BENESTON HDMI&VGA to IP Encoder

USER MANUAL

About our user manual

Thank you for purchasing our H.264 HD video encoder.

Before install H.264 HD video encoder，please read this user manual clearly. Please strictly to follow our manual to install and use our encoder, or install and use under guiding by professional person, to protect your body safety and to avoid the encoder damage from physical and electrical. The encoder maybe will be damaged if incorrect electrical connection or the physical installation, even threaten the body safety.

Please note and understand:

* This manual contains product pictures &interface screenshot picture, may be different with actual product due to product upgrades/function changes. Please to the actual product.

* The software can be upgraded, new function after upgrade in this manual may not be mentioned.

Indicators

Warning: need to pay special attention to the details that may damage the body safety.

Be careful： need to operate carefully, otherwise you may damage the product and function.

Attention： notes, usage tips, or additional information.

1 OVERVIEW AND FEATURE

Overviews

Our HDMI &VGA to IP encoder is a network encoding device to compress and convert HDMI or VGA signal to H.264 network stream.

Encoded media stream would support standard RTP/RTSP, RTMP Plush protocol and ONVIF1.1/2.0. So the device is compatible to NVR, Wowza, FMS, RED5 ect. stream media server.

Our device also supports Windows/Linux/Unix translatability and SDK tool.

The encoder support 1CH HDMI or VGA input up to 1920x1080p60 (HDMI) and 1920x1200@60hz and also support HDMI embedded digital audio and analog audio(line-in)input.

The encoder would compress video and audio signal base on high quality image and audio and plush adjustable video and audio bate rate from 512Kbps to 20Mbps.

Feature :

- ●Support HMDI1.3 and HDCP1.3
- ●Supports HDMI &VGA interface and AES/EBU embedded audio (HDMI)
- ●Supports various formats of
  1080p30/25/24, 1080i, 1080i50, 720p60/50, 480i/p, 576i/p
- ●supports standard VESA protocol from VGA to WUXGA various formats upto 1920x1200 60hz
- ●H.264 High Profile level 4.1 compressing technology, high definition, high acoustic fidelity, bellow 50ms of encoding delay
- ●Encoding code rate is adjustable, picture quality can be controlled
- ●Automatically embed audio signal to HDMI signal and support independent audio input or output

●Support AAC-LC and G.711 audio encoding

●supports two-way voice talkback , RS-485 signaling get through and alarm

semaphore get through (Once connected to our coming decoding)

●Support main and sub-streaming encoding (main streaming & Sub-

streaming)

●support TCP/IP, RTP/RTSP ,RTMP standard

●Support Onvif 1.1/2.0

●Support HTTP / WINDTALK Web management , Online preview

●Image enhancement and fault-tolerant technology, strong resisting error
code capability, excellent picture quality, clear acoustic
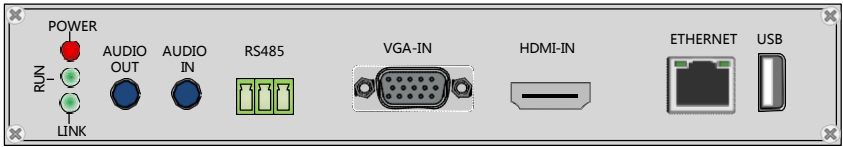
2 DEVICE LIST AND DESCRIPTION

Packing list

1. One (1) HDMI&VGA Encoder
2. One (1) User Manual
3. One (1) AC Adapter

1.   2.   3.

For any returns, please include all components listed above with original packaging in

Resalable Condition. **Absolutely No Returns** will be accepted if any component is

missing/damaged.

(-) Front Panel

(二) Rear Panel

(三) Technical Specifications

Type	VMI-EN001-HD	
Input Interface	1 x HDMI 1 x VGA	
Output Interface	1 10/100M Ethernet	
Analog audio line-in	1*3.5mm audio socket (Unbalanced Connection)	
Analog audio line-out	1*3.5mm audio socket (Unbalanced Connection)	
Alarm Semaphore	1x Industrial Terminal Block	
RS-485 Connector	1x Industrial Terminal Block	
Network Connector	1x RJ45, Ethernet Connected	
HDMI Resolution	1080p/1080i/720p/480p/576p/480i/576i	
VGA Resolution	VGA/XGA/UVGA/SVGA/SXGA/SXGA+/WXGA/WXGA/ WSXGA/WUXGA	
Video Compression Standard	H.264 Main profile level 4.1 ,High Profile, Slice encoding	
Audio Compression Standard	AAC-LC，G.711(u-Law/a-Law)	
Video Encoding Code Rate	512Kbps ~ 25Mbps	
Audio Encoding Code Rate	64Kbps	

Encoding Delay	< 60ms	--
Decoding Delay (coming)		200ms
Media Transmission Protocols	RTP/RTSP, Compatible RTP over TCP Transmission Mode RTMP, RTP	
Signal Protocol	TCP	
NetworkManagement	HTTP,ONVIF 1.1/2.0	
Management Interface	Web	
Remote Management / Remote upgrade Firmware	Yes	
Power Supply	DC12V,1A	
Power Consumption	7 Watts (max)	
Operating Temperature	-10°C ~ 70°C	
Storage Temperature	-20°C ~ 60°C	
Relative Humidity	20~90% RH (Non-condensation)	
Dimension	182X122X36mm	

Key Components

Components Made in USA for this product:

Name of Component	Manufacturer
Multi-Rate SDI Adaptive Cable Equalizer	Gennum
Multi-Rate SDI Automatic Reclocker	Gennum
Multi-Rate Dual Slew-Rate Cable Driver	Mindspeed & Gennum
SDI SPD	Bourns
HDMI ESD Protection	Semtech
Micro Controller Unit	Texas Instruments

Components Made in Taiwan for this product:

Name of Component	Manufacturer
DC/DC Converter	

*Key components are listed by the manufacturer and are subject to change
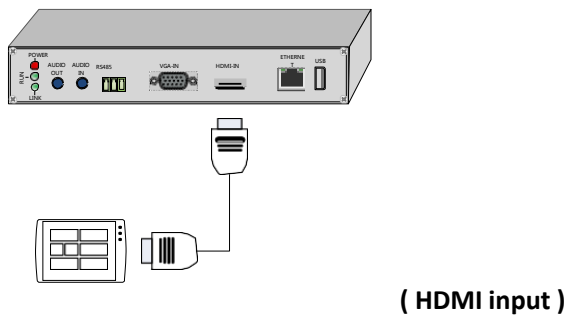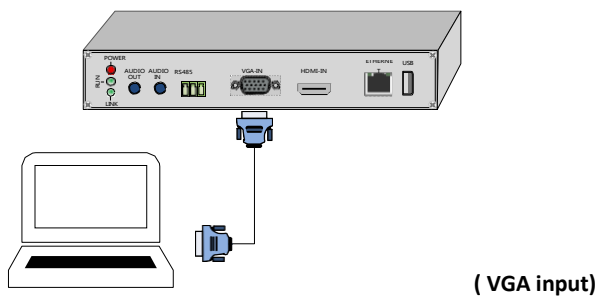
without notice

3   INSTALLATION AND CONNECTION

Preparation

Open the packing, check whether the product and accessories are complete.

Connect HDMI or VGA video signal

connection：

（see next page）
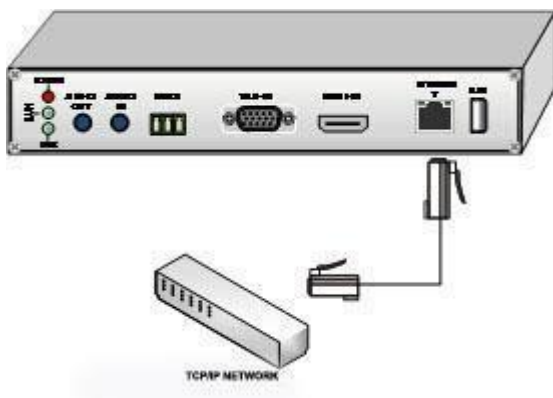

(VGA input)

(HDMI input)

To improve signal quality and ensure the effective transmission distance

of HDMI and VGA signal, please use high quality cable, Inferior cable may seriously affect the signal quality, transmission distance, and even lead to the device is not working properly.

Connect internet

（**1**）**connection：**

Connect one end of the network cable to the encoder 10/100M Ethernet interface. The other end is connected to the network switch, also can be directly connected to the computer's Ethernet port.

Please note: when use the normal network cable connect directly to the computer's Ethernet port, the computer network port should has the automatic transfer line function. Otherwise, please use a crossover cable to connect.

Test found that some small home network switches is not support

well for a large number of continuous video encoder data. It will lead to network packet loss , video mosaics, video stagnation or no images.

## Connect analog audio input/out put(option)

Connect RS-485 Control line (Option）

The encoder supports the RS-485 control interface. RS-485 can be used to control the camera (PTZ) and other industrial equipment, and be paired with decoder to achieve the remote transparent transmission RS-485 signals.

RS-485 also can be connected to a RS-422 reception / transmission terminal. However, the specific electrical characteristics should be according to the practical application of restrictions on the scene to customize.
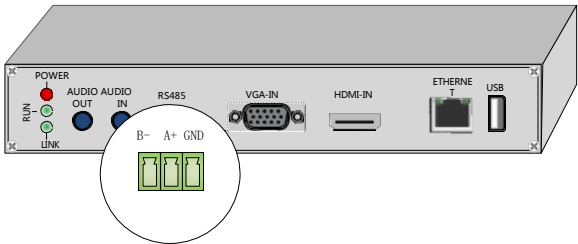
RS-485 can be do not connect to ground. However the signal transmission quality, anti-interference ability will be improved after connecting the ground .

Connect the power supply
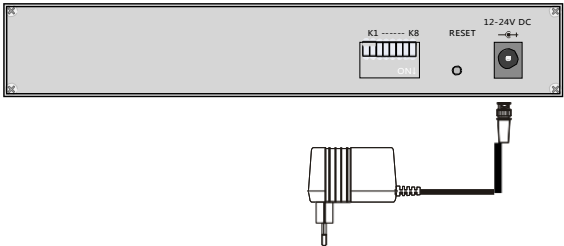
Use the power adapter (DC12V1A) connect to the main product,

after the power is turned on, then the product start working immediately.
Be sure to use the original power adapter, or compatible with the electrical

mechanical characteristics of device power adapter. Improper power adapter may

damage the device, and even endanger the personal safety!

Dip Setting

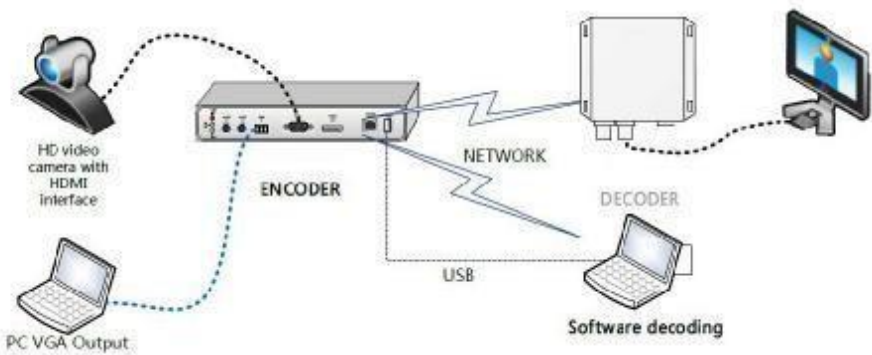| Dip No.	Status	Description
K1	OFF(default)	Video/audio setting by Web-base management system
	ON	Video（HDMI or VGA）/audio（HDMI or analog audio input） setting byK2/K3
K2	OFF	As K1 is ON，K2 is OFF, HDMI Source is valid As K1 is OFF, HDMI source is invalid
	ON	AS K1 is ON，K2 is ON, VGA source is valid. As K1 is OFF , VGA source is invalid
K3	OFF	As K1 is on, K3 is OFF, HDMI embedded audio is audio source , As K1 is OFF ,HDMI embedded audio is not audio source
	ON	As K1 is ON, K3 is ON, Analog audio is audio source . As K1 is OFF, Analog audio is not audio source
K4	OFF(Default)	Normal Mode

	ON	Force device IP is 192.168.1.168 . This function used as forgot changed IP address and force restore default IP address. Please note that as changed IP address ,Please also plush K4 to OFF
K5-K7	No definition	
K8	OFF(default)	USB status under master mode （connect to other USB device）
	ON	USB status under slave mode (Connect PC to the encoder by USB）

Restore ex-factory setting
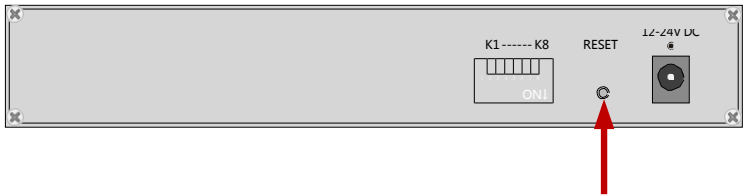
As you could not access web-based management system to restore the encoder, You could press the Reset button by pen for over 3 seconds to reset the device (like restore default IP address 192.168.1.168 and encoding parameter setting).

Typical connect application diagram

4 LED INDICATOR DESCRIPTIONS LED INDICATOR

Name	Color	Status	Description
LOCK	Green	ON	SDI signal is active
		Flicker	SDI signal is inactive
		OFF	SDI signal source has n't been connected.
LINK	Green	ON	Ethernet has been connected.
		OFF	Ethernet has n't been connected.
POWER	Green	ON	Power on
		OFF	Power off

5 DEVICE MANAGEMENT AND SET UP

The encoders use WEB interface for device management and set up.

Factory default IP address of device

Encoder **default IP address is 192.168.1.168** , net Mask is

You can log in WEB management interface to change the

address.

Via WEB browser log in management interface

Before log in the encoder Web management interface, please ensure that the following network condition is connected:

*   your computer is connected with encoder correctly；

*   Insure set your computer IP address and the IP address of the encoder in same network segment；

*   try using PING and other network testing tools to identify and insure be communicated with the encoder based on TCP / IP protocol.

After reaching the above condition, use a Web browser to access the following address：

http://<device IP address>

For example, if the factory default IP address is **192.168.1.168** ， then access the

following address： http://192.168.1.168 ， then the authentication dialog box will appears.

Default log in name is admin； default log in password is admin

WEB management interface language

WEB management interface of encoder to support **English**. There is an information bar in the top right of WEB management interface that will indicate the current language and log in information

Modify the log in user password

To prevent illegal users log in the device, it is recommended to modify the default log

in user: **admin** and password immediately after first log in. How to modify: choose

"**Basic Settings> Change my password**" function, modify the password in the present

interface.

Change my password   ✕

New Password: [   ]
Confirm Password: [   ]

[Cancel] [OK]

Notes: the user name "admim" can NOT be modified in current version.

Device working status

After logging in to the WEB management interface, first appeared the working status
in the information page. You can also manually click the WEB management interface
of the "**basic Settings**" menu to appears the status page.

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The status information page appear the below current status information of encoder：

System basic status	
Device start time	the start time after device is power on
Persistent time	the device power-on working time
CPU payload	the percent of main processor load of encoder
Free memory	the margin of encoder system memory
HDMI/VGA Video and Audio signal status	

Video signal	indicate the input video signal is normal or not, displays information represents the meaning as below: normal (device LOCK light is always on) no signal (device LOCK light is off)
Video mode	Display HDMI/VGA signal mode
Video format	displays current HDMI/VGA input format
Audio sampling	displays current HDMI input audio format (sampling rate)
Encoder status (Main/Sub/Motion JPEG) streaming	
Main streaming：	
Video	the encoding mode of current main streaming（H.264）
Scaling size	Default size or adjust Scaling size
Instant bit rate	the actual encoding bit rate of current main streaming (Note: the actual encoding bit rate of H.264 encoding is different with the set bit rate , specially in VBR mode is more obvious.)
Instant frame rate	the video frame rate of actual current main streaming encoding (close to but not exactly equal to the set target frame rate)
Audio engine bundle	Adjust audio function
Secondary streaming：	
Secondary Streaming disable	display the secondary streaming is disable / enable, and the secondary streaming set the resolution format
Video	the encoding mode of current main streaming（H.264）
Instant bit rate	the actual encoding bit rate of current secondary streaming (Note: The actual encoding bit rate of H.264 encoding is different with the set bit rate, specially in VBR mode is more obvious)
Instant frame rate	the video frame bit rate of actual current secondary streaming encoding (close to but not exactly equal to the set target frame rate)
Audio engine bundle	Adjust audio function
Global Network status	

Network	INTERNET or Ethernet
Connectivity	INTERNET or Ethernet

Audio signal source option

The encoder supports HDMI AES / EBU audio, and also supports dual-channel analog audio (Line-in) input. The audio of collection encoding can be selected between HDMI or Line-in audio AES/EBU audio.

If you want to select HDMI AES / EBU audio as audio source, could by K1, K2, K3 Dip setting. Please check DIP switch setting table to check the detail information.

After switching the audio source, the encoder will quickly reset (currently

connect decoder will be disconnected), this process takes about 3 seconds.

RTMP pushing parameters

1. Select "Add a stream" icon

2. Select "RTMP Pushing"
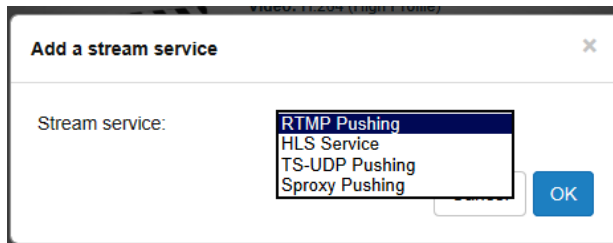
3. Select "setting" icon
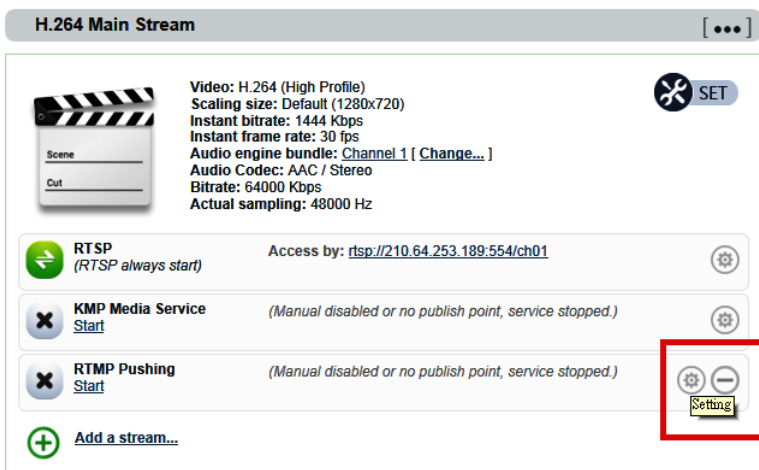
4. Add your URL+NAME on Push point and enable pushing as "Yes". Example: add Youtube IP add. as below:

Main Stream RTMP pushing parameters

Press Yes

Enable pushing: `Yes` ▼

Push point: rtmp://a.rtmp.youtube.com/live2/yourkey-1234.1yyz-src1

Username: [_____]

Password: [_____]

Connection timeout (s): `15` ▲▼

Connection retry interval (s): `3` ▲▼

SAVE   Return

EX: URL+Name

ENCODER-EINRICHTUNG

Server-URL

rtmp://a.rtmp.youtube.com/live2

Name/Schlüssel für den Stream

yourkey-1234.1yyz-src1   Ausblenden   Zurücksetzen

5. after Save, you complete the Youtube live streaming setting.

HDMI/VGA ENCODER(直播盒) Live Streaming Demo_RTMP

How does RTSP of encoder to visit URL：

ONVIF support

The encoder supports ONVIF 1.1/2.0 standards. Follow ONVIF standard, the device supports automatic detection, supports media description and RTSP media obtain, supports parameter setting as well as device(PTZ) remote control functions.

Set system time

The encoder built in RTC clock, which can maintain system time under power off. When you use the encoder at first time, you need to manually calibrate the system time; In additional, as the errors of RTC clock system in every time (3-6 months), the clock will have a few seconds of error, so may need to calibrate time again.

Select the "**Basic Settings**> **Location & Time** "to calibrate the time

The method of calibration the time：

Automatic synchronization time

Current computer Of device	Automatically obtains the current system time of the computer and set to the encoder.
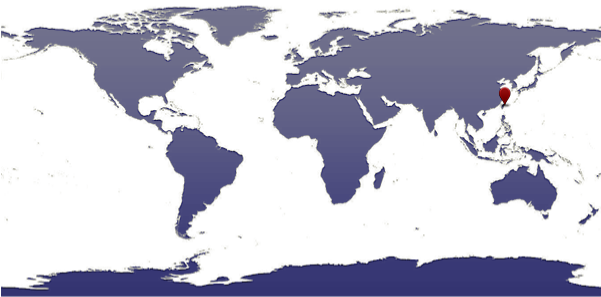
Location / Time	
NTP time synchronization	Via the Internet-standard network time service, automatically obtains the time from the built-in NTP server of encoders and set to the encoder. Please be note: (1) the encoder must be correctly connect to Internet network (2) the default gateways and DNS of encoder network

Manually set device time

Please click "YYYY-MM-DD HH: NN: SS" format to enter the time (YYYY is the year, MM is the month, DD is the day, HH the hour, NN is the minute, SS is the seconds), and then submit to time setting.

Modify user password

Click on the "Change   " in user interface list, you can modify the user's authentication password.

Restore factory settings

If you modify the parameters lead to the device does not work (the most typical case is you can not be accessed over the network encoder when modifying the network address), you can restore the factory settings, so that the encoder will restore factory defaults.

Restore factory settings two method:

一、 **Via the WEB interface, "Quick reset > reset" function;**

二、 **Through DIP switch encoder: reset button**

Restore factory settings will lead to hard reset the encoder, restart the process takes about 15 seconds.

After restoring the factory settings, the following parameters will be changed

to the default value：

A   Log in user admin password will be restored to the admin；

A   Obtaining the network address of the device will be restored to the manual to get;

A   IP address of Encoder will be restored to 192.168.1.168 ，mask will be restored to 255.255.255.0；

A   All video and audio encoding parameters will be restored to factory default;

A   Media transmission parameters (RTSP settings) will be restored to the factory default；

A   RS-485 port parameters will be restored to the factory defaults；

After restoring the factory settings, the following parameters will remain unchanged ：

A   RTSP authentication of users and passwords；

A   System time；

A   Default mask；

A   DNS setting.

Firmware upgrade

The encoder supports online firmware upgrade，use for updating the software version .

Via the WEB management interface, **"Basic Settings > update firmware"**, you can online upload the firmware upgrade file which provide by the manufacturer.

Please note：

1、The speed of firmware upgrades file upload is slow, please be patient.

2、After uploading firmware file successfully, the encoder will automatically restarts the encoder, this process will takes about 1-2 minutes (the time will be different according to upgrade content), please be patient.

3、Please do not upload the unofficial release of the firmware upgrade file, or other illegal files, in order to avoid permanent damage the encoder.

4、After the upgrade is complete, via the WEB interface "**system   information >**

version information" to check the latest version information is in line with expectations, and confirm the upgrade is successful.

Network Configuration

Via the WEB management interface function "**Network & Service Settings**> **Network Manager**", you can configure the encoder IP address and related network parameters, including: IP address, mask, default gateway, main DNS server address and secondary DNS server address.

The encoder supports DHCP dynamic obtain the IP address, mask, default gateway, and DNS addresses. In the "**network manager**" configuration interface, select "**address obtain**" to "**DHCP dynamic access**" , then the IP address, mask, default gateway, and main DNS server and secondary DNS server parameters will be forbid to modify.

Note: After setting the address obtains way is "**DHCP dynamic obtain**", please manually restart the encoder to update the DHCP address obtain.

RTSP connection parameter set

Main set listening port of RTSP services and whether to require RTSP connection client authentication and other options.

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Via the WEB management interface

Main Stream RTSP service parameters

Service port:	554 (To take effect the port changing, you must reset or reboot device)
Session ID:	ch01
RTSP Multicast:	Enable
Multicast Session ID:	The multicast session ID should always be '<Session ID>/ssm', that is: **ch01/ssm**
Multicast Address:	224.0.0.1 (A valid multicast address should be 224.x.x.x ~ 239.x.x.x)
TTL:	127 (TTL [Time to Live, value range 1-255] decides how many routers the data packets can pass through. Please set it according to your network environment, or use the default value 127.)
Video Multicast Port:	3000 (Must be an even value and greater than 1024)
Audio Multicast Port:	3002 (Must be an even value and greater than 1024)

SAVE   Return

Media（RTSP）publishing parameters

Listening port	RTSP service standard listening port is 554 ， meanwhile no need to designate the service port when the RTSP visit URL, such as rtsp://192.168.1.168/ch01. If you change the listening port to other number(not 554, such as 8554), then you need to designate the service port when the RTSP visit URL, such as rtsp://192.168.1.168:554/ch01.
Authentication	The default factory settings RTSP connection no need

authentication, but this may lead to illegal users may also be connected to the encoder to obtain video and audio. For security, we recommend that you set the RTSP access requires authentication.

RTSP access user authentication can be set in the "Basic Settings> User Management" > "media access users", please refer to section 5.12.

Two-way voice intercom network transmission parameters Encoder supports two-way voice intercom with the company 's decoder or PC terminal software. Two-way voice intercom will open a TCP / IP service channel receive the voice from other side, set the listening port of the service channel, the default port is 1260.

Audio&Video adjustments

Video and audio encoding adjustments is set the H.264 video encoding and audio encoding parameter options. Typical parameters include: encoding frame rate settings, encoding bitrate settings, encoding quality of pictures control and latency control. Please set video and audio encoding parameters " **home→ audio&video adjustments**" in the WEB management interface.

Main / Sub streaming encoder set

Main Stream Encoder parameters

Scaling:	Default size
Color:	With color
H.264 profile:	High profile
Bitrate control:	CBR - Constant bitrate
Bitrate:	2.0M bps
Framerate:	HALF (Half when source framerate >=50)
GOP Size:	60 - Produce one I frame per 60 frames
Reference frames:	One

(Using multiple reference frames should better encoding quality but this may be not compatible to some decoders)

SAVE   Return

Bitrate control	Optional is CBR or VBR. CBR mode called "constant bit rate mode" that will set the bit rate coding rate as a reference, no matter how simple or complex of the picture ,changes more or less, it will make the encoding bit rate set as close as possible to the target bit rate; VBR called "variable bit rate mode" that the encoding bit rate will follow the simple or complex of picture changes more or less to adjust, but please do not exceed the set target rate. CBR mode will display better picture quality, but takes up more bandwidth; VBR mode will save more bandwidth, but has some
Bitrate	Provide series normal encoding bitrate for your selection
Framerate	Set the encoding bitrate by manual，unit is bps

Quality	Select the image quality control is "low", "medium", "high" in the set encoding mode and the coding rate prerequisite, describe how to control the picture quality. The quality is higher, then the picture performance is better, but the real-time, fluency is poor; opposite, the real-time and fluency is better, however the performance and quality of pictures will be
Frame rate control	By default, encoding framerate will automatically adapt to the SDI input signal's frame rate (such as the input signal for 1080p30, then the encoding frame rate control is 30fps) "if you want this mode then select" **automatically adapt the input video frame rate** ". You can also manually select the encoding framerate , you can select" **Manual frame rate specifies the encoding** " , and fill the specified framerate in the "**specify an encoding frame rate**"parameter.
Set frame rate	If "encoding mode" is" **Manual frame rate specifies the encoding** ", please fill in the target frame rate. please note: the target frame rate is not exceed the actual SDI input signal frame rate.

Text overlay settings

The encoder can be overlay the English max 24 characters on the screen, and the time information can be overlay on the screen simultaneously. Select "

Text/Time Overlay."

Text Overlay settings

Text&Time Overlay

Network & Service Settings —

Network Manager

Easy Management Services

Web Service

Onvif Service

Quick Reset

Reboot

System Information

Serial No.: **170502230**
Hardware Ver.: **1.4**
Firmware Ver.: **2.5.0**
Software Ver.: **3.40.0190**

NOTE: If you require more fonts/languages support, please contact our technical support. We can customize more fonts/languages, by upgrading a language patch firmware.

Main Stream Overlay

Enable overlay for this stream: Close ☑   Don't rotate follow picture: Yes ☑   SET

⊕ Add overlay item...

Sub Stream Overlay

Enable overlay for this stream: Close ☑   Don't rotate follow picture: Yes ☑   SET

⊕ Add overlay item...

Add Overlay Item   ✕

Overlay Type	Text
Position	Left top
Font	Default (En)
Font Size	Auto - Medium
Font Style	Normal
Text Outline	2 px
Overlay Text:	

Cancel   OK

Date and Time Overlay settings

Add Overlay Item   ✕

Overlay Type	System Time ▾
Position	Left top ▾
Font	Default (En) ▾
Font Size	Auto - Medium ▾
Font Style	Normal ▾
Text Outline	2 px ▾

Cancel   OK

RS485&PTZ Control settings (option)

Select the WEB management interface "RS485 and PTZ control settings", you can set the baud rate parameter of encoder RS-485 interface. If you open "with decoders transparent transmission RS-485 signal ", then the input RS-485 signal of our decoder will output from the RS-485 output interface of encoder.

The current version of the software encoder only supports the PTZ

which can via RS-485 interface to controls and supports Pelco-D protocol, control in the PTZ in ONVIF protocol. If you need to support

other protocol , please contact the manufacturer or dealer.

Quick Reset

"**Quick Reset**" is quickly reset the video encoding function of encoder. When the video signal instability or improper parameter setting cause the encoder does not work , try to set the device quickly reset. The quickly reset probably need to wait three seconds or so.

Reboot

"Reboot" is for encoder performs a **warm reboot**, when the encoder still does not work after quick reset, please try to reboot the device. Device reboot need to wait probably one minute or so.

In some status, maybe you need to **cold reboot**, that is plug out the input power of encoder at first , and then turn on the power.

> Warning: we recommend that you don't often use cold reboot. Cold reboot may lead to the adverse effect in the software and hardware of the device.

6   COMMON PROBLEMS AND SOLUTIONS

The device is powered on, PWR LED is off.

Please check whether the power adapter is connected. Please must use the manufacturer's original power adapter, the voltage standard, the current standard connector specification of non-original power adapter may not be adapted to the encoder, lead to the power supply is not work.

Exclude the fault of power adapters, if the device is powered on and the PWR LED still is off, please contact the manufacturer or dealer for repair or replacement.

The device is powered on, PWR LED is flashing

After power on, the encoder PWR LED should be always on. When the PWR LED is

flashing, please check whether the problem is the power adapter, including：

（1）　　　Check whether is use the original power adapter；

（2）　　　Check the voltage standard of power adapter. Encoder supports input

voltage range 5V ~ 24V DC, however suggest to use 12V DC.

（3）　　　Check the output power of the power adapter whether meets

the requirements of the encoder. Encoder maximum power (full load) is 6W.

Exclude

the fault of power adapters, if the PWR LED still is off, maybe it 's the   fault

of encoder or illegal repair the encoder, please contact the manufacturer or dealer

for repair or replacement.

LOCK LED is flashing

Encoder power on around one minute, if LOCK LED is flashing (or off), it 's normal.
Encoder power start up takes about 1 minute or so. After starting up is complete, the
encoder will detect the Video input signal, if the video input signal is normal, LOCK LED
should be always on; otherwise be off.

There are two cause of the LOCK LED is flashing：

（1）　　　Encoder fault which led to start improperly. How to detect the fault : that
's ping the IP address of encoder in the computer, or open the encoder
management interface using WEB browser. If can ping the correct IP address
of the encoder, or WEB access is normal, then the encoder is normal;
otherwise describe the encoder is failure, please contact the manufacturer
or dealer for repair.

（2）　　　Video input signal is unusual. Common problems include the video cable
wire is too long, video sources is instability or the quality is not good.

LOCK LED is off

Please check the input video signal whether is normal, or check the signal of
Loopback out of encoder whether is normal.

LINK LED is flashing or off

Encoder power on around one minute, if LINK LED is flashing (or off), it 's normal. After encoder power starting up successfully, if the LAN network connect is normal, then the LINK LED be always on, otherwise be off.

IF the LINK LED is off, please check the network connection .

If the LINK LED is always flashing, may the fault of encoder lead to the device does not work. How to detect the fault: that 's ping the IP address of encoder in the computer, or open the encoder management interface and use WEB browser. If they can ping the correct IP address of the encoder, or WEB access is normal, then the encoder is normal; otherwise indicated encoder is failure, please contact the manufacturer or dealer for repair.

You can not access the WEB management interface

Please try to use ping tool to detect the IP of encoder whether is connected.

If the encoder's IP address can not be connected, check the network connection is normal, or network address of the encoder settings are correct (if necessary, please restore the device settings: dial the K1 dip switch

After using the above troubleshooting methods (including the restore factory settings), if still unable to access the encoder WEB management interface, please contact the manufacturer or dealer for repair.

WEB management interface prompt log in however can not pass authentication

This fault as follows: When open the encoder WEB management interface, prompting for authentication, however can not enter a user name and password to enter the management interface through certification. Please check and try：
（1） Whether the name and password is correct;
（2） Whether the keyboard Caps lock
（3） Please try to cold reboot then log in again;

（4） Restore factory settings.

WEB management interface displays unusual

This fault as follows: WEB management interface can log in normally, however the picture is not displayed correctly, or page layout confusing. Please check and try：

（1） If you use IE browser, please be sure to use IE 7.0 and above versions. IE 6.0 software may lead to image shows unusual or page layout confusing.

（2） The WEB browsers can be used by proven including: IE 7.0 and above, Firefox, Google Chrome, Apple Safari. Non-authenticated browser may not be displayed.

（3） Check the third-party plug-ins which install in browser whether effect WEB display, such as antivirus software plug-ins, JS script blocking plug-ins.

（4） Please try to delete the browser's temporary file , then refresh the page.

You can not preview the video in real time via WEB interface

Real-time preview video need to use VLC player plug-in. Encoder will try to automatically download and install VLC player when real-time preview video page, however due to browser security limit, in most cases the download installation will be blocked. If VLC Player plug in is not installed properly, it will not preview the video in real time.

If the VLC player can not automatically download and install, please try：

（1） Add the current encoder WEB management address (eg http://192.168.1.168) to the list of trusted sites in your browser , then refresh the page. When the browser prompts you to download and install the components, please accept and install.

（2） Please download VLC Player and manually install the file which the link from the preview screen, after the installation is complete, close the browser and reopen the encoder WEB management interface.

（3） Download and install VLC player from http://www.videolan.org/ website.

If VLC Player is installed correctly, but still can not preview video, please check and try:

（1） Suggest to install VLC version 1.1.11 and full installation (do not install the green version, free version from internet).

（2） Browser security options whether is blocking load ActiveX components.

（3） The browsers which is available by proven including: IE 7.0 (and above), Firefox, Google Chrome, other browsers may not load properly because VLC ActiveX component and can not preview video.

（4） The encoder is behind a firewall / NAT , or the current PC is behind a firewall / NAT, due to the impact on the firewall / NAT, the default connection can not connect to the encoder device. Please refer to section 5.7, try to modify the connection method, make the encoder port mapping and other operations.

（5） Encoder open RTSP authentication mechanism, the VLC player plug will prompt to enter a user name and password when the authentication information is not entered correctly , or media access user management is not properly configured the authentication user name and password.

（6） Please note that some versions of the Firefox browser does not automatically play the video, need to manually click "Play" button to preview the video.

Unable to connect the encoder via VLC player software, etc.

Through proven that the encoder can be connected and obtain video and audio from VLC Media Player, CoreAVC and iOS devices, Oplayer etc. via RTSP protocol , and the VLC Media Player is the best decoding player software.

Through proven that the follow media player can not connect encoder ：Windows Media Player、Real Player. Other software still needs to verification.

Please check your player software whether can properly support RTSP protocol and decode H.264 video and AAC audio.

If you confirm the media player software can support the encoder connection, but still can not access the media of encoder, please check and try:

（1） Check the input URL whether is correct. Main streaming of encoder RTSP access URL is **rtsp://<the IP address of encoder>/ch01** ； Secondary streaming URL is **rtsp:/ /<the IP address of encoder>/sub01**

（2） If be connected the secondary streaming, but have not open the secondary streaming, then can not access successfully.

（3） If be changed the service port of encoder, please add the service port on the URL.

（**4**） If the encoder's RTSP request authentication, be sure to provide the correct authentication information. If the player does not support interactive prompted for a user name and password, add the user name and password information in the RTSP URL, the form is: **rtsp: // <user name>: <password> @ <IP address of encoder device >: <service port number> / ch01.**

ONVIF management software can not find encoder

The encoder supports the ONVIF specification 1.1 / 2.0, please check the ONVIF management software versions whether compatible with our encoder .

Our encoder follow the ONVIF specification, the HELLO broadcast messages will display when starting up; the ONVIF management software will display PROBE broadcast message when detect the device. If ONVIF management software can not support these detection mechanisms

you can manually fill in the following service address management software to the ONVIF：**http://<IP address of encoder>/onvif/device_service**

ONVIF management software encoder can not connect the

RS485 interface to control PTZ

Current encoder only supports PTZ control of Pelco-D protocol , if you need to support other protocols, please contact the manufacturer or dealer.

Please connect the RS-485 cable correctly, and set the baud rate parameter correctly.

Video signal lock properly, but no video and audio encoding

Please try to quickly reset the encoder, Or restart the encoder.

Encode with video, no audio

Please confirm whether HDMI signal with embedded audio.

Please check the DIP setting is right according our DIP switching table

The current version of the software secondary stream is without audio.

Encode with audio, no video

Please check the video signal source.

If the quantity of connections is a lot, the video or picture will display mosaic or stagnation

Please reduce the quantity of connections. Network of encoder output flow capacity is limited, then the video resolution, frame rate and bit rate coding is different, the number of concurrent connections can be limited (in principle the total output flow should not exceed 20Mbps).

If the quantity of connections is over the limit, you can not connect the encoder via RTSP

The limit quantity of RTSP of encoder is 10 pieces, if the quantity is over, then will refuse to connect.

Some decoders or decoding software can not decode the encoder's video and audio correctly

The encoder utilize High Profile H.264 standard default video. The decoding system which is not compatible with High Profile H.264 may not be decoded correctly; the audio utilize the AAC-LC encoding algorithm, the decoding system which is not compatible can not be decoded correctly.

If you enable the encoder low latency or ultra-low latency encoding technology, may be due to compatibility problems lead to decoding system can not decode.

Forget the IP address and unable to connect and manage encoder

Please press reset button to restore encoder settings

Incorrectly modify the parameters and lead to does not work

Please restore the device's factory settings.

Video signal is normal, however can not lock signal encoder

Please check the connection port of video. Video input signal must be

connected to the HDMI/VGA-INPUT port.

The encoder does not support POC (Power Over Cable) function. If the coax

which with POC capacity connect the encoder may lead to signal unusual, and

may damage the encoder.

Analog audio with noise

The encoder uses unbalanced analog audio connections, please must be connected to the ground correctly.

Left and right channels of analog audio is dislocated

Please swap the left and right channels of analog audio cables.

Encoder often crashes

（1）　Excessive RTSP connections or encoding bit rate is too high may cause overload and lead to the encoder feign death；

（2）　SDI signal instability, frequent loss of signal may lead to encoder feign death;

（3）　Encoder limit ambient operating temperature is minimum -20 degrees Celsius, up to 60 degrees Celsius. Inappropriate environment and operating temperature will lead to the encoder does not work.

（4）　In poor network environment, as the decoder uses RTP over TCP to connect the encoders, network repeated transmission lead to the network throughput overload and encoder feign death.