



VLIP-H5HD-DC

1G H.265 HDMI 1080p@60HZ over IP w/Videowall
Processing Receiver (Decoder)



User Manual

VER 1.1

Thank you for purchasing this product

Please read these instructions carefully for optimum performance and safety before connecting, operating, or adjusting this product. Please keep this manual for future reference.

A surge protection device is recommended.

This product contains sensitive electrical components that may be damaged by electrical spikes, surges, electric shocks, lightning strikes, etc. The use of surgeprotection systems is highly recommended to protect and extend the life of your equipment.

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1. Introduction

The AV over IP product distributes multiple HD contents to multiple HD display devices over a 100M/1G Network Switch. It offers configurable high-quality, low-bandwidth H.265/H.264 configurable compression video and supports resolution up to 1920x1200@60Hz 4:4:4. Signal transmission distance can be extended up to 328ft / 100m via CATE5E/6/6A/7 cable. The product supports analog audio embedding and extracting. It also supports RS-232 control (pass-through & Guest mode) and single-machine control (without a Controller Box, matrix switching can be realized with panel buttons or RS-232 control).

2. Features

- ☆ HDMI 1.3 and HDCP 1.4 compliant
- ☆ Video resolution up to 1920x1200@60Hz 4:4:4
- ☆ Supports 4.95Gbps video bandwidth
- ☆ Signal transmission distance can be extended up to 328ft / 100m via CATE/6/6A/7 cable
- ☆ Supports point-to-point signal extension
- ☆ Supports signal distribution, multicast mode, distributed matrix, and video wall (up to 9 x 9) functions over a 1G Network Switch
- ☆ Intelligent video wall management makes it achievable for the novel layout of wall configurations
- ☆ Supports LPCM 2.0CH (32/44.1/48KHz) audio format
- ☆ Supports audio embedding and extracting
- ☆ Supports RS-232 control (pass-through & Guest mode)
- ☆ Supports mainstream and Substream encoding modes
- ☆ Stream parameters can be configured via Web GUI or Controller Box
- ☆ Controlled via panel buttons, RS-232, TCP/IP, Web GUI, and Controller Box
- ☆ Supports POE function (802.3af Class 3, PD mode)
- ☆ Smart networking design for easy and flexible installation

3. Package Contents

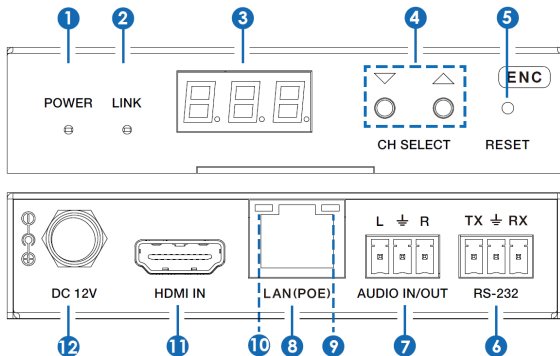
| Qty | Item |
|-----|--|
| 1 | 1080P over IP 100M/1GbE Decoder |
| 2 | 3-pin Phoenix Connector (3.81mm, male) |
| 4 | Machine Screw (KM3, 4mm) |
| 2 | Mounting Ear |
| 1 | 12V/1A Locking Power Adapter |
| 1 | User Manual |

4. Specifications

| Technical | |
|----------------------------|--|
| HDMI Compliance | HDMI 1.3 |
| HDCP Compliance | HDCP 1.4 |
| Video Bandwidth | 4.95Gbps |
| Video Compression Standard | H.265/H.264 |
| Transmission Distance | 100m (CAT5E/6/6A/7) |
| Video Resolution | Up to 1920x1200@60Hz 4:4:4 |
| Color Space | RGB4:4:4, YCbCr 4:4:4, YCbCr 4:2:2 |
| Color Depth | Input: 8-bit, 10-bit, 12-bit (1080p@60Hz); Output: 8-bit |
| Audio Formats | LPCM 2.0CH (32/44.1/48KHz) |
| Connection | |
| Decoder | 1x HDMI OUT [Type A, 19-pin female] 1x LAN [RJ45 connector, POE] 1x AUDIO OUT [3-pin phoenix connector] 1x RS-232 [3-pin phoenix connector] |
| Mechanical | |
| Housing | Metal enclosure |
| Color | Black |
| Dimensions | 120mm [W] x 95mm [D] x 21.5mm [H] |
| Weight | 74g |
| Power Supply | Input: AC100 - 240V 50/60Hz, Output: DC 12V/1A |
| Power Consumption | 2.88W |
| Operating Temperature | 14 - 113°F / -10 - 45°C |
| Storage Temperature | -4 - 140°F / -20 - 60°C |
| Relative Humidity | 20 - 90% RH (no condensing) |

5. Operation Controls and Functions

5.1 Encoder Panel



| No. | Name | Function Description |
|-----|------------------|--|
| 1 | POWER LED (Red) | The LED flashes at 1 Hz during the system startup, and the LED is always on after the startup is complete. |
| 2 | LINK LED (Green) | Network connection status LED. <ul style="list-style-type: none">▪ Light on: Network is connected well, and there is a compatible signal (the resolution is less than 1920*1200, and the frame rate is less than or equal to 60) access.▪ Light flashes at 1Hz: The network is connected well, but there is<ul style="list-style-type: none">▪ No video input.▪ Light flashes at 10Hz: Network is connected well, but the accessed signal is incompatible (resolution is greater than 1920*1200, or the frame rate is greater than 60).▪ Light off: Network is not connected. |
| 3 | LED screen | Displays IP address, ID, etc. information. <i>Note: When clicking the SHOW ME option of the corresponding machine on the Controller, the LED screen of the corresponding device will flash "SHO" so that you can find the corresponding machine in the system.</i> |

| | | |
|----|-------------------------------------|--|
| 4 | CH SELECT | Used to set Encoder ID and other settings. |
| 5 | RESET | System reset button. Press and hold this button for 5 seconds; the system will restart and restore factory Settings. |
| 6 | RS-232 | RS-232 serial port, supporting signal pass-through and local serial port control. |
| 7 | AUDIO IN/OUT | AUDIO IN: Analog stereo audio input port. Connect to an audio input source device. |
| | | AUDIO OUT: Analog stereo audio output port. Connect to an audio output device. |
| 8 | LAN (POE) | 100M/1G Network port. Connect to a Switch/Router/Hub for data transmission or POE function. |
| 9 | Link Signal Indicator lamp (Green) | <ul style="list-style-type: none"> ▪ Illuminating: The network cable is typically connected. ▪ Dark: The network cable is not connected well. |
| 10 | Data Signal Indicator lamp (Yellow) | <ul style="list-style-type: none"> ▪ Flashing: There is data transmission. ▪ Dark: There is no data transmission. |
| 11 | HDMI IN | HDMI input port connects to an HDMI signal source device such as a DVD or Set-top box with an HDMI cable. |
| 12 | DC 12V | <p>The device can be powered via two methods:</p> <ul style="list-style-type: none"> ▪ Local DC 12V/1A power supply. ▪ POE from Network Switch. The device acts in PD mode. <p>A DC power supply is unnecessary when the Switch supports the POE function.</p> |

Note:

The encoder can choose HDMI audio input or external audio embedding. It can be set through the CH SELECT buttons on the front panel of the Encoder. (The default setting is HDMI audio input.)

If it is set to HDMI audio input, the L/R OUT output of the Encoder is HDMI audio loop out. Suppose it is set to external audio embedding. In that case, the L/R IN input of the Encoder is the input of shallow audio embedding, and the L/R OUT output is the external audio embedding loop out.

Description of the LED screen and CH SELECT buttons (For the Encoder).

- 1, After the system is powered, the Encoder's LED screen will show the ENC ID (000by default if not set).
- 2, Press and hold the UP button for 5 seconds, the Encoder's LED screen will show in sequence "IP:", "xxx", "xxx", "xxx", "xxx", which is the IP address of the Encoder.
- 3, Press and hold the UP + DOWN buttons simultaneously for 5 seconds, then release them and enter the "Configuration" mode with "CFN" displayed on the LED screen.

- 4, Press the UP or DOWN button for Channel ID settings to display the current ID number (e.g., 001) on the LED screen. Press and hold the UP + DOWN buttons for 5 seconds, then release them to enter the “ID Settings” mode. The ID number (e.g., 001) on the LED screen will flash at 1Hz; press the UP or DOWN button to select the Channel ID you desire, then press and hold the UP + DOWN buttons for 5 seconds to confirm the setting and stop flashing.
- 5, For EDID ID settings, press the UP or DOWN button until the LED screen shows “E00” (in which “E” refers to EDID, “00” to EDID ID). Press and hold the UP + DOWN buttons for 5 seconds, then release them to enter the “EDID Settings” mode. The EDID ID number (e.g., E01) on the LED screen will flash at 1Hz, then press the UP or DOWN button to select the EDID ID you desire, then press and hold the UP + DOWN buttons for 5 seconds to confirm the setting and stop flashing.
The corresponding EDID ID is as follows:

| EDID ID | EDID Description |
|---------|------------------|
| 00 | H1080P60_2CH |
| 01 | H720P60_2CH |
| 02 | D1024P60 |
| 03 | D1080P60 |
| 04 | D1200P60 |
| 05 | H1200P60_2CH |
| 06 | COPY |
| 07 | USER1 |
| 08 | USER2 |

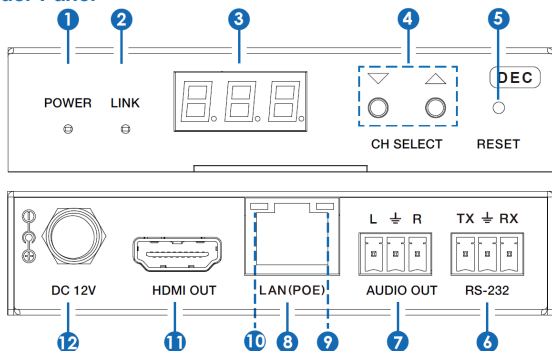
Notes:

- (1) *H* refers to HDMI; *D* refers to DVI. (The default EDID of 1080p60 will be used if you have not previously copied the EDID to ID 06 or downloaded EDID to ID 07/08 on the controller box web page.)
 - (2) EDID ID 06/07/08 is not available without Controller Box.
- 6, For audio options settings, press the UP or DOWN button until the LED screen shows “AHE” (in which “A” refers to Audio and “HE” to HDMI EMB). Press and hold the UP + DOWN buttons for 5 seconds, then release them to enter the “AUDIO Settings” mode. The audio option (AHE or AEI) on the LED screen will flash at 1Hz, then press the UP or DOWN button to select the AUDIO option, then press and hold the UP + DOWN buttons for 5 seconds to confirm the setting and stop flashing.
The corresponding audio options are as follows:

AHE: Use HDMI Audio

A: Use external Audio In

5.2 Decoder Panel



| No. | Name | Function Description |
|-----|------------------|---|
| 1 | POWER LED (Red) | The LED flashes at 1 Hz during the system startup, and the LED is always on after the startup is complete. |
| 2 | LINK LED (Green) | Network connection status LED. <ul style="list-style-type: none"> Light on: Network is connected well, and there is video data. Light flashes: Network is connected well, but there is no video data. Light off: Network is not connected. |
| 3 | LED screen | Displays IP address, ID, etc. information. <i>Note: When clicking the SHOW ME option of the corresponding machine on the Controller, the LED screen of the corresponding device will flash "SHO" so that you can find the corresponding machine in the system.</i> |
| 4 | CH SELECT | Used to set Decoder ID and other settings. |
| 5 | RESET | System reset button. Press and hold this button for 5 seconds; the system will restart and restore factory Settings. |
| 6 | RS-232 | RS-232 serial port, supporting signal pass-through and local serial port control. |
| 7 | AUDIO OUT | Analog stereo audio output port. Connect to an amplifier or loudspeaker through a 3-pin phoenix connector. It follows the audio output of the Encoder. |

| | | |
|----|-------------------------------------|--|
| 8 | LAN (POE) | 100M/1G Network port. Connect to a Switch/Router/Hub for data transmission or POE function. |
| 9 | Link Signal Indicator lamp (Green) | <ul style="list-style-type: none"> ▪ Illuminating: The network cable is typically connected. ▪ Dark: The network cable is not connected well. |
| 10 | Data Signal Indicator lamp (Yellow) | <ul style="list-style-type: none"> ▪ Flashing: There is data transmission. ▪ Dark: There is no data transmission. |
| 11 | HDMI OUT | The HDMI output port connects to an HDMI display device such as a TV or monitor. |
| 12 | DC 12V | <p>The device can be powered via two methods:</p> <ul style="list-style-type: none"> ▪ Local DC 12V/1A power supply; ▪ POE from Network Switch. The device acts in PD mode. A DC power supply is not needed when the Switch supports the POE function. |

Description of the LED screen and CH SELECT buttons (For the Decoder).

- 1, After the system is powered on, the Decoder's LED screen will show the ID of the connected Encoder (000 by default if not set).
- 2, Press and hold the UP button for 5 seconds, the Decoder's LED screen will show in sequence "IP:", "xxx", "xxx", "xxx", "xxx", which is the IP address of the Decoder.
- 3, Press and hold the UP + DOWN buttons simultaneously for 5 seconds, then release them and enter the "Configuration" mode with "CFN" displayed on the LED screen.
- 4, Press the UP or DOWN button for Channel ID settings to display the current ID number (e.g., 001) on the LED screen. Press and hold the UP + DOWN buttons for 5 seconds, then release them to enter the "ID Settings" mode. The ID number (e.g., 001) on the LED screen will flash at 1Hz; press the UP or DOWN button to select the Channel ID you desired, then press and hold the UP + DOWN buttons for 5 seconds to confirm the setting and stop flashing.
- 5, For output resolution settings, press the UP or DOWN button until the LED screen shows "S00" (in which "S" refers to Scaler and "00" to resolution ID), then press and hold the UP + DOWN buttons for 5 seconds, then release to enter the "Output Resolution Settings" mode. The Resolution ID number (e.g., S01) on the LED screen will flash at 1Hz, then press the UP or DOWN button to select the Resolution ID you desire, then press and hold the UP + DOWN buttons for 5 seconds to confirm the setting and stop flashing.

The corresponding output resolution ID is as follows:

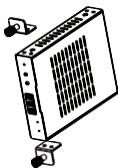
| Resolution ID | Resolution Description |
|---------------|------------------------|
| 00 | Pass-Through (default) |
| 01 | 1080P60 |
| 02 | 1080P50 |
| 03 | 1080P30 |
| 04 | 1080P25 |
| 05 | 1080P24 |
| 06 | 720P60 |
| 07 | 720P50 |
| 08 | 576P50 |
| 09 | 480P60 |
| 10 | 640X480P60 |
| 11 | 800X600P60 |
| 12 | 1024X768P60 |
| 13 | 1280X800P60 |
| 14 | 1280X1024P60 |
| 15 | 1366X768P60 |
| 16 | 1440X900P60 |
| 17 | 1600X1200P60 |
| 18 | 1680X1050P60 |
| 19 | 1920X1200P60 |

6. Rack Mounting Instruction

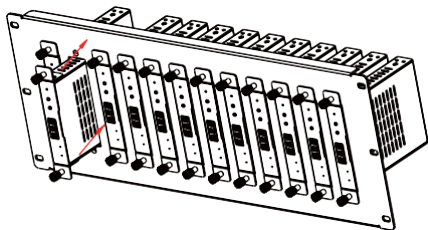
6.1 4U Rack Mounting

This product can be mounted in a standard 4U rack (Please contact your supplier for a 4U rack sale). The mounting steps are as follows:

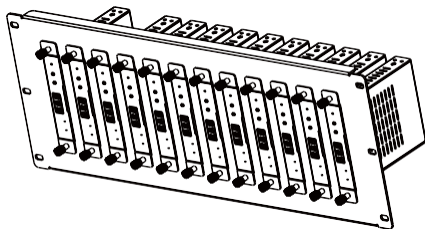
Step 1: Use included screws to fix two mounting ears on the product, as shown in the figure below:



Step 2: Insert the product with mounting ears into a 4U rack (up to 12 units can be installed vertically), as shown in the figure below:



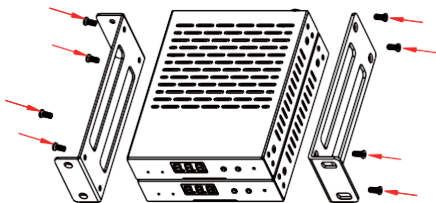
Step 3: Use screws to fix mounting ears on the rack to complete the mounting, as shown in the figure below:



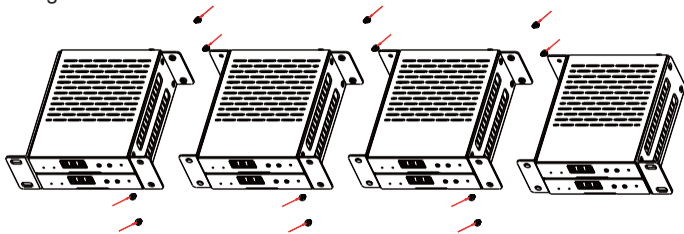
6.2 1U Rack Mounting

This product also can be mounted in a standard 1U rack (up to 8 units can be installed horizontally). The mounting steps are as follows:

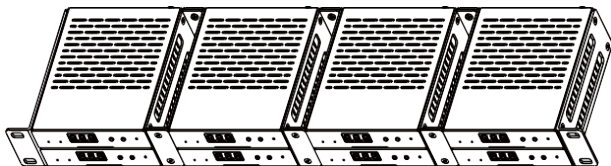
Step 1: Stack two products on top of each other, then use included screws to fix two 1U rack panels on the products, as shown in the figure below:



Step 2: Fix two 1U rack panels on another two stacked products in the same way, then use screws to fix two 1U rack panels together, as shown in the figure below:
The figure below:



Step 3: Fasten screws between two 1U rack panels so that eight products are mounted in a 1U rack, as shown in the figure below:



7. Encoder and Decoder Matching Settings

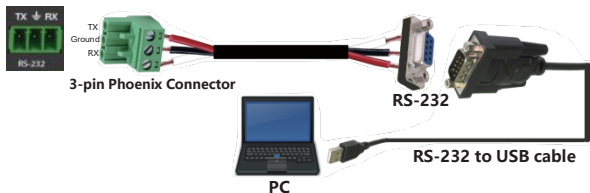
When multiple Encoders and Decoders are in the system without a Controller Box, it is necessary to match them well first. You can match all Encoders and Decoders in the following two methods.

Method 1: Use the CH SELECT buttons on the front panel of the Encoder/Decoder.

According to the methods mentioned in Chapter 5, set the ID of Encoder, then the ID of Decoder, and finally the Encoder ID from which to subscribe the stream. Match all Encoders and Decoders in the same way.

Method 2: Use the RS-232 serial port command control.

Connect the RS-232 port of the Encoder/Decoder to a PC or control system, as shown in the figure below. Then use a Serial Command tool on a PC to send the RS-232 command code: “!OUT xxx FR yyy\r\n”. The function of this command is to connect the Decoder (ID: xxx) to the Encoder (ID:yyy). Match all Encoders and Decoders in the same way.

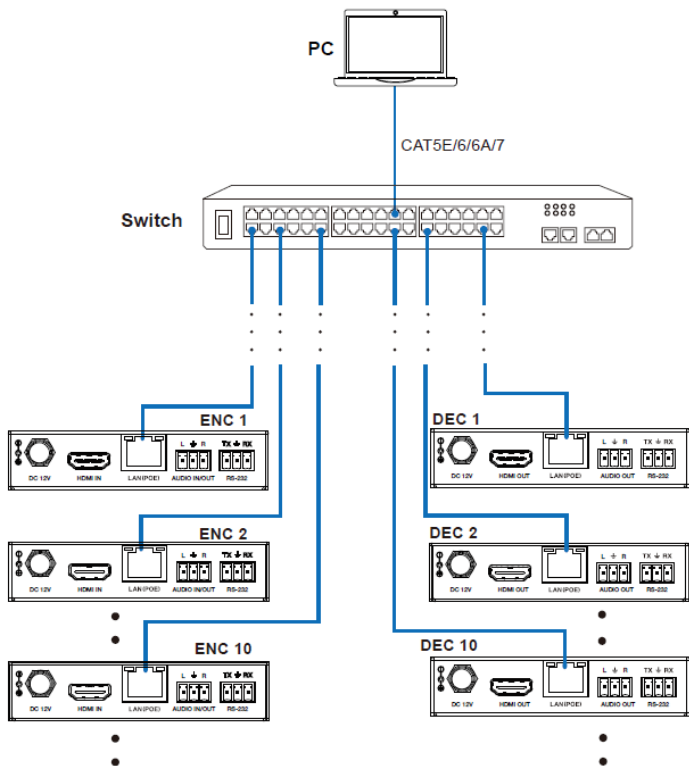


8. Web GUI User Guide

The built-in Web GUI can configure all products through a Switch. The operation method is shown below.

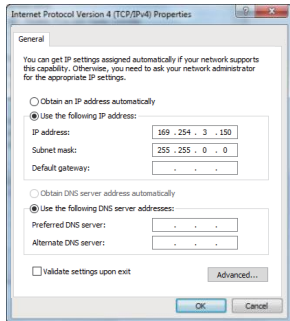
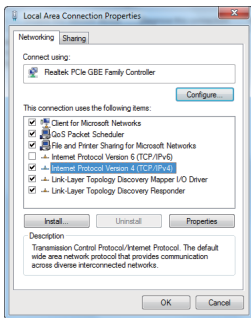
Step 1: Match all Encoders and Decoders as described in Chapter 7.

Step 2: Connect the PC and IP products you need to configure to a Switch. The connection diagram is shown below.

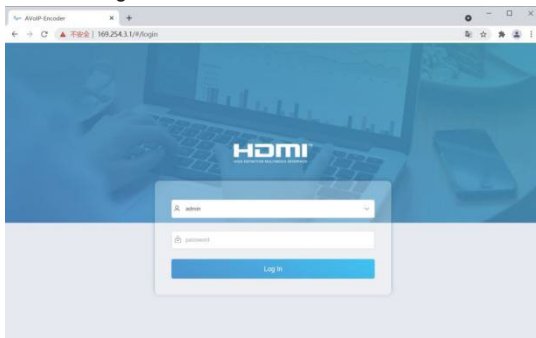


Step 3: Press and hold the (CH SELECT) UP button on the front panel of the Encoder/Decoder for 5 seconds to check the IP address. (Please refer to Chapter 5 for details.)

Step 4: Set the PC's IP address in the same network segment as the Encoder/Decoder; for instance, set the IP address to 169.254.3.150 and the Subnet mask to 255.255.0.0.



Step 5: Input the IP address of the Encoder/Decoder into the browser on the PC to enter the Web GUI login interface.

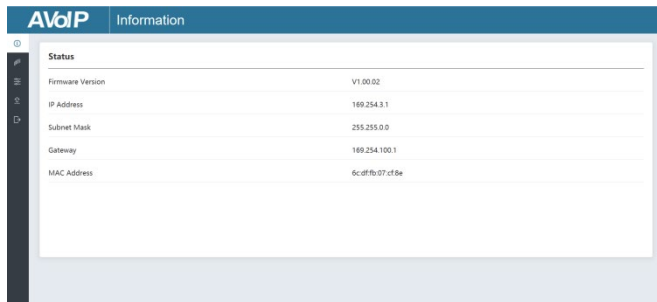


Step 6: Input the default User “admin” and the default Password “admin,” and then click “Log In” to enter the Web GUI interface.

The Web GUI function pages are shown below:

■ Device Information Page

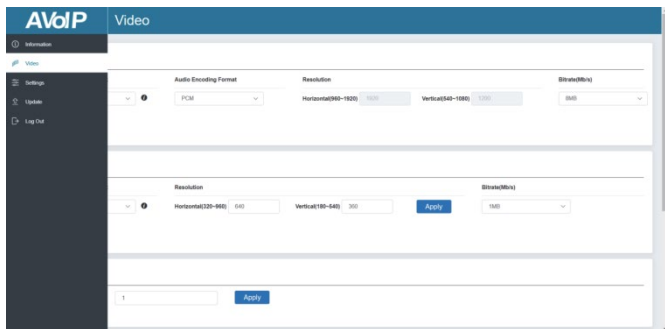
The Status page provides basic information about the Encoder/Decoder, such as Firmware Version, IP Address, Subnet Mask, Gateway, and MAC Address.



The screenshot shows the AVoIP web interface. The top navigation bar is blue with the AVoIP logo on the left and the word "Information" on the right. Below the navigation bar is a dark sidebar with icons for Home, Settings, Update, and Log Out. The main content area is titled "Status" and contains a table with the following information:

| Status | |
|------------------|-----------------|
| Firmware Version | V1.00.02 |
| IP Address | 169.254.3.1 |
| Subnet Mask | 255.255.0.0 |
| Gateway | 169.254.100.1 |
| MAC Address | 6c.dff.07.cf.6e |

■ Video Configuration Page



The screenshot shows the AVoIP web interface for video configuration. The top navigation bar is blue with the AVoIP logo on the left and the word "Video" on the right. Below the navigation bar is a dark sidebar with icons for Home, Settings, Update, and Log Out. The main content area is titled "Video" and contains several configuration sections:

- Audio Encoding Format:** A dropdown menu set to "PCM".
- Resolution:** Two columns of resolution options. The first column has "Horizontal(960-1920)" and "30FPS". The second column has "Vertical(540-1080)" and "30FPS". A "Bitrate(Kbps)" dropdown is set to "600".
- Resolution:** Two columns of resolution options. The first column has "Horizontal(120-960)" and "640". The second column has "Vertical(180-640)" and "300". An "Apply" button is present. A "Bitrate(Kbps)" dropdown is set to "150".
- Resolution:** A single input field containing "1" and an "Apply" button.

On this page, you can configure the video properties as required.

Encoder Video Configuration

Encoder video configuration page includes Main Stream, Sub Stream, ID Setting, Audio Selection, and EDID Setting.

The screenshot displays the AVoIP Video configuration interface. It features a dark blue header with the AVoIP logo and a 'Video' tab. The main content area is divided into five sections: Main Stream, Sub Stream, ID Setting, Audio Selection, and EDID Setting. Each section contains various configuration options such as Video Encoding Format, Audio Encoding Format, Resolution, Bitrate, Local ID, Audio Input, and EDID selection buttons.

| Section | Parameter | Value |
|-----------------|------------------------|---|
| Main Stream | Video Encoding Format | H.265 |
| | Audio Encoding Format | PCM |
| | Resolution | Horizontal(960-1920) 1080, Vertical(540-1080) 720 |
| | Bitrate(Mbps) | 8MB |
| Sub Stream | Video Encoding Format | H.265 |
| | Resolution | Horizontal(320-640) 640, Vertical(180-640) 360 |
| | Apply | Apply |
| | Bitrate(Mbps) | 1MB |
| ID Setting | Local ID(1-162) | 1 |
| Apply | Apply | |
| Audio Selection | Audio Input | HDMI |
| EDID Setting | Select User EDID1 File | Default |
| | Select User EDID2 File | Default |
| EDID | EDID | HDMI:1080p@60Hz, Audio:2CH PCM |

Main Stream: You can configure Video Encoding Format, Audio Encoding Format, and Bitrate. Video Encoding Format supports H.264 and H.265 (H.265 by default). Audio Encoding Format supports PCM and AAC (PCM by default). Encoding Resolution cannot be set; it follows the input resolution. The default Bitrate is 8Mb/s.

Sub Stream: You can configure Video Encoding Format, Resolution, and Bitrate. Video Encoding Format supports H.264 and H.265 (H.265 by default). The default Encoding Resolution is 640*360. The default Bitrate is 1Mb/s.

ID Setting: You can configure the ID of the Encoder. (After setting the ID, the IP will change. You need to press and hold the (CH SELECT) UP button on the front panel of the Encoder for 5 seconds to check the IP address, and then re-enter the new IP address on the web page to continue setting).

Audio Selection: You can configure the Audio Input (HDMI/Analog). **EDID Setting:** You can choose an EDID option from the drop-down list, as shown in the below figure.

Audio Selection

Audio Input

HDMI 1080p@60Hz, Audio 2CH PCM
 HDMI 720p@60Hz, Audio 2CH PCM
 DVI 1280x1024@60Hz, Audio None
 DVI 1920x1080@60Hz, Audio None
 DVI 1920x1200@60Hz, Audio None
 HDMI 1920x1200p@60Hz, Audio 2CH PCM

EDID Setting

Select User EDID1 File

User EDID-1

EDID

HDMI 1080p@60Hz, Audio 2CH PCM

User EDID 1 and User EDID 2 can be uploaded in the Select User EDID1 File and Select User EDID2 File, and the content of the uploaded binary file is EDID. (This file can be downloaded from the Download EDID of the DecoderVideo page.)

Decoder Video Configuration

The decoder video configuration page includes Transmission Protocol, ScaleSetting, Download EDID, Video Timeout Setting, ID Setting, and PictureSetting.

AVoIP Video

Transmission

Protocol

Scaler Setting

Scaler

Download EDID

Download EDID to your PC

Video Timeout Setting

Timeout After Video Lost (0-60min)

ID Setting

Local ID(1-762)

Max Channel ID(0-762)

Source Selection ID(1-762)

Picture Setting

Brightness

Contrast

Hue

Saturation

Transmission Protocol: You can select “udp unicast” or “udp multicast” (udp multicast by default).

Scaler Setting: You can set the output resolution (Pass Through by default).

Download EDID: You can download the EDID binary file of the display device connected to the Decoder. The EDID file can be used as the User EDID file to be uploaded to the Encoder.

Video Timeout Setting: You can set the timeout to turn off the video output when no input video signal is detected. 0 means never close.

ID Setting:

Local ID: You can set the ID of the Decoder. (After setting the ID, the IP will change. You need to press and hold the (CH SELECT) UP button on the front panel of the Decoder for 5 seconds to check the IP address, and then re-enter the new IP address on the web page to continue setting).

Max Channel ID: You can set the maximum range of Source Selection ID that can be set. When it is set to 0, there is no limit to the Source Selection ID setting range.

Source Selection ID: You can select the Encoder ID as the inputsource.

Picture Setting: You can configure the picture parameters (Brightness, Contrast, Hue, and Saturation).

■ Settings Page

You can set Network settings on this page, configure Security Module, and modify username and Login Password as required.

The screenshot shows the AVoIP Settings page. The top header is blue with the AVoIP logo and the word 'Settings'. Below the header, there are three main sections: Network, Security, and Modify username. The Network section contains four input fields: IP Address (192.254.3.1), Gateway (192.254.100.1), Subnet Mask (255.255.0.0), and HTTP Web Port (80). There are two buttons: 'Set Network Defaults' and 'Save'. The Security section has a toggle for 'HTTPS' which is currently turned on. The Modify username section has a text input field for 'Username' and an 'Apply' button.

The screenshot shows a web interface for logging in. It has a title "Login" at the top left. Below the title are three input fields: "Old Password", "New Password", and "Confirm Password". Each field is a simple text box. At the bottom of the form is a blue button labeled "Apply".

Notes:

- (1) *The Network Settings can be set only when the Mode button is set to Static.*
- (2) *All changes will take effect by clicking “Save” below.*
- (3) *After any changes to the Network Settings, username, or Login Password, it will redirect to the Web browser home page or the Web GUI login interface. You must log in to the Web GUI again with the new settings.*

■ Update Page

The screenshot shows a web interface titled "AVoIP Update". The main content area is titled "Transmitter" and contains three rows of settings:

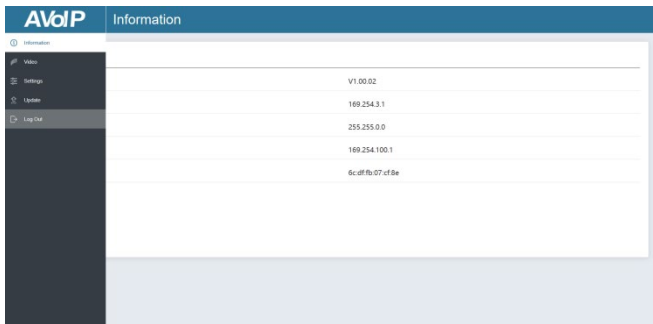
- Firmware Update:** Includes a "Browse" button, the text "No file chosen", an "Update" button, and a progress bar.
- Factory Reset:** Includes a "Reset" button.
- Reboot:** Includes a "Reboot" button.

Click “Browse..” to import the upgrade file and click “Update” to start the upgrade. There will be a progress bar prompt during the upgrade process. When the progress bar reaches 100%, it indicates the promotion is booming, and the device will be restarted automatically.

Clicking “Reset” can reset the device to factory default settings.

Clicking “Reboot” can reboot the machine.

■ Log Out Page



Click “Log Out” on the left; the Web GUI will automatically exit and skip to the login interface.

9. Switch Model

A network Switch used to set up the system should support the below features:

1. Type of layer 3/managed network Switch.
2. Gigabit bandwidth.
3. Support multicast, and need to enable the multicast function.
4. Support IGMP snooping and need to enable the IGMP snooping function.
5. Support filter/drop unregistered Multicast traffic, and need to enable the function.

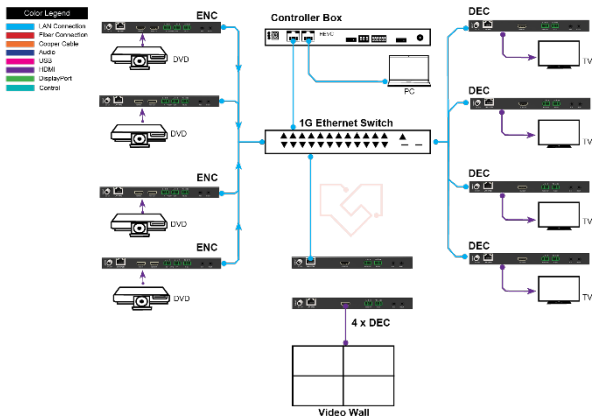
The following Switch models are highly recommended.

| Manufacturer | Model Number |
|--------------|----------------------|
| HUAWEI | S5720S-28X-PWR-LI-AC |
| NETGEAR | S3300 |

10. 1080P over IP System Control

This product also can be controlled by Controller Box or a third-party controller. For details of 1080P over IP system control, please refer to 1080P over IP Controller Box user manual.

11. Application Example



Notes:

- (1) For the default IP mode of the Control LAN port of the Controller Box is DHCP, the PC also needs to be set to "Obtain an IP address automatically" way, and a DHCP server (e.g., network router) is required in the system.
- (2) If there is no DHCP server in the system, 192.168.0.225 will be used as the IP address of the Control LAN port. You must set the PC's IP address in the same network segment. For example, set the PC's IP addresses 192.168.0.88.
- (3) You can access the Web GUI by inputting the Control LAN port IP address (192.168.0.225) or URL "http://controller.local" on your computer's browser.
- (4) No need to care about the settings of the Video LAN port of the

*Controller Box; they are managed by Controller automatically.
(5) When the Network Switch does not support PoE, the Encoder, Decoder, and Controller Box should be powered by a DC power adapter.*



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