

## HaiweiTech HHD-101

# H.265 HDMI CVBS Decoder User Manual

Model: HHD-101 | Brand: HaiweiTech

## 1. INTRODUCTION

This user manual provides detailed instructions for the installation, operation, and maintenance of the HaiweiTech H.265 HDMI CVBS Decoder (Model: HHD-101). This device is designed to decode various IP video streams, including H.264/H.265, RTMP, RTSP, RTP, HTTP, HLS, and UDP, and output them via HDMI (up to 4K resolution) and CVBS/BNC interfaces. It is ideal for advertisement displays, monitoring, and other video distribution applications.



Figure 1.1: HaiweiTech H.265 HDMI CVBS Decoder

The image displays the compact, black metal casing of the HaiweiTech H.265 HDMI CVBS Decoder, featuring a ribbed top surface for heat dissipation and various ports on the front panel.

## 2. PRODUCT OVERVIEW

### 2.1. Key Features

- **Input Support:** Decodes up to 4 (multi-view) channels of H.264/H.265 IP streams (RTMP/RTSP/RTP/HTTP/HLS/UDP), MPEG1, MPEG2, MPEG4, SL hyperlink (P-P), VP8/VP9/AVS/AVS+. Supports 2\*1080P + 2\*720P simultaneous decoding.
- **Output Interfaces:** 1x HDMI output (up to 4096x2160P 30FPS) and 1x CVBS/BNC output. Includes RS485 out.
- **Resolution Support:** 4096x2160 (30/25/24 FPS), 3840x2160 (30/25/24 FPS), 1080P (60/50/30/25/24 FPS), 1080I (60/50 FPS), 720P (60/50/25/24 FPS), 576P (50 FPS).
- **Low Latency:** Haiwei proprietary protocol-based ultra-low latency point-to-point transmission solution available with the decoder.
- **Additional Services:** SDK/API, IP finder/Video management platform/iOS Android APP, solution analysis, and OEM services are available.

### 2.2. Package Contents



Figure 2.1: Package Contents

The image shows the decoder unit, a power adapter, an Ethernet cable, and an AV cable, which are typically included in the product package.

### 2.3. Device Interfaces



(figure-1)



(figure-2)

- ① **LAN- Ethernet port**  
Need to configure the IP gateway of the decoder if need to normally use it.
- ② **LED indicators**  
RED: POWER ON  
Green: Network
- ③ **RST- Reset**  
Keep sticking the RST button until the GREEN light off
- ④ **AV OUT- CVBS out**
- ⑤ **HDMI OUT-HDMI out**
- ⑥ **BNC OUT-BNC out**
- ⑦ **RS485**  
GEN  
IO-1  
IO-2  
485A  
485B
- ⑧ **Power In**  
12V 2A power required

Figure 2.2: Rear Panel Interfaces

This diagram clearly labels the various ports on the rear panel of the decoder: LAN (Ethernet port for IP input), RST (Reset button), LED (Status Indicators), AV Out (CVBS/Audio Out), HDMI Out (up to 4K), BNC Video Out (CVBS), and RS485 I/O.

- **LAN:** Ethernet port for IP video input. Configuration of the decoder's IP gateway may be required.
- **LED Indicators:** Red indicates Power ON, Green indicates Network activity.
- **RST:** Reset button. Press and hold until the green LED turns off to reset the device.
- **AV OUT:** CVBS (Composite Video Broadcast Signal) and analog audio output.
- **HDMI OUT:** High-Definition Multimedia Interface output, supporting resolutions up to 4K.
- **BNC OUT:** BNC connector for CVBS video output.
- **RS485:** Serial communication interface for control and data transfer (GND, IO-1, IO-2, 485A, 485B).



Figure 2.3: Power Input

The image shows the side of the decoder with the DC 12V power input port.

### 3. SETUP

Follow these steps to set up your HaiweiTech H.265 HDMI CVBS Decoder:

1. **Connect Power:** Connect the provided 12V 2A power adapter to the DC 12V input port on the decoder and plug it into a power outlet. The red LED indicator should illuminate.
2. **Network Connection:** Connect an Ethernet cable from your network (router or switch) to the LAN port on the decoder. Ensure your network provides access to the IP video streams you intend to decode. The green LED indicator should illuminate, indicating network activity.
3. **Video Output Connection:**
  - For HDMI output, connect an HDMI cable from the HDMI OUT port on the decoder to the HDMI input of your display (monitor, TV, projector).
  - For CVBS output, connect a BNC cable from the BNC OUT port to your display's BNC input, or use the AV OUT port with the provided AV cable for composite video and analog audio.
4. **Access Web Interface:** The decoder typically obtains an IP address via DHCP. To find its IP address and configure settings, you may need to use an IP scanner tool or refer to your router's connected devices list. Once the IP address is known, open a web browser and enter the decoder's IP address to access its web-based configuration interface.
5. **Configure IP Stream:** Within the web interface, navigate to the input settings. Enter the full RTSP, RTMP, HTTP, HLS, or UDP stream URL, including any necessary username and password. Ensure the syntax is correct.

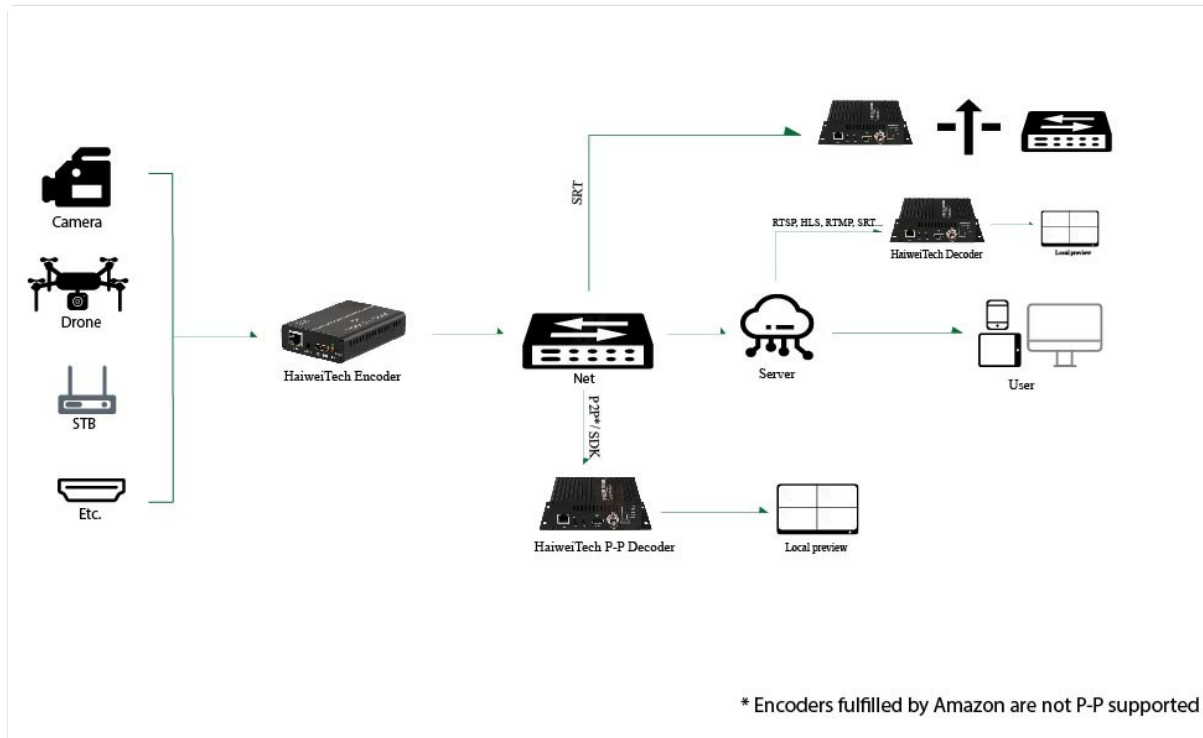


Figure 3.1: Typical System Integration

This diagram illustrates how the decoder fits into a larger video system, receiving streams from an encoder via a network and outputting to a local display or user device.

## 4. OPERATING INSTRUCTIONS

Once the decoder is set up and configured with the correct IP stream, it will automatically begin decoding and outputting the video and audio to the connected display(s).

- **Single Channel Decoding:** For single stream decoding, ensure only one IP stream URL is configured as active in the web interface. The decoder will output this stream to both HDMI and CVBS simultaneously.
- **Multi-View Decoding:** The decoder supports multi-view decoding for up to 4 channels (2\*1080P + 2\*720P). Configure multiple stream URLs in the web interface and select the multi-view layout option if available. The decoder will combine these streams into a single output display.
- **Resolution and Frame Rate:** The decoder will attempt to output the stream at its native resolution and frame rate, up to the maximum supported by the device (4K@30FPS). Ensure your display supports the output resolution.
- **Audio Output:** Audio embedded in the IP stream will be output via HDMI and the analog AV OUT port.
- **RS485 Control:** If applicable, connect RS485 devices for external control or data communication as per your system requirements.

## 5. MAINTENANCE

To ensure optimal performance and longevity of your decoder, follow these maintenance guidelines:

- **Cleaning:** Use a soft, dry cloth to clean the exterior of the device. Do not use liquid cleaners or aerosols.
- **Ventilation:** Ensure the decoder is placed in a well-ventilated area. Do not block the ventilation slots on the device.
- **Temperature:** Operate the device within its specified temperature range. Avoid extreme heat or cold.
- **Firmware Updates:** Periodically check the manufacturer's website (if available) for firmware updates. Updates can improve performance, add features, or fix bugs.
- **Power Cycle:** If the device becomes unresponsive, disconnect the power adapter, wait 10 seconds, and then reconnect it.

## 6. TROUBLESHOOTING

If you encounter issues with your decoder, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
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Problem	Possible Cause	Solution
No video output / Black screen	<ul style="list-style-type: none"> <li>• Incorrect cable connection</li> <li>• No power to the decoder</li> <li>• Incorrect IP stream URL or credentials</li> <li>• Display not set to correct input</li> <li>• Unsupported resolution/codec</li> </ul>	<ul style="list-style-type: none"> <li>• Check HDMI/CVBS and power cable connections.</li> <li>• Verify power adapter is connected and red LED is on.</li> <li>• Double-check the IP stream URL, username, and password in the web interface. Ensure correct syntax (e.g., <i>rtsp://xxx.xxx.xxx.xxx/554</i>).</li> <li>• Select the correct HDMI/AV input on your display.</li> <li>• Ensure the IP stream resolution and codec are supported by the decoder.</li> </ul>
Video freezes or disconnects frequently	<ul style="list-style-type: none"> <li>• Network instability</li> <li>• Insufficient bandwidth</li> <li>• Stream source issues</li> <li>• Decoder overload (multi-view)</li> </ul>	<ul style="list-style-type: none"> <li>• Check network cable and router/switch stability.</li> <li>• Ensure sufficient network bandwidth for the stream(s).</li> <li>• Verify the stability of the IP stream source.</li> <li>• If using multi-view, reduce the number of streams or their resolution/bitrate. Some users report multi-decode can be challenging.</li> <li>• Consider a power cycle of the decoder.</li> </ul>
Cannot access web interface	<ul style="list-style-type: none"> <li>• Incorrect IP address</li> <li>• Network configuration issue</li> <li>• Firewall blocking access</li> </ul>	<ul style="list-style-type: none"> <li>• Verify the decoder's IP address using an IP scanner.</li> <li>• Ensure your computer is on the same network segment as the decoder.</li> <li>• Temporarily disable any firewalls on your computer.</li> <li>• Try resetting the decoder to factory defaults (using the RST button) if the IP address is unknown or inaccessible.</li> </ul>
No audio	<ul style="list-style-type: none"> <li>• Audio not present in stream</li> <li>• Incorrect audio settings</li> <li>• Display audio issues</li> </ul>	<ul style="list-style-type: none"> <li>• Confirm the IP stream contains audio.</li> <li>• Check audio settings in the decoder's web interface.</li> <li>• Ensure your display's volume is up and not muted.</li> </ul>

## 7. SPECIFICATIONS

Feature	Detail
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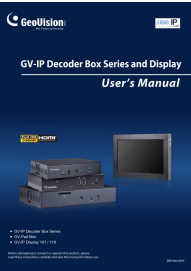

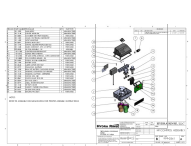


Feature	Detail
Model Number	HHD-101
Input Protocols	H.264/H.265 IP (RTMP/RTSP/RTP/HTTP/HLS/UDP), MPEG1, MPEG2, MPEG4, SL hyperlink (P-P), VP8/VP9/AVS/AVS+
Max Input Channels	Up to 4 (multi-view), e.g., 2*1080P + 2*720P
Output Interfaces	1x HDMI, 1x CVBS/BNC, 1x RS485
HDMI Output Resolution	Up to 4096x2160P @ 30FPS
Supported Resolutions	4096x2160 (30/25/24), 3840x2160 (30/25/24), 1080P (60/50/30/25/24), 1080I (60/50), 720P (60/50/25/24), 576P (50)
Power Input	DC 12V 2A
Package Dimensions	8.27 x 6.81 x 3.03 inches
Item Weight	1.57 pounds
Manufacturer	HaiweiTech
Country of Origin	China

## 8. WARRANTY AND SUPPORT

HaiweiTech is dedicated to providing solutions for various streaming industries. The company designs, produces, develops, and upgrades its software and hardware, offering OEM/ODM services.

For technical support, SDK/API documentation, IP finder tools, video management platforms, or inquiries regarding iOS/Android applications and solution analysis, please refer to the official HaiweiTech support channels. While specific warranty details are not provided in this manual, it is recommended to contact HaiweiTech directly or refer to your purchase documentation for warranty information and service requests.

You can visit the HaiweiTech store on Amazon for more information: [HaiweiTech Amazon Store](#)

	<p><a href="#">SPX Hankison HHD   HHDS Series Refrigeration Dryers Technical Data Sheet</a></p> <p>Detailed technical specifications, benefits, features, and selection guide for SPX Hankison HHD and HHDS series refrigeration dryers, including performance data and correction factors for various operating conditions.</p>
	<p><a href="#">GeoVision GV-IP Decoder Box Series and Display User Manual</a></p> <p>This user manual provides comprehensive instructions for GeoVision's GV-IP Decoder Box Series, GV-Pad Mini, and GV-IP Display products. It covers installation, setup, features, troubleshooting, and integration with video surveillance systems, offering a detailed guide for security professionals.</p>
	<p><a href="#">Minolta SRT 101 Service Manual: Comprehensive Disassembly and Repair Guide</a></p> <p>Access detailed technical procedures and diagrams for servicing the Minolta SRT 101 35mm SLR camera. This service manual is essential for repair technicians and advanced users.</p>
	<p><a href="#">Hydra Rinse HR Control Assembly Parts List and Diagram</a></p> <p>Detailed parts list and exploded view diagram for the Hydra Rinse HR Control Assembly, including part numbers, descriptions, quantities, and manufacturing/purchase types. This document also provides revision history and general assembly notes for the 999-0341 drawing.</p>
	<p><a href="#">CH-101 HDMI to HDMI Repeater (V1.3) Operation Manual</a></p> <p>This operation manual provides detailed information on the CH-101 HDMI to HDMI Repeater (V1.3) by Cypress Technology Co., Ltd. It covers the product's advanced features, specifications, package contents, and step-by-step connection and installation instructions for optimal audio and video signal extension.</p>
	<p><a href="#">GeoVision GV-IP Decoder Box Series and Display User's Manual</a></p> <p>User's manual for the GeoVision GV-IP Decoder Box Series and Display, covering installation, operation, and features.</p>