




# AVMATRIX SE1217 H.265/ H.264 HDMI Streaming Encoder User Guide

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## AVMATRIX SE1217 H.265/ H.264 HDMI Streaming Encoder User Guide



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## USING THE UNIT SAFELY

Before using this unit, please read below warning and precautions which provide important information concerning the proper operation of the unit. Besides, to assure that you have gained a good grasp of every feature of your new unit, read below manual. This manual should be saved and kept on hand for further convenient reference.



### Warning and Cautions

- To avoid falling or damage, please do not place this unit on an unstable cart, stand, or table.
- Operate unit only on the specified supply voltage.
- Disconnect power cord by connector only. Do not pull on cable portion.
- Do not place or drop heavy or sharp-edged objects on power cord. A damaged cord can cause fire or electrical shock hazards. Regularly check power cord for excessive wear or damage to avoid possible fire / electrical hazards.
- Ensure unit is always properly grounded to prevent electrical shock hazard.
- Do not operate unit in hazardous or potentially explosive atmospheres. Doing so could result in fire, explosion, or other dangerous results.
- Do not use this unit in or near water.
- Do not allow liquids, metal pieces, or other foreign materials to enter the unit.
- Handle with care to avoid shocks in transit. Shocks may cause malfunction. When you need to transport the unit, use the original packing materials, or alternate adequate packing.
- Do not remove covers, panels, casing, or access circuitry with power applied to the unit! Turn power off and disconnect power cord prior to removal. Internal servicing / adjustment of unit should only be performed by qualified personnel.
- Turn off the unit if an abnormality or malfunction occurs. Disconnect everything before moving the unit.

**Note:** due to constant effort to improve products and product features, specifications may change without notice.

## BRIEF INTRODUCTION

### Overview

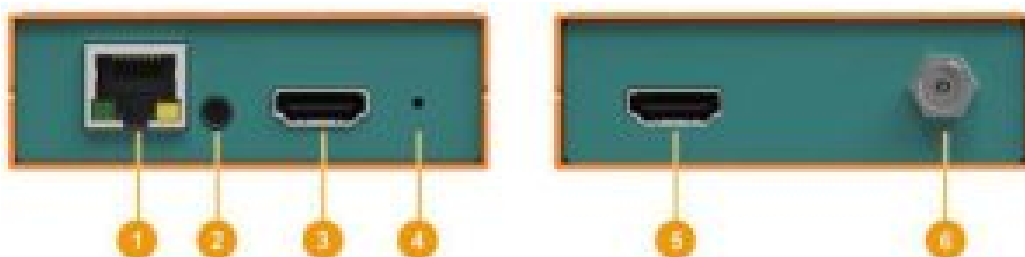
SE1217 is a HD audio and video encoder which can encode and compress HDMI video and audio source into IP stream, and then transmit it to streaming media server via network IP address to live broadcast on platforms like Facebook, YouTube, Ustream, Twitch, Wowza etc



### Main Features

- 1×HDMI input, 1×HDMI loop out, 1×Analog audio input
- Supports H.265/ H.264 stream encode protocol, up to 1080p60hz
- Dual-stream (main stream and sub stream)
- RTSP, RTP, RTMPS, RTMP, HTTP, UDP, SRT, unicast and multicast
- Video and audio streaming or single audio streaming
- Image and text overlay
- Mirror image & upside-down image
- Live stream with no need for connecting a computer

### Interfaces



1. LAN PORT FOR STREAM
2. AUDIO INPUT
3. HDMI INPUT
4. RESET/ LED INDICATOR
5. DC 12V IN
6. HDMI LOOPOUT

### SPECIFICATIONS

Video	Input: HDMI Type A ×1; Loop Out:HDMI Type A ×1
Analog Audio	3.5mm line in ×1
Network	RJ-45×1(100/1000Mbps self-adaptive Ethernet)
<b>STANDARDS</b>	
HDMI In Format Support	1080p 60/59.94/50/30/29.97/25/24/23.98/23.976,
	1080i 50/59.94/60, 720p 60/59.94/50/30/29.97/25/24/23.98,
	576i 50, 576p 50, 480p 59.94/60, 480i 59.94/60
Video Coding	H.265/ H.264
Video Bitrate	16Kbps ~ 12MKbps
Audio Coding	ACC/ MP3/ MP2/ G711
Audio Bitrate	24Kbps ~ 320Kbps
Encoding Resolution	1920×1080, 1680×1056, 1280×720, 1024×576, 960×540,
	850×480, 720×576, 720×540, 720×480, 720×404, 720×400,
	704×576, 640×480, 640×360
Encoding Frame Rate	5-60fps
<b>SYSTEMS</b>	

Network Protocols	HTTP, RTSP, RTMP, RTP, UDP, Multicast, Unicast, SRT
Configuration Management	Web configuration, Remote upgrade
<b>OTHERS</b>	
Consumption	5W
Temperature	Working temp: -10°C~60°C, Storage temp: -20°C~70°C
Dimension (LWD)	104×75.5×24.5mm
Weight	Net weight: 310g, Gross weight: 690g
Accessories	12V 2A power supply; Mounting bracket for optional

## OPERATIONS GUIDE

### Network Configuration and Login

Connect the encoder to network via a network cable. The default IP address of the encoder is 192.168.1.168. The encoder can auto obtain a new IP address when it is using DHCP on the network,

Or disable DHCP and configure the encoder and computer's network in the same network segment. The default IP address as below.

- **IP Address:**192.168.1.168
- **Subnet Mask:** 255.255.255.0
- **Default Gateway:** 192.168.1.1

Visit encoder's IP address **192.168.1.168** through an Internet browser to login the WEB page for setting up. The default Username is **admin**, and password is **admin**.

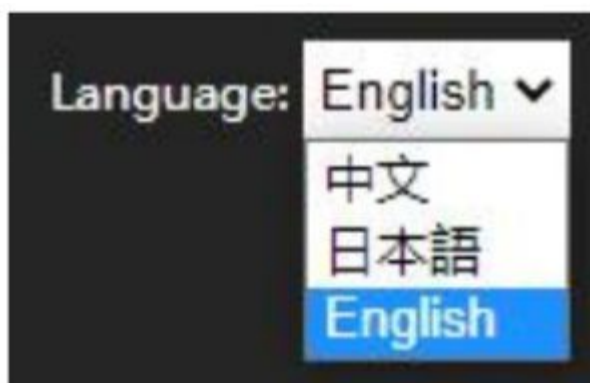
### Management Web Page

The encoding settings can be set on the encoder management web page.

### Language Settings

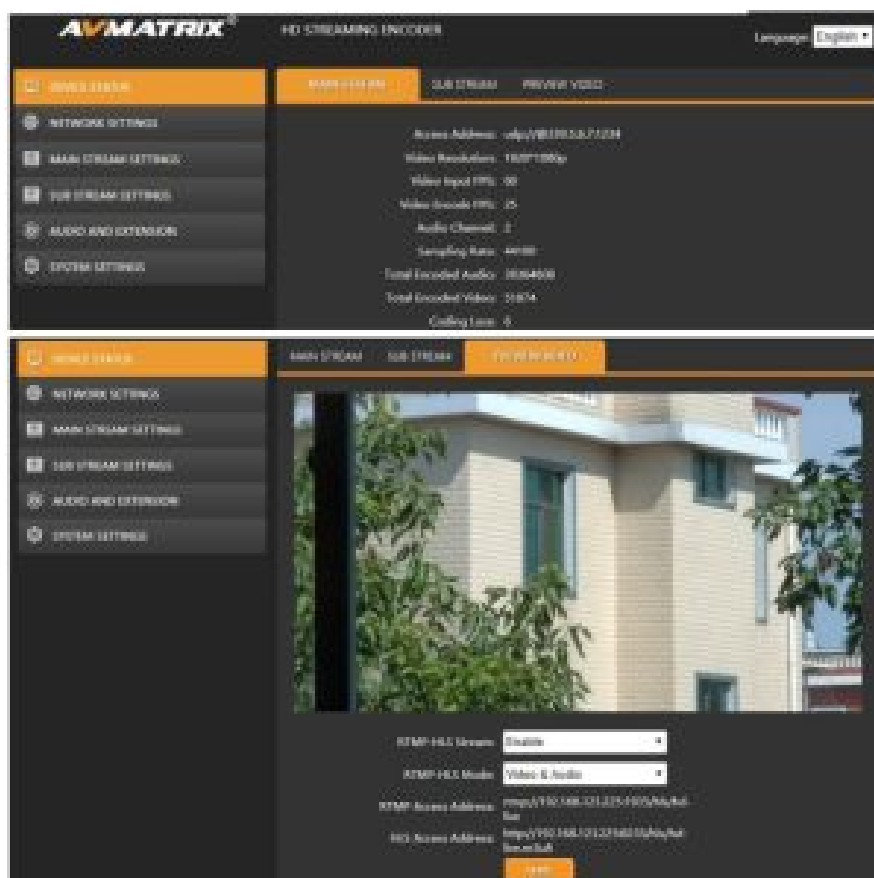
There are languages of Chinese ( ), Japanese ( ) and English for option on the top-right corner of the encoder

management web page.



## Device Status

The status of MAIN STREAM and SUB STREAM can be checked on the web page. And we also can have a preview on the streaming video from PREVIEW VIDEO.



## Network Settings

The network can be set to dynamic IP (DHCP Enable) or static IP (DHCP Disable). The default IP information can be checked in Part 3.1.

DEVICE STATUS

NETWORK SETTINGS

**MAIN STREAM SETTINGS**

SUB STREAM SETTINGS

AUDIO AND EXTENSION

SYSTEM SETTINGS

ETHERNET

ENABLE

IP Address: 192.168.1.231

Netmask: 255.255.255.0

Gateway: 192.168.1.1

DNS1: 223.8.8.8

DNS2: 114.114.114.114

MAC: 08:00:00:00:00:00

Apply

### Main Stream Settings

The main stream can be set to mirror image and upside-down image from MAIN PARAMETER tab. Configure main stream network protocol RTMP/ HTTP/ RTSP/ UNICAST /MULTICAST/ RTP/ SRT accordingly. Please note that only one of HTTP/ RTSP/ UNICAST /MULTICAST/ RTP can be enable at same time.

DEVICE STATUS

NETWORK SETTINGS

**MAIN STREAM SETTINGS**

SUB STREAM SETTINGS

AUDIO AND EXTENSION

SYSTEM SETTINGS

MAIN PARAMETER

RTMP

HTTP

RTSP

UNICAST

MULTICAST

RTP

SRT

Stream Protocol: H.264

Mirror Image: Disable

Upside down Image: Disable

Aspect Ratio: Auto

Stream Control: CBR

Keyframe Interval: 30 0-1000

Encode Resolution: Auto

Bitrate: 2000 0-10000

Quantize Level: Auto

H.264 Profile: Main profile

Encoding Frame Rate: 25 0-30

Package: H264

Buffer Mode: VBR

Apply

DEVICE STATUS

NETWORK SETTINGS

**MAIN STREAM SETTINGS**

SUB STREAM SETTINGS

AUDIO AND EXTENSION

SYSTEM SETTINGS

MAIN PARAMETER

RTMP

HTTP

RTSP

UNICAST

MULTICAST

RTP

SRT

RTMP Mode: Disable

RTMP Method: URL Mode

RTMP Content: Video & Audio

RTMP URL: rtsp://

Apply

DEVICE STATUS

NETWORK SETTINGS

**MAIN STREAM SETTINGS**

SUB STREAM SETTINGS

AUDIO AND EXTENSION

SYSTEM SETTINGS

MAIN PARAMETER

RTMP

HTTP

RTSP

UNICAST

MULTICAST

RTP

SRT

HTTP: Disable

HTTP Path: /hls/ test with "/"

HTTP Port: 80 0-65535

Apply

DEVICE STATUS

NETWORK SETTINGS

**MAIN STREAM SETTINGS**

SUB STREAM SETTINGS

AUDIO AND EXTENSION

SYSTEM SETTINGS

MAIN PARAMETER

RTMP

HTTP

RTSP

UNICAST

MULTICAST

RTP

SRT

RTSP: Disable

RTSP Path: /hls/ test with "/"

RTSP Port: 8554 0-65535

RTSP Authentication: Disable

RTSP Content: Video & Audio

RTSP TCP: UDP

TTL: 32 0-255

Apply

DEVICE STATUS

NETWORK SETTINGS

MAIN STREAM SETTINGS

SUB STREAM SETTINGS

AUDIO AND EXTENSION

SYSTEM SETTINGS

MAIN PARAMETER

RTMP

HTTP

RTSP

UNICAST

MULTICAST

RTP

SRT

Group:

Unicast IP: 
(Support domain or IP format)

Unicast Port: 
(1-65535)

Save

DEVICE STATUS

NETWORK SETTINGS

MAIN STREAM SETTINGS

SUB STREAM SETTINGS

AUDIO AND EXTENSION

SYSTEM SETTINGS

MAIN PARAMETER

RTMP

HTTP

RTSP

UNICAST

MULTICAST

RTP

SRT

Multicast:

Multicast IP:

Multicast Port: 
(1-65535)

Save

DEVICE STATUS

NETWORK SETTINGS

MAIN STREAM SETTINGS

SUB STREAM SETTINGS

AUDIO AND EXTENSION

SYSTEM SETTINGS

MAIN PARAMETER

RTMP

HTTP

RTSP

UNICAST

MULTICAST

RTP

SRT

RTP:

RTP Server IP:

RTP Port: 
(1-65535)

Save

DEVICE STATUS

NETWORK SETTINGS

MAIN STREAM SETTINGS

SUB STREAM SETTINGS

AUDIO AND EXTENSION

SYSTEM SETTINGS

MAIN PARAMETER

RTMP

HTTP

RTSP

UNICAST

MULTICAST

RTP

SRT

SRT:

SRT Method:

Encryption:

Listen Port:

Group: 
(1-65535)

Save

## Sub Stream Settings

Configure sub stream network protocol RTMP/ HTTP/ RTSP/ UNICAST/ MULTICAST/ RTP/ SRT accordingly. Please note that only one of HTTP/ RTSP/ UNICAST/ MULTICAST/ RTP can be enable at same time.

DEVICE STATUS

NETWORK SETTINGS

MAIN STREAM SETTINGS

SUB STREAM SETTINGS

AUDIO AND EXTENSION

SYSTEM SETTINGS

Stream Protocol

RTMP

HTTP

RTSP

UNICAST

MULTICAST

RTP

SRT

Stream Protocol:

Aspect Ratio:

Frame Control:

Encode Resolution:

Bitrate: 
(16-120000)

Framerate Level:

H.264 Profile:

Encoding Frame Rate: 
(1-60)

Buffer Mode:

Save

DEVICE STATUS

NETWORK SETTINGS

MAIN STREAM SETTINGS

SUB STREAM SETTINGS

AUDIO AND EXTENSION

SYSTEM SETTINGS

Stream Protocol

RTMP

HTTP

RTSP

UNICAST

MULTICAST

RTP

SRT

RTMP:

RTMP Method:

RTMP Connection:

RTMP URL:

Save



DEVICE STATUS

NETWORK SETTINGS

MAIN STREAM SETTINGS

SUB STREAM SETTINGS

AUDIO AND EXTENSION

SYSTEM SETTINGS

MAIN PARAMETER

RTSP

HTTP

RTSP

UNICAST

MULTICAST

RTSP

SET

HTTP

Enable

RTSP Path: /h264\_0

Start with '1'

RTSP Port: 80

(1-65535)

Apply

DEVICE STATUS

NETWORK SETTINGS

MAIN STREAM SETTINGS

SUB STREAM SETTINGS

AUDIO AND EXTENSION

SYSTEM SETTINGS

MAIN PARAMETER

RTSP

HTTP

RTSP

UNICAST

MULTICAST

RTSP

SET

RTSP

Disable

RTSP Path: /h264\_0

Start with '1'

RTSP Authentication: Enable

RTSP Content: Video & Audio

RTSP Port: 854

(1-65535)

Apply

DEVICE STATUS

NETWORK SETTINGS

MAIN STREAM SETTINGS

SUB STREAM SETTINGS

AUDIO AND EXTENSION

SYSTEM SETTINGS

MAIN PARAMETER

RTSP

HTTP

RTSP

UNICAST

MULTICAST

RTSP

SET

Unicast

Disable

Unicast IP: 192.168.1.101

(Support broadcast IP format)

Unicast Port: 1234

(1-65535)

Apply

DEVICE STATUS

NETWORK SETTINGS

MAIN STREAM SETTINGS

SUB STREAM SETTINGS

AUDIO AND EXTENSION

SYSTEM SETTINGS

MAIN PARAMETER

RTSP

HTTP

RTSP

UNICAST

MULTICAST

RTSP

SET

Multicast IP

Disable

Multicast IP: 224.0.0.2

Multicast Port: 1234

(1-65535)

Apply

DEVICE STATUS

NETWORK SETTINGS

MAIN STREAM SETTINGS

SUB STREAM SETTINGS

AUDIO AND EXTENSION

SYSTEM SETTINGS

MAIN PARAMETER

RTSP

HTTP

RTSP

UNICAST

MULTICAST

RTSP

SET

RTSP Server IP

Disable

RTSP Server IP: 192.168.1.123

RTSP Port: 8080

(1-65535)

Apply

DEVICE STATUS

NETWORK SETTINGS

MAIN STREAM SETTINGS

SUB STREAM SETTINGS

AUDIO AND EXTENSION

SYSTEM SETTINGS

MAIN PARAMETER

RTSP

HTTP

RTSP

UNICAST

MULTICAST

RTSP

SET

SET

Disable

SET Method: Unicast

Encryption: Disable

Unicast path: H264

Latency: 0

(Adjusting)

Apply

## Audio and Extension

DEVICE STATUS

NETWORK SETTINGS

MAIN STREAM SETTINGS

SUB STREAM SETTINGS

AUDIO AND SUBTITLES

SYSTEM SETTINGS

AUDIO SETTINGS

MAIN STREAM AUDIO

SUB STREAM AUDIO

AUDIO CONTROL

VIDEO SETTINGS

Audio Input

Audio Source

Audio Channel

Audio Encoder Mode

AAC Format

Resample

RTSP Audio Format

Audio Rate

Apply

Audio Input

Audio Source

Audio Channel

Audio Encoder Mode

AAC Format

Resample

RTSP Audio Format

Audio Rate

Apply

Audio Settings

MAIN STREAM AUDIO

SUB STREAM AUDIO

AUDIO CONTROL

VIDEO SETTINGS

Output Codec

Audio

Max bitrate 65535 Kbps (to match the output Resolution)

Audio

Audio B

Audio F

Audio R

Audio V

Audio S

Transparency

Test Code

Test Control

Apply

Audio Settings

MAIN STREAM AUDIO

SUB STREAM AUDIO

AUDIO CONTROL

VIDEO SETTINGS

Output Codec

Audio

Max bitrate 65535 Kbps (to match the output Resolution)

Audio

Audio B

Audio F

Audio R

Audio V

Audio S

Transparency

Test Code

Test Control

Apply

Audio Settings

MAIN STREAM AUDIO

SUB STREAM AUDIO

AUDIO CONTROL

VIDEO SETTINGS

Brightness

Contrast

Gain

Relativity

Apply

Audio Settings

MAIN STREAM AUDIO

SUB STREAM AUDIO

AUDIO CONTROL

VIDEO SETTINGS

Device Audio

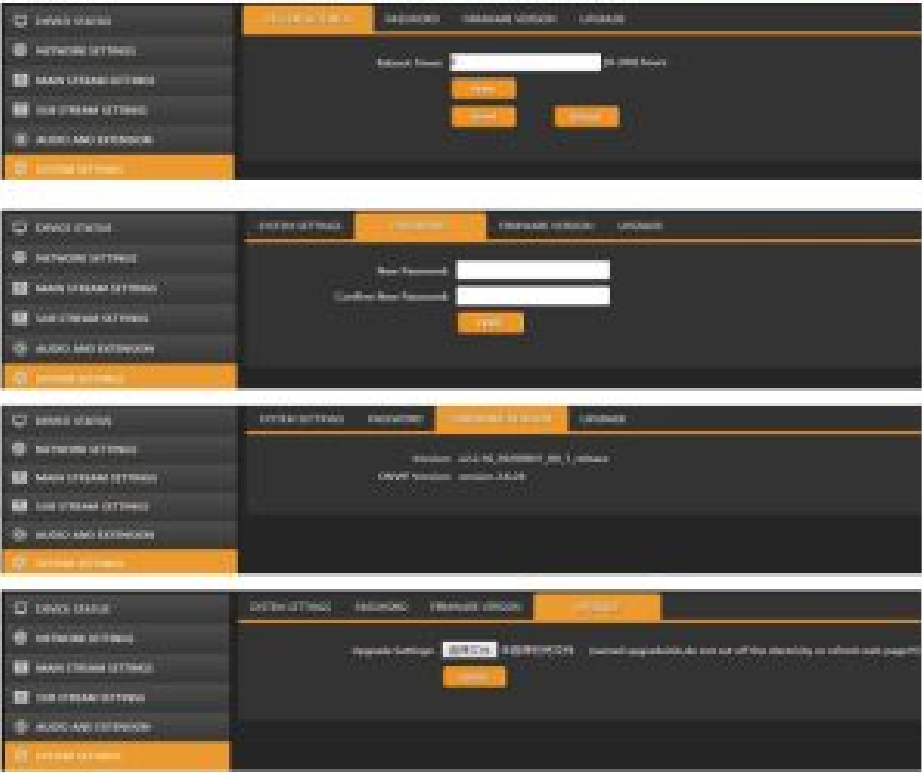
Device Input

Device Password



Device Transport Protocol

Apply

System Settings



Documents / Resources

<div>  <b>SE1217</b> H.265/H.264 HDMI STREAMING ENCODER</div>	<p><a href="#">AVMATRIX SE1217 H.265/ H.264 HDMI Streaming Encoder</a> [pdf] User Guide SE1217, H.265 HDMI Streaming Encoder, H.264 HDMI Streaming Encoder, HDMI Streaming Encoder, Streaming Encoder, Encoder</p>
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