, RTSP, RTMP, ONVIF protocol.
- Support MPEG1 Audio Layer 2.
- CBR/VBR rate: 16Kbps~16Mbps.
- > 1000M network interface uses full duplex mode.
- Support up to 720p, 1080p@60HZ HD video input.
- Support image parameter settings.
- > WEB interface management 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





③ Reset button 1

⑤ Indicator of power input

⑥ Indicator of LAN output

- 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: Realtek RTL8139C+ Fast Ethemet N	Configure		automatically if your network supports ed to ask your network administrator for
his connection uses the following items:	CONTRACTOR NO	Obtain an IP address autom	atically
QoS Packet Scheduler		Subset the following IP address	\$:
South Monitor Driver		IP address:	192 . 168 . 1 . 11
✓ S [™] Internet Protocol (TCP/IP)		Subnet mask:	255 . 255 . 255 . 0
<]	>	Default gateway:	
Install Uninstal	Properties	O Obtain DNS server address	automatically
Transmission Control Protocol/Internet Protoco	I. The default	Subset the following DNS served	er addresses:
wide area network protocol that provides comm across diverse interconnected networks.	nunication	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	-		

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.

Http://192.168.1.168/ - Windows Internet Explorer		
	▼ 🗟 4 × 区 百度搜索	+ م
🚖 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 警告: 此服务器要求以不安全的力的基本认证)。 Image: Comparison of the system of t	方式发送您的用户名和密码(没有安全连接	*
	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.

H.265/H.264	Encoder	Language: English 💽
Status	System status	
Encoder	Running Time:	0000-00-00 00:01:00
OSD	CPU Usage:	23%
System	Memory Usage:	39.0M/248.3M
	Input Size:	1920×1080p@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]

6.2 Audio setting

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

Status	Audio	
Encoder	Audio Input:	HDMI 💌
Main stream	Samplerate:	44100 💌
Substream1	Samplerater	
Substream2	Encoder:	AAC+
Substream3	Bitrate:	48000 [24000~48000]
Audio		
Advanced	Analog Vol:	10 [-50~50]
OSD		Apply
System	ONVIF Audio	
	G711A Over RTSP:	Disable
		Apply

6.3 Advanced

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

Status	Advanced		
Encoder	Deinterlaced:	Both	
Main stream	TS muxer:	Compatible with FFMPEG	
Substream1			
Substream2	TS once pack:	128	[3-128]
Substream3	TS password enable:	Disable 💌	
Audio Advanced	Slice split enable:	Disable 💌	
OSD	Slice size:	1024	[128-65535]
System	MIN_QP:	5	[1-35]
	MAX_QP:	42	(MIN_QP-50]
	SAR(H.264 Only):	Disable	
	CSC	Apply	
	CSC:	Disable 💌	
	Luminance:	50	[0-100],Default:50
	Contrast:	50	[0-100],Default:50
	Hue:	50	[0-100],Default:50
	Satuature:	50	[0-100],Default:50
		Apply	

7. OSD Setting

7.1 Streaming OSD Setting

Click OSD \rightarrow Network \rightarrow Setting all the Parameter \rightarrow Click apply

Status	Main stream		
Encoder	Alpha:	100	[0-128]
OSD	Text1:	Hello	Enable 💌
Main stream	Font size:	36	[8-72]
Substream1	Tonc size.	30	[0-72]
Substream2	X:	10	[0-1920]
Substream3	Y:	10	[0-1080]
LOGO upload		10	[0 1000]
System	Text2:	World	Enable 💌
L	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

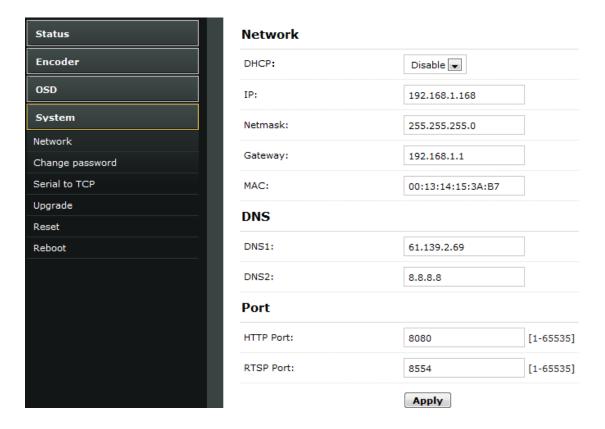
Status	LOGO upload
Encoder	logo1.bmp: 浏览
OSD	file size should < 500kbyte, 0xF1F1F1 is transparent color. The file name is logo1.bmp.
Main stream	Upload
Substream1	logo2.bmp: 浏览
Substream2	file size should < 500kbyte, 0xF1F1F1 is transparent color. The file name is logo2.bmp.
Substream3	
LOGO upload	Upload
System	

XNote: 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

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



8.2 Change password

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

H.265/H.264 Encoder					
Status	Change password				
Encoder	Old password:	•••••			
OSD	New password:	•••••			
System	Confirm new password:				
Network					
Change password		Apply			
Serial to TCP					
Upgrade					
Reset					
Reboot					

8.3 Reset

System→Reset→Reset

H.265/H.264 Encoder			
Status	Reset		
Encoder	Restore the device to factory settings.		
OSD	Reset		
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)

H.265/H.264 Encoder		
Status	Reboot	
Encoder	Please wait for 1 minute after reboot.	
OSD	Reboot	
System		
etwork		
nange password		
rial to TCP		
grade		
set		
<u>boot</u>		

9. Application

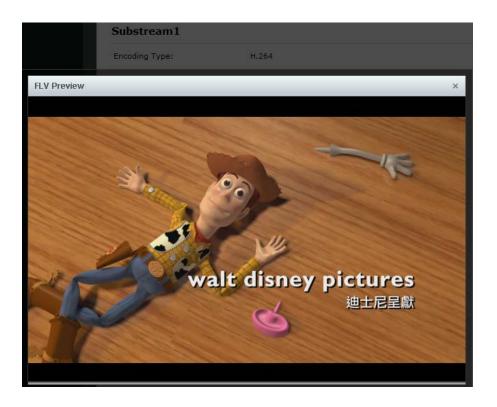
9.1 User Application Example

9.1.1 Web Video Preview

Status \rightarrow Main stream \rightarrow 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

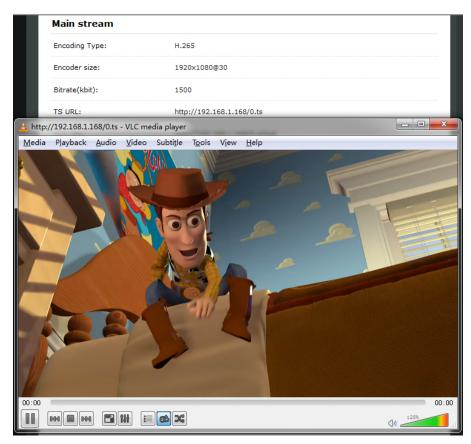
. .

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

🛓 v	LC media player	TRACK 1	
Me	dia Playback Audio Video	Subtitle Tools	View Help
	Open File	Ctrl+O	
	Open Multiple Files	Ctrl+Shift+O	
	Open Folder	Ctrl+F	
۲	Open Disc	Ctrl+D	
뫟	Open Network Stream	Ctrl+N	
5	Open Capture Device	Ctrl+C	
	Open Location from clipboard	Ctrl+V	
	Open Recent Media	•	
	Save Playlist to File	Ctrl+Y	
	Convert / Save	Ctrl+R	
((•))	Stream	Ctrl+S	
	Quit at the end of playlist		
	Quit	Ctrl+Q	

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

🚊 Open Media	
💽 File 💿 Disc 🏆 Network 🐸 Capture Device	
Network Protocol Please enter a network URL:	
http://183.12.14.44.8080/0.ts	
http://www.example.com/stream.avi rtp://@:1234	
mms://mms.examples.com/stream.asx rtsp://server.example.org:8080/test.sdp http://www.yourtube.com/watch?v=gg64x	
Show more options	Play V Cancel



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.

H.265/H.264	Encoder		Lanç
Status	Main stream		
Encoder	Encoding type:	H.265 💌	
Main stream	FPS:	20	[5-60]
Substream1 Substream2	GOP:	60	[5-300]
Substream3	Bitrate(kbit):	2000	[32-32000]
Audio	Encoded size:	same as the input	
Advanced OSD	Bitrate control:	vbr	
System	TS URL:	/0.ts	Enable 💌
	HLS URL:	/0.m3u8	Enable 💌
	RTSP URL:	/0	Enable 💌
	Multicast IP:	238.0.0.1	Enable 💌
	Multicast port:	1234	[1-65535]
		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

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:	1920×1080@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.

Status	Main stream		
Encoder	Encoding type:	H.265 -	
lain stream	FPS:	H.264 H.265 50	[5-60]
Substream1	GOP:	60	[5-300]
ubstream3	Bitrate(kbit):		
udio	Bitrate(KDIt):	2000	[32-32000]
dvanced	Encoded size:	same as the input 💌	
DSD	Bitrate control:	vbr 💌	
δγstem	TS URL:	/0.ts	Enable 💌
	HLS URL:	/0.m3u8	Enable 💌
	RTSP URL:	/0	Enable 💌
	Multicast IP:	238.0.0.1	Enable 💌
	Multicast port:	1234	[1-65535]

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

itatus	Main stream		
ncoder	Encoding type:	H.265 🖵	
lain stream ubstream1	FPS:	30	[5-60]
ubstream2	GOP:	60	[5-300]
ubstream3	Bitrate(kbit):	2000	[32-32000]
udio dvanced	Encoded size:	same as the input	
DSD	Bitrate control:	vbr	
lystem	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]

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

l.265/H.2	264 Encoder	Language: English
Status	Audio	
Encoder	Audio Input:	номі 📼
Main stream	Samplerate:	44100
Substream1	Samperate.	
Substream2	Encoder:	AAC+ 💌
Substream3	Bitrate:	48000 [24000~48000]
Audio		
Advanced	Analog Vol:	10 [-50~50]
OSD		Apply
System		
	G711A Over RTSP:	Enable
		Apply
		(RUP)

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 <u>http://url.cn/2ESQRcn</u>)

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.

				LIVE STREAMING	0.802
		am is	This	Stream now BET	
		NE	OF	Events	E
			~ 1	COMMUNITY	* 0
			~	CHANNEL	0
			~	ANALYTICS	ılıl A
			~	CREATE	
\$				la and faadhaali	11-1
	onail	hlight Change thumbr	Crea	lp and feedback	Hei
	CARDS	STREAM OPTIONS	BASIC		
			Live		
		iption	Add		
		e next stream	Sch		
			Catego		
		•	Gam		
		(recommended)	Gam		
			Privac		
			Publi		
Advanced setti					
		ETUP	ENCOL		
			Server		
		tmp.youtube.com/live2	rtmp		
]		rtmp Stream		

Status	Main stream		
Encoder	Alpha:	100	[0-128]
OSD	Text1:	Hello	Enable 💌
Main stream	Fh - i		
Substream1	Font size:	36	[8-72]
Substream2	X:	10	[0-1920]
Substream3	Y:	10	[0-1080]
LOGO upload	••		[0 1000]
System	Text2:	World	Enable 💌
	Font size:	36	[8-72]
	X:	10	[0-1920]
	Υ:	62	[0-1080]
	LOGO:	logo2.bmp 🗨 Enable 💌	
	X:	10	[0-1920]
	Y:	114	[0-1080]
		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 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)

H.265/H.264	Encoder	Language: English
Status	System status	
Encoder	Running Time:	0000-00-00 00:01:00
OSD	CPU Usage:	23%
System	Memory Usage:	39.0M/248.3M
	Input Size:	1920×1080p@60
	Collected Video Frames:	3470
	Lost Video Frames:	5
	Audio Samplerate:	48000
	Main stream	
	Encoding Type:	H.265
	Encoder size:	1920×1080@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 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, 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 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.