# H.265/H.264 HDMI Video Encoder Quick Star Guide

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## Preface

Thanks for purchasing our products. The video encoder is mainly used for CCTV surveillance, IPTV live broadcast, WeMedia broadcast, major sports broadcast, remote teaching, tele-medicine, wedding ceremonies, video conference etc. It adopts high performance SOC which is capable of collection, compression and transmission of video and audio together. Integrated with H.265 video encoding algorithm, it can be better to transmit and save the videos by halving storage space and bandwidth. The embedded web server allows users to easily monitor and remotely control front-end video from browsers like IE, Microsoft Edge, Google Chrome, Firefox, Safari etc. If possible, it's recommended to use Google Chrome directly.

The tested streaming media servers include Tencent Cloud, Alibaba Cloud, Baidu Cloud, 163Yun, QINIU, AUDIANYUN, LE Cloud, MUDU.TV, Youtube and Wowza etc. It's compatible with Hikvision's NVR & CMS (iVMS-4200) and Dahua's NVR & CMS (SmartPSS) by private protocols. Video protocols like TS stream, RTMP, HTTP, RTSP and ONVIF are all supported. It also supports AAC, G.711U and G.711A audio encoding.

**NOTE**: This document might be changed and updated at any time without notice. If you have any questions, please contact us directly.

#### 1. Preparation

- 1.1 Download and Install ActiveX
  - Name of ActiveX: IPCOCX\_setup2.15
  - Download link as below: <u>https://www.dropbox.com/s/f0447ye44108fl0/ActiveX\_IPC</u> <u>OCX\_setup2.15.rar?dl=0</u>

1.2 Download and Install IPC Manager

- Name of IPC Manager: NEU\_IPCManager\_V4.02.28\_win\_x86
- Download link as below: <u>https://www.dropbox.com/s/ks1c66x3dxjknge/NEU\_IPCMa</u> <u>nager\_V4.02.28\_win\_x86.rar?dl=0</u>
- Install IPC Manager

NOTE: IPC Manager c	an only be	used in '	Windows	instead	of
MAC OS.					

#### 1.3 Clear Cache

- Run IE>Tools>Internet Options
- Delete corresponding browsing history
- Click checkbox before "Every time I visit the webpage"

Internet Options ?	C Delete Browsing History	Website Data Settings ? ×
General Security Privacy Content Connections Programs Advanced Home page To create home page tabs, type each address on its own line.	Keep cookies and temporary Internet files that enable your favorite websites to retain preferences and display faster.	Temporary Internet Files History Caches and databases Internet Explorer stores copies of webpages, images, and media for faster viewing later.
http://www.baidu.com/	Copies of webpages, images, and media that are saved for faster viewing.	Check for newer versions of stored pages: Every time I visit the webpage Every time I start Internet Explorer
Use current Use default Use new tab	Cookies and website data Files or databases stored on your computer by websites to save preferences or improve website performance.	Automatically     Never
Startup	History     List of websites you have visited.	Disk space to use (8-1024MB) 250 🖨
Change how webpages are displayed in tabs.     Tabs	Download History List of files you have downloaded.	C:\Users\Gordon\AppData\Local\Microsoft\Windows\INetCache\
Browsing history	Form data Saved information that you have typed into forms.	Move folder View objects View files
Delete temporary files, history, cookies, saved passwords, and web form information. Delete browsing history on exit Delete	Passwords Seved passwords that are automatically filled in when you sign in to a website you've previously visited.	S OK Cancel
Appearance Fonts Accessibility	Tracking Protection, ActiveX filtering and Do Not Track ( A list of websites excluded from filtering, data used by Tracking Protection to detect where sites might automatically be sharing deta about your visit, and exceptions to Do Not Track requests.	ls
OK Cancel (6) Apply	About deleting browsing Delete Cancel	

#### 2. Two Methods to Configure IP Address of HDMI Video Encoder

2.1 Power on with DC12V and connect it to the routers

 Steps to obtain IP address by DHCP Server as below: Enter user name & password>Select All>DHCP> Modification>Refresh

IPCManager V4.02.28									<ul> <li>– □</li> </ul>	×
	Select	No.	Model	Name	Protocol	IP Address	MAC Address	HTTP Port	Serial No.	Firmwa
Q		1	IPC-ON200H16C	IPC-ON200H1	IPC	192.168.1.100	78:a3:51:80:65:1c	80	ON200H16CM0FZ201812	V2.38.1
IPC Searching										
(L)										
Firmware Upgrading										
*										
Configurations										
⊁										
Tools										
	<									>
	<mark>2</mark> 🛛 Se	elect ALL		(3 инс						
		Refre				ig IP Address				
		Manua	l add	IP From						
				Subnet			- 11 - 11 - 11 - 11 - 11 - 11 - 11 - 1			
User Name admin Password •••••• 12345				IP Gate	way				4 Modification	

**NOTE**: please ensure the network camera and your PC are on the same segment if it's connected to the same router.

2.2Connect HDMI Video Encoder to PC directly (direct connection)
Set static IP address for PC

etworking Sharing	General	
Connect using:		gned automatically if your network
Realtek PCIe GBE Family Controller #2	supports this capability. Oth administrator for the approp	erwise, you need to ask your network priate IP settings.
Configure	Obtain an IP address a	automatically
This connection uses the following items:	2 Use the following IP ac	ddress:
<ul> <li>We client for Microsoft Networks</li> <li>File and Printer Sharing for Microsoft Networks</li> </ul>	IP address:	192.168.1.12
VirtualBox NDIS6 Bridged Networking Driver	Subnet mask:	255.255.255.0
🗹 🛬 QoS Packet Scheduler	Default gateway:	192.168.1.1
Internet Protocol Version 4 (TCP/IPv4)	5	
	✓ Obtain DNS server add	fress automatically
<	3 Use the following DNS	server addresses
Install Uninstall Properties	Preferred DNS server:	206 . 96 . 134 . 133
Description	Alternate DNS server:	
Transmission Control Protocol/Internet Protocol. The default wid		
area network protocol that provides communication across diverse interconnected networks.	Validate settings upor	Advanced

 Steps to obtain IP address by manual modification as below: Enter user name & password>Select All>Use The Following IP Address>Enter IP from/Subnet Mask/IP Gateway>Modification>Refresh



#### 3. Access from a Browser

- 3.1 Start a browser (Internet Explorer, Chrome, Firefox, Safari).
- 3.2 Enter the IP address or host name of the network camera or encoder in the browser's Location/Address field.

**NOTE**: The default IP address is 192.168.1.120. If you do not know the IP address, use IPCManager to locate the device in your network. For information about how to discover and assign an IP address, please see----

3.3 Enter your user name and password. If this is the first time the product is accessed, it's strongly recommended to set a new password.

Authentication Required ** http://192.168.1.120 requires a username and password, Your connection to this site is not private.	
User Name: admin	
Password: *****	
Log In Cancel	

3.4 Click "Log In" and the Preview page opens in your browser.



- 4. Configure Wireless Connection (Only available to Wireless Devices)
  - 4.1 Connect to Wi-Fi
    - Click Settings>Network>WIFI
    - Double click your wireless ID from the Wireless List
    - Enter your password of WIFI in the column of Key

	🖵 Live view 🚺 🏘 Setting	
ystem		
etwork		
deo/Audio	TCP/IP OWIFI HTTP RTSP RTMP Mulitcast 4G	
curity	NOT Description of the factors	
	NOTE:Does not support this feature	
	Wireless List     Num. SSID Signal Authentication Encryption	
	Vum 350 Signal Audrenucation Encryption	
	Refeash	
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	Refresh • Wirdess Settings	
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	Refresh • Wirdess Settings	
	Refresh • Wireless Settings	
	Refinish  • Wireless Settings  SSID: Authentication / Encryption: OPIN/INDAE •  ③ Key:	
	Rofresh • Wireless Settings SSID: Authentication / Encryption: OPEN/MICHE •	
	Ratensh • Wireless Settings SSD: Authentication / Encryption: OPEN(MCDH • ) P Setting: DHCP •	
	Refinish  • Wireless Settings  SSID: Authentication / Encryption: OPIN/INDAE •  ③ Key:	
	Ratensh • Wireless Settings SSD: Authentication / Encryption: OPEN(MCDH • ) P Setting: DHCP •	

**NOTE**: Check whether the device is connected to the WIFI from Settings>Network>WIFI>Wireless Status. If not connected yet, please try to re-configure the WIFI connection or reboot the device after your settings.

#### 4.2 Reboot

Click Settings>System>Maintain>System Reboot

→ C © 192.168.1.1	20/cn/home.asp	14日 立 三
	📮 Live view 🛛 🔀 Setting	
<ul> <li>System</li> <li>Network</li> </ul>	System	
<ul> <li>Video/Audio</li> </ul>	System status System info 🕘 Maintain	
Security	• Maintain	
	System delault     Default factory	
	Upgrade	
	Path:         Browse         Upgrade           Note         1.Don't POWER OFF during upgrading. It will be reboot after the upgrade, it will fake around (1-10) minutes.	

**NOTE**: it will take a little time to reboot, please wait for a while after clicking System reboot button.

#### 5. Configure 4G Connection (Only available to 4G Devices)

5.1 Connect to 4G

- Click Settings>Network>4G
- Select True from the dropdown list to enable 4G
- Click Save and it will automatically dial

D HD Encoder → - → C <sup>2</sup> © 192,168.1.1	20/cr/home.asp	= _ c %i☆
	🖵 Live view 🚺 🖗 Setting	
• System	Video/Audio	
<ul> <li>2 Network</li> <li>Video/Audio</li> </ul>	TCP/IP WIFI HTTP RTSP RTMP Mulitcast	
Security	Basic setting	
	©inable   rabe ■     : ▼	
	Wireless Status	
	Link Status: Current IP:	
	Save     Resot	

**NOTE**: Check whether the device is connected to the 4G from Settings>Network>4G>Wireless Status. If not connected yet, please try to re-configure the 4G connection or reboot the device after your settings.

5.2 Reboot

Please see 4.2

#### 6. Configure Encoder via IE & Chrome

**NOTE**: By IE, it's necessary to clear cache, or else all settings might not be shown correctly on IE or browsers powered by IE kernel. For details to clear cache, please see 2.2.

#### 6.1 Check System Status

- Click Settings>System>System Status>Overview
- Check whether video & audio input by HDMI are correct?

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	Live view 创命 Setting	
System     Natwork     Video/Audio	System System status System info Maintain	
Security	Overview	
	Video input: 1920h1080@60HZ Audio input: PCM 2CH 46000HZ	
	System settings	
	System mode 2*1080#@25/30 •D1@25/30 •	
	Sire	

#### 6.2Configure System Mode

- Click Settings>System>System Status>System Settings
- Select the needed system mode from drop-down list
- Click Save and it will automatically reboot

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	및 Live view 00☆ Setting	
System     Network     Video/Audio	System status System info Maintain	
• Security	<ul> <li>Overvlew</li> <li>Video input: 1920r/1680@60HZ</li> <li>Audio input: PCM 2CH 46000HZ</li> </ul>	
	System settings      System mode     2110004925509-01-025209      1110004955060      Soci      Reset	

#### 6.3 Configure Audio

- Click Settings>Video/Audio>Audio/Audio Config
- Select the corresponding Codec Type and Bitrate
- Click Save to make the above settings valid

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	🖵 Live view 🕚 🏟 Setting	
System     Network     Video/Audio	Video/Audio Audio Video OSD Image	
Security	Audio config	
	Audio Input HDMI * Codes type G711U * GBRrate Channet Streve *	
	Save Reset	

#### NOTE:

- a. Two types of coding for audio: AAC and G.711. Usually it's recommended to use AAC if you're trying to use streaming media server for live broadcast.
- b. Usually use G.711U and G.711A if it's connected to NVR, audio sampling is 8000 by default.
- 6.4 Configure Video
  - Click Settings>Video/Audio>Video
  - Configure Resolution/Key Interval/Bitrate
  - Click Save to make the above settings valid

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	🖵 Live view 🕕 û Setting	
System     Network	Video/Audio	
Video/Audio	Audio 🕑 //ideo OSD Image	
Security	• Video	
	Charnet Valinstream  Codec type: H204  Resolution 1920r180	
	• Gop	
	(6) Key interval: 50 [5-200]	
	Bitrate mode	
	Type: VB • Bitrate: 4056 kbit/s (64-12000) Quality: 4 •	
	« Framerate:	
	Framerate: 25 v   fps	
	Save Reset	

**NOTE:** if there are many moving objects in the image, it's strongly recommended to change the key interval with a smaller one like 5 or 10, then the image quality can be improved.

6.5 Configure OSD

- Click Settings>Video/Audio>OSD
- Add Text OSD
  - a. Select True from drop-down list to enable Test OSD
  - b. Enter corresponding content to enable channel name
  - c. Select True to enable Move to let contents move in from the left side of screen

HD Encoder >		é – 5
← → C ① 192.168.1.1	20/cn/home.asp	<b>ଲ</b> ନ
	및 Live view 민상 Setting	
System     Network	Video/Audio	
Video/Audio	Audio Video 🖲 DSD Image	
Security	• Video	
	Channel: Main stream •	
	• Text osd	
	Chable: False •	
	X pos: 0 [0-1920] y pos: 0 [0-1080] Font: 2 [8-128] Conor serring: 400000-4FFFFF] Transparent: 128 [0-128]	
	S Content:	
	() Move: False *	

- Add Picture OSD
  - a. Select True from drop-down list to enable Picture OSD
  - b. Click Browse to select the corresponding images
  - c. Click Upload to upload the above selected images

<u> </u>	ole: False •			
×р	os: 0 [0-1920]			
ур	os: 0 [0·1080]			
Transpare	ent 128 [0-128]			
Picture nar	ne:			
Pictu	ire:	8 0 (Only support jpg	format)	

• Click Save to make the above settings valid

6.6 Configure RTMP address

- Click Settings>Network>RTMP>Enable
- Enter RTMP address in the column of Push URL
- Click Save to make the above settings valid

HD Encoder ×		- • ×
← → C* © 192.168.1.12	10/cn/home.asp	Qe 🖈 🖽 🗄
	Live view 🕕 Setting	
System     Network	Video/Audio	
• Video/Audio	TCP/IP WIFI HTTP RTSP 9 RTMP Mulitcast 4G	
Security	Video push	
	Channet Main stream • ④ Enable: True • ⑤ Push URL:	
	Save Reset	

**NOTE:** if there are two lines of push address, the format is push address and live streaming code together like rtmp://push address/live streaming code/

#### 7. FAQ

- 7.1 How many languages can be supported by default for UI?A: two languages by default: Simplified Chinese and English.
- 7.2 What is the main difference for main stream and sub stream?
   A: Main stream means higher resolution, primarily used for CCTV surveillance while sub stream means lower resolution for network transmission.
- 7.3 Can live broadcast and surveillance be used simultaneously?
   A: Yes, RTMP protocol will be used for live streaming while RTSP for surveillance, so it won't be affected when simultaneously used.

7.4 Which kind of NVR can support live streaming and surveillance as well as sound?

**A**: as far as we learned, only NVR from TP-Link can support AAC, while traditional manufacturers only support G.711, not AAC because of intellectual property. Besides, right now our encoder can be compatible with Hikvision's NVR & CMS (iVMS-4200) and Dahua's NVR & CMS (SmartPSS).

7.5 Can we use H.265 encoding when pushing streams by RTMP?
A: No, RTMP can only support H.264 encoding. And Adobe said clearly before there is no more update and maintenance for RTMP, that's why RTMP and RTSP can only support H.264 encoding.

#### 8. Contact

Any question, please contact us directly through below ways:

- Tell: +86-18923798767 (WhatsApp)
- Skype: wyliu007
- Email: <u>wyliu@ssqvision.com</u>