

CEL-HEC506

H.264/H.265 HD Encoder

User Manual

Foreword

Thanks for using our products, Please contact us if you have any questions .

Statement:

We have tried best to ensure the integrity and accuracy of the contents of the manual, but the technical error , operation error and printing error can not be fully avoided . if any doubt or dispute , please refer to our final interpretation .

The user manual will be updated in real time without special notice.

This user manual is provided only for reference guide for users, which can not guarantee exact same as the real product . Please refer to the real product .

About Default

The factory default administrator account of the device: **admin**

The factory-default user password of the device: 123456

The factory default IP address of the device: 192.168.1.168

1 Product Overview

The H.264/H.265 Encoder is a hardware device used for high-definition video signal (720P / 1080P, etc.) encoding and network transmission, using the latest and high-efficient HD digital video compression technology H.264/H.265, with the characteristics of reliable, high-definition, low bitrate and low latency. Input the HDMI high-definition video signal to conduct the encoding process, after compression processing of Sigmastar SSC337DE chip, output the standard TS network stream, the launch of product fills the gap in this industry, which is a direct replacement for the traditional capture card or software coding method, using hard-coded, the system is more stable, and image quality is more perfect, which can be used in a wide variety of needs for high-definition video and high-resolution and high frame rate acquisition-based IP network transmission, its powerful scalability makes it more easier to respond to the needs of different industries and can be used as live video encoder. Industrial controlled, precision design, small size, easy installation, the power is less than 2W, which is more energy and more stable.

● **Product features**

- High-performance hardware encoding
- support H.265 video coding efficiency
- support H.264 BP/MP/HP
- support AAC / G.711 Advanced Audio Coding format quality
- CBR / VBR rate: 16Kbps ~ 12Mbps
- 1000M network interface uses full duplex mode
- mainstream and secondary stream can be pushed to different server
- Supports up to 720P, 1080P @ 60HZ HD video input
- Support image parameter settings
- support HDCP protocol.
- support HTTP TS, UDP, RTSP, RTMP, ONVIF protocol
- the mainstream and sub stream use the different network protocol for transmission
- WEB interface, English and Chinese is optional for configuration interface
- WEB interface management authority
- Support remote management in WAN(WEB)
- Support resolution customized settings
- Support one key to restore the factory configuration

2 Applications

1. The HD video broadcast server
2. Video Server for video Conference System
3. Digital Standard HD stream server
4. The live video teaching system front-end capturing
5. IPTV system front-end capturing
6. The wechat broadcast system front-end capturing
7. The medical video broadcast and recording system
8. Support access to NVR

3 Interface Instruction



- A. DC12V----- Power input, 12V/DC (12V/1A)
- B. AUDIO----- External audio input
- C. RESET -----It is used to reset the device . After power on , hold it on for about 10 seconds to reset the device to default IP 192.168.1.168
- D. LAN-----100M Ethernet port
- E. HDMI-----Video input,Input HD HDMI signal



- F. Light Indication:
 - 1) POWER, Lighting, means 12V DC supply normally.
 - 2) HDMI Light, Slow Flashing means the video input , image capturing and compression is normally working .
 - 3) RUN Light, means the main program running normally.

4 WEB SETTINGS

Step 1: Reset & initialization

Input the power supply to turn on encoder and hold a pin to press RST on the encoder for 10 seconds, it will be restarted and initialized. The default Route IP of dash board is 192.168.1.168 after initialization.

Step 2: Login Dash board in the Google Chrome Browser

Ensure the network segments of the computer and the encoder are both in 192.168.1.xxx!
 or, contact us to get a device search tool to modify the device IP as your network segments.

Scandev tool download address: <http://forum.52dtv.com/attachment.php?aid=37>

Enter **192.168.1.168** in URL address,

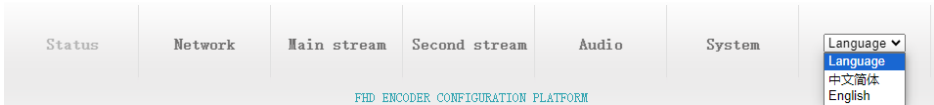
Default user Name: admin

Default password: 123456



5.1 Status Display

When you access to the web-interface, you can choose the language on the right top :
 Chinese/English



Input status: when you input the HD signal source, it will show resolution of video input , if it' s blank here , it means there no video input .

Status Display

Input Status

Interface type:HDMI
 Video input:1920 x 1080P @58
 Audio input:(16bit PCM) 48K

Mainstream Status: it will show the resolution of the mainstream you set and multicast address . you can stream the multicast address by VLC or other streaming software.

Main stream status

Video output: (H.265) 1920 * 1080 @ 30 fps
 Audio output: (AAC) 1 ch, 16 bits, 48000HZ @ 64000 bps

Second stream Status: it will show the resolution of the secondstream you set and multicast address . you can stream the multicast address by VLC or other streaming software

Second stream status

Video output: (H.264) 704 * 576 @ 30 fps
 Audio output: (AAC) 1 ch, 16 bits, 48000HZ @ 64000 bps

Mainstream Live View: you can play the stream address by your computer if you installed the VLC

Main stream live view

RTSP stream address: rtsp://192.168.1.168:554/main
 UDP TS address: udp://192.168.1.98:20000
 HTTP-TS address: http://192.168.1.168:8081
 Multicast address: udp://235.250.42.42:5000
 RTMP stream address:

Second stream Live View: you can play the stream address by your computer if you installed the VLC.

Second stream live view

RTSP stream address: rtsp://192.168.1.168:554/sub
 UDP TS address: udp://192.168.1.98:20001
 HTTP-TS address: http://192.168.1.168:8082
 Multicast address: udp://235.250.42.42:5001
 RTMP stream address: rtmp://192.168.1.75/live/ext

5.2 Network Settings

You can set network with Ethernet, please ignore the WIFI configuration.

Network settings

Net type: Ethernet

DHCP: Disable

IP: 192.168.0.168

Netmask: 255.255.255.0

Gateway: 192.168.0.1

DNS0: 112.4.0.55

DNS1: 114.114.114.114

MAC: 00:11:22:33:44:12

The Default IP of the device is 192.168.1.168. if IP setting is forgotten after changing. You can reset it to default IP follow step 1 above.

5.3 Mainstream encoding

Mainstream encoding settings

Main stream settings

Enc type: H.265

Profile: main

Frame rate: 30 [15-60]

Bitrate mode: CBR

Group of picture: 30 [2-200]

Output size: Auto

Max bitrate(kbps): 2500 [256-12000]

Fluotuate: Auto

Set up

Main stream setting:

- Enc type: H.264 & H.265 is optional
- Profile: baseline profile / main profile / high profile (note: H.265 version choose main profile)
- Frame rate: 5-60 (when the input resolution is 720i/50,1080i50, the frame rate will choose 25)
- Bitrate mode: VBR / CBR
- Group of picture: 2-200, it shows picture quality, default setting is advisable .
- Bitrate: 256-12000 (Network bandwidth setting)

Note: You can modify the above parameters without rebooting the encoder

Mainstream protocol settings

HTTP:	<input type="text" value="/main"/>	Disable ▾	Format: /main (begin with '/')
HTTP port:	<input type="text" value="80"/>	[1-65535]	
RTSP:	<input type="text" value="/main"/>	Enable ▾	Format: /main (begin with '/')
RTSP port:	<input type="text" value="554"/>	[1-65535]	
Multicast IP:	<input type="text" value="235.250.42.42"/>	Enable ▾	
Multicast port:	<input type="text" value="5000"/>	[1-65535]	
UDP-TS address:	<input type="text" value="192.168.1.98"/>	Enable ▾	
UDP-TS port:	<input type="text" value="20000"/>	[1-65535]	
HTTP-TS address:	<input type="text" value="192.168.1.168"/>	Enable ▾	
HTTP-TS port:	<input type="text" value="8081"/>	[1-65535]	
RTMP server ip:	<input type="text" value="rtmp://192.168.1.75/live/main"/>	Enable ▾	
ONVIF:	Disable ▾	Disable Auth ▾	

[Set up](#)

Mainstream protocol settings:

RTSP: /main enable/disable

RTSP port: 1-65535 optional

Multicast IP : 232.255.42.42 disable UDP Multicast optional

Multicast port: 1-65535 optional

UDP-TS : 192.168.1.168 disable UDP Unicast optional

UDP-TS port: 1-65535 optional

HTTP-TS enable/disable

RTMP server IP : rtmp pushing address from the media server.

Onvif : enable/disable onvif protocol to connect NVR,

enable/disable Auth means if add the administrator account and password encryption authorization.

when enable onvif and Auth, you must use

rtsp: // admin:123456@192.168.1.168:554/main

to play in VLC

OSD Settings

The screenshot shows an 'OSD settings' window with two identical configuration sections for 'Text1' and 'Text2'. Each section includes input fields for X and Y coordinates, font size, alpha value, color (with a dropdown menu), background color (with a dropdown menu), and a text input field. A 'Set up' button is located at the bottom of the configuration area.

Note: You can insert two couples of words and three pictures simultaneously in mainstream

Text1 X: 0-1920 is optional, display the left and right position of the text

Text1 Y: 0-1080 is optional, display the up and down position of the text

Font1 size: 1-7 is optional

Alpha1: 0-128 is optional,

Color1: choose the color you want to display

Bg1: choose background color of the text on the video

Text1: input the content of the text you want.

Text2 is similar to Text1.

Icon Set

Icon: disable/ enable (disable: no images enable: display the images)

Icon X: 0-1920 is optional to set the left and right position of the picture

Icon Y: 0-1080 is optional to set the up and down position of the picture

The x y coordinate refers to the position of the top left corner of the icon on the screen.

Alpha: 0-128 is optional

Upload picture: choose to upload the image, support *.jpg format, the file size less than 1M , the pixel size not exceeding 200x200.

File name: need the name of the picture file

5.4 Second stream settings

Note: the way of the setting is similar to the mainstream code setting

5.5 Audio Encoding Settings

Audio bitrate: 64k, 96k, 128k, 160k, 192k, 256k

Audio type: AAC, G.711

Audio resample: 8k, 16k, 32k, 48k

Audio digital gain: 2x,4x,8x, used to adjust volume

Audio input mode: digital/analog, means audio from HDMI or external audio input.

5.6 System Setting


Change password: You can modify the web password by this.

System information: it shows device SN and firmware version, time of synchronize (the serial numbers of the device are set by factory, if you want to modify it , please contact the us)

Upgrade setting:

Note: choose the zip rar file, no need to unzip the file . Do not refresh the webpage when

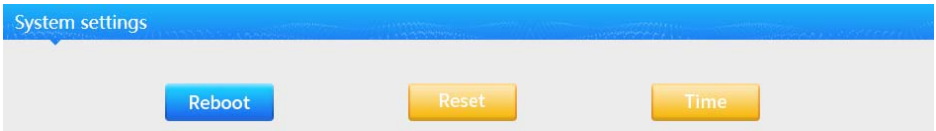
you upgrade the system .



Upgrade settings

Upgrade system: 未选择任何文件 (do not multip uploading, do not power off or refresh the page)

System setting: reboot the device and reset the device to default parameters, synchronize the current time.



System settings