User Manual

aegis
CONNECTION TOGETHER

AVP-EN4K-101

AVP-DE4K-101

AVP-4K30 Series

4K UHD Video over IP Encoders and Decoders

User Manaual

Version: V1.0.4

Important Safety Instructions

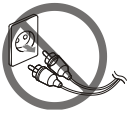
1. Do not expose this apparatus to rain, moisture, dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.

6. Clean this apparatus only with dry cloth.

2. Do not install or place this unit in a bookcase, built-in cabinet or in another confined space. Ensure the unit is well ventilated.

7. Unplug this apparatus during lightning storms or when unused for long periods of time.

3. To prevent risk of electric shock or fire hazard due to overheating, do not obstruct the unit's ventilation openings with newspapers, tablecloths, curtains, and similar items.



8. Protect the power cord from being walked on or pinched particularly at plugs.

4. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

9. Only use attachments / accessories specified by the manufacturer.

5. Do not place sources of naked flames, such as lighted candles, on the unit.

10. Refer all servicing to qualified service personnel.

Warnings of FCC

This equipment has been tested and found to comply with the limits for a Class B digital device, according to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used following the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-- Reorient or relocate the receiving antenna.

-- Increase the separation between the equipment and receiver.

-- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.

-- Consult the dealer or an experienced radio/TV technician for help. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Contents

Introduction

Overview

AVP-4K30 series encoders (AVP-EN4K-101) and decoders (AVP-DE4K-101) provide a flexible, powerful, and scalable solution at resolutions up to 3840 x 2160@60Hz 4:2:0, 3840 x 2160@30Hz 4:4:4. Allow 4K UHD media to be switched and distributed over standard gigabit Ethernet networks, providing complete end-to-end streaming systems. Audio, video together with IR, and USB signals can be routed separately or as a whole throughout the matrix system. Encoders can be used with decoders to function video walls up to the dimensions of 16 x 16. Both of them can handle and output up to 7.1 channel audio, allowing you to enjoy the finest sound.

HDCP 2.2 specifications are employed. A local area network is covered with a range of up to 100m (330ft) over a single Cat 5e cable or above. Standard features like bi-directional serial, bi-directional IR, and independent analog audio input/output are included. The codecs allow USB extensions to take place to control a keyboard and a mouse. AVP-4K30 series offer integration-friendly control features——the front panel link DIP switch, Windows PC configurator (HDMIOverIPConsole), AGS-i TOUCH on iPad, and IP controller (AVP-CBS2K-101) providing simple, flexible control, and management options. They are the perfect solution for any low-latency and signal-routing applications. Common applications include homes, classrooms, conference rooms, and broadcasts.

Features

- Distributes and switches 4K UHD AV signals via standard gigabit Ethernet networks, providing complete end-to-end streaming systems.
- The encoder supports HDMI input and output resolutions up to 3840 x 2160@60Hz 4:2:0.
- The decoder supports HDMI output resolutions up to 3840 x 2160@30Hz 4:4:4.
- Supports streaming resolutions up to 3840 x 2160@30Hz 4:4:4.
- Features video wall up to the dimensions of 16 x 16.
- Supports HDR10.
- Supports CEC one-touch-play and standby commands to power on/off the display, as well as CEC Frame.
- Supports multi-channel audio up to PCM 7.1, Dolby Atmos, and DTS: X.
- Supports independent analog audio input and output at 2 channels, 24 bits@48 kHz/channel.
- HDCP 2.2 compliant.
- Flexible routing policies, allow audio, video, USB, IR, and RS232 signals to be routed separately or as a whole throughout the matrix system.
- Allows AV, USB, IR, RS232, and power signals to be delivered up to 328ft/100m over a single Cat 5e cable or above.
- Allows video output to follow input resolution or to convert the input resolution to 3840 x 2160@30Hz 4:4:4 and 1080p@60Hz.
- Supports HDMI input and output transmission distance up to 50ft/15m.
- 1 ~ 2 fps latency.
- Supports bi-directional serial communication, allowing control of remote RS232 devices between encoders/decoders and IP controller, or between encoders and decoders.
- Supports bi-directional IR pass-through, allowing control of remote source and display devices between encoders and decoders.

- Supports IR generation – sends IR codes through API.
- Encoder offers a USB type B port to directly connect to a PC and complies with USB 2.0 standards.
- Decoder offers two USB type A ports to directly connect to a keyboard and a mouse and complies with USB 2.0 standard, providing +5 VDC at up to 500 mA to connected USB peripherals.
- Supports Mouse Roaming.
- Supports point-to-point, point-to-multipoint, multipoint-to-point, multipoint-to-multipoint applications.
- Supports PoE to be remotely powered by compatible power source equipment such as a PoE-enabled Ethernet switch, eliminating the need for a nearby power outlet.
- Supports user-selectable output HDCP configuration via PC configurator.
- Fit in/stretch out video wall, and rotate video management -- Decoded video can fill a video wall, maintain an aspect ratio in a video wall, or can be rotated 180° and 270° clockwise, presenting imagery that meets customer expectations.
- Supports AutoIP, zero-configuration networking (zeroconf), a set of special technologies that automatically assign dynamic IP addresses to the devices on startup, and a server-less method of choosing an IP address.
- Works with multiple operation tools, the front panel link DIP switch, Windows PC configurator, AGS-i TOUCH on iPad, and IP controller for device control, device management, and device upgrade.
- Supports communications protocols used on the Ethernet such as TCP/IP, ARP, DHCP, ICMP (ping), IGMP, and UDP.

Package Contents

AVP-EN4K-101

- 1 x AVP-EN4K-101 Unit
- 1 x Power Adapter (12 VDC 1A)
- 1 x Detachable Plug
- 1 x Phoenix Port (Male, 3.5 mm, 3 pins)
- 1 x IR Emitter (3.9ft/1.2m)
- 1 x Broadband IR Receiver (3.9 ft/1.2 m, 30 kHz ~ 50 kHz)
- 2 x Mounting Ears

AVP-DE4K-101

- 1 x AVP-DE4K-101 Unit
- 1 x Power Adapter (12 VDC 1A)
- 1 x Detachable Plug
- 1 x Phoenix Port (Male, 3.5 mm, 3 pins)
- 1 x IR Emitter (3.9ft/1.2m)
- 1 x Broadband IR Receiver (3.9 ft/1.2m, 30 kHz ~ 50 kHz)
- 2 x Mounting Ears

Specifications

4K Specifications		
Max. 4K Capabilities		
Resolution and Frame Rate	Chroma Sampling	Max. Bit Depth per color
3840 x 2160@30Hz	4:4:4	8 bit
3840 x 2160@60Hz	4:2:0	
Frame Rate	24, 30, 50, or 60 fps. **Note:** • 3840 x 2160@50Hz and 60Hz can only support 4:2:0 chroma sampling. • AVP-EN4K-101 features all the capabilities above while AVP-DE4K-101 is not compatible with 3840 x 2160@50Hz and 60Hz.	
Chroma Sampling	4:4:4: or 4:2:0	
Color Bit Depth	8 bits per color	
Signal Type	HDMI	
Max. HDMI Video Data Rate	8.91 Gbps (2.97 Gbps per channel)	

AVP-EN4K-101

Video	
Maximum HDMI Data Rate	8.91 Gbps (2.97 Gbps per channel)
Maximum Pixel Clock	297 MHz
Color Bit Depth	8 bits per channel
Formats	RGB and YCbCr digital video
Standards	HDMI 1.4, HDCP 2.2, VESA, CEA-861F

Input Video	
Input Video Port	1 x female HDMI type A (19 pins)
Input Video Type	HDMI, HDCP
Input Video Resolutions	3840 x 2160p@24Hz 4:4:4, 3840 x 2160p@30Hz 4:4:4, 3840 x 2160p@50Hz 4:2:0, 3840 x 2160p@60Hz 4:2:0, 640 x 480p@60Hz, 720 x 480p@60Hz 1280 x 720p@60Hz, 1920 x 1080i@60Hz, 1920 x 1080p@60Hz, 720 x 576p@50Hz 1280 x 720p@50Hz, 1920 x 1080i@50Hz 1920 x 1080p@50Hz, 1920 x 1080p@24Hz 1920 x 1080p@25Hz 640 x 480@60Hz, 800 x 600@60Hz 1024 x 768@60Hz, 1280 x 720@60Hz 1280 x 768@60Hz, 1280 x 800@60Hz 1280 x 960@60Hz, 1280 x 1024@60Hz 1360 x 768@60Hz, 1366 x 768@60Hz 1400 x 1050@60Hz, 1440 x 900@60Hz 1600 x 900@60Hz, 1600 x 1200@60Hz 1680 x 1050@60Hz, 1920 x 1080@60Hz 1920 x 1200@60Hz
Average Encoding Data Rate	• 3840 x 2160@30Hz: about 250 Mbps • 1080p@60Hz: about 150 Mbps
End-to-End Time Latency	1 ~ 2 fps
Input Video Signal	0.5~1.2 V p-p
Input DDC Signal	5 V p-p (TTL)
Video Impendence	100 Ω

Output Video	
Output Video Port	**HDMI loop-through: (local output)** 1 x female HDMI type A (19 pins) **Ethernet output:** 1 x female RJ-45
Output Video Type	**HDMI loop-through: (local output)** HDMI, HDCP **Ethernet output:** IP stream
Output Video Resolutions	**HDMI loop-through: (local output)** Up to 3840 x 2160@60Hz 4:2:0 **Ethernet output:** Up to 3840 x 2160@30Hz 4:4:4
Output Video Signal	0.5~1.2 V p-p
Output DDC Signal	5 V p-p (TTL)
Video Impendence	100 Ω

Audio (Analog Audio)	
Gain	Unbalanced output: 0 dB
Frequency Response	20 Hz to 20 kHz, ±1 dB
THD + Noise	-78 dBFS typical at -5.2 dBV input
SNR	> 85 dBFS at the input (A-weighted)
Stereo Channel Separation	> 80 dB
Digital Sampling Rate	48 kHz
Bit Depth	24 bits

Input Audio	
Digital audio input:	
Input Audio Port	1 x female HDMI type A (19 pins)
Signal Format	LPCM 2.0/2.1/5.1/ 7.1; Dolby 5.1/7.1/Atmos; DTS 5.1/7.1/DTS:X
Analog audio input:	
Number/ Signal Type	1 PC level stereo, unbalanced
Input Audio Port	1 x 3.5 mm stereo jack, 2 channels; tip (L), ring (R), sleeve (ground)
Signal Format	Analog
Impedance	>10k ohms, AC coupled
Nominal Level	-4.2 dBV (617 mVrms)

Output Audio	
Digital audio output:	
Output Audio Port	**HDMI loop-through: (local output)**

	1 x female HDMI type A (19 pins) **Ethernet output:** 1 x female RJ-45
Signal Format	**HDMI loop-through: (local output)** LPCM 2.0/2.1/5.1/ 7.1; Dolby 5.1/7.1/Atmos; DTS 5.1/7.1/DTS:X **Ethernet output:** Dolby 5.1/Dolby True HD/Dolby Digital Plus, DTS 5.1/DTS HD/DTS True HD, LPCM2.0/LPCM2.1/LPCM5.1/LPCM 7.1
Analog audio output:	
Number/ Signal Type	1 PC level stereo, unbalanced
Output Audio Port	1 x 3.5 mm stereo jack, 2 channels; tip (L), ring (R), sleeve (ground)
Signal Format	Analog
Impedance	>20 ohms, DC coupled
Nominal Level	-3.47 dBV (670 mVrms)

Control	
Control Method	1. Front panel link DIP switch 2. HDMI Console (HDMIoverIPConsole) 3. Aegis AGS-i TOUCH on iPad 4. Web GUI (AVP-CBS2K-101)

General	
Operating Temperature/ Humidity	0°C ~ +45°C (+32°F ~ +113°F) 10% ~ 90%, non-condensing
Storage Temperature/ Humidity	-20°C ~ +70°C (-4°F ~ +158°F) 10% ~ 90%, non-condensing
Power	12 VDC 1 A
Power Consumption	About 6 W (Powered via either PoE or a power adapter)
ESD Protection	Human body model: • ±8 kV (air-gap discharge) • ±4 kV (contact discharge)
Surge Protection	Voltage: ±1 kV
Group Pulse Protection	Voltage: ±2 kV
Case Dimensions (W x H x D)	310 mm x 76 mm x 180 mm (12.2" x 3.0" x 7.1")
Unit Dimensions (W x H x D)	220 mm x 25 mm x 130.2 mm (8.7" x 1.0" x 5.1")
Unit Weight (without accessories)	0.74 Kg (1.63 lbs.)

AVP-DE4K-101

Video	
Maximum HDMI Data Rate	8.91 Gbps (2.97 Gbps per channel)
Maximum Pixel Clock	297 MHz
Color Bit Depth	8 bits per channel
Formats	RGB and YCbCr digital video
Standards	HDMI 1.4, HDCP 2.2, VESA, CEA-861-F

Input Video	
Input Video Port	1 x female RJ-45
Input Video Type	IP stream
Input Video Resolutions	Up to 3840 x 2160@30Hz 4:4:4

Output Video	
Output Video Port	1 x female HDMI type A (19 pins)
Output Video Type	HDMI, HDCP
Output Video Resolutions	Up to 3840 x 2160@30Hz 4:4:4
End-to-End Time Latency	1 ~ 2 fps
Output Video Signal	0.5~1.2 V p-p
Output DDC Signal	5 V p-p (TTL)
Video Impendence	100 Ω

Audio (Analog Audio)	
Gain	Unbalanced output: 0 dB
Frequency Response	20 Hz to 20 kHz, ±1 dB
THD + Noise	-78 dBFS typical at -5.2 dBV input
SNR	> 85 dBFS at the input (A-weighted)
Stereo Channel Separation	> 80 dB
Digital Sampling Rate	48 kHz
Bit Depth	24 bits

Input Audio	
Digital audio input:	
Input Audio Port	1 x female RJ-45
Signal Format	LPCM 2.0/2.1/5.1/ 7.1; Dolby 5.1/7.1/Atmos; DTS 5.1/7.1/DTS:X

Output Audio	
Digital audio output:	
Output Audio Port	1 x female HDMI type A (19 pins)
Signal Format	LPCM 2.0/2.1/5.1/ 7.1; Dolby 5.1/7.1/Atmos;

Output Audio	
	DTS 5.1/7.1/DTS:X
Analog audio output:	
Number/ Signal Type	1 PC level stereo, unbalanced
Output Audio Port	1 x 3.5 mm stereo jack, 2 channels; tip (L), ring (R), sleeve (ground)
Signal Format	Analog **Note:** Only when PCM digital or analog signals are input into the encoder, this audio output port can output audio signals.
Impedance	>20 ohms, DC coupled
Nominal Level	-3.47 dBV (670mVrms)

Control	
Control Method	1. Front panel link DIP switch 2. HDMI Console (HDMIoverIPConsole) 3. Aegis AGS-i TOUCH on iPad 4. Web GUI (AVP-CBS2K-101)

General	
Operating Temperature	0°C ~ +45°C (+32°F ~ +113°F) 10% ~ 90%, non-condensing
Storage Temperature	-20°C ~ +70°C (-4°F ~ +158°F) 10% ~ 90%, non-condensing
Power	12 VDC 1 A
Power Consumption	4 W (Powered via either PoE or a power adapter)
ESD Protection	Human body model: • ±8 kV (air-gap discharge) • ±4 kV (contact discharge)
Surge Protection	Voltage: ±1 kV
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Case Dimensions (W x H x D)	310 mm x 76 mm x 180 mm (12.2" x 3.0" x 7.1")
Unit Dimensions (W x H x D)	220 mm x 25 mm x 130.2 mm (8.7" x 1.0" x 5.1")
Unit Weight (without accessories)	0.74 Kg (1.63 lbs.)

Panel Description

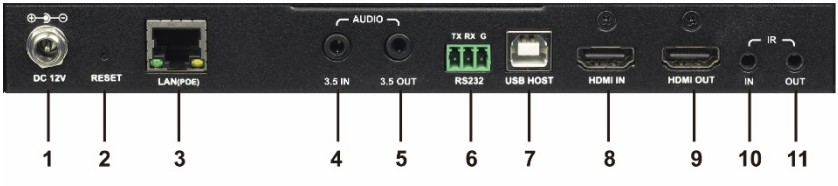
AVP-EN4K-101

Front Panel

No.	Name	Description	
1	POWER Indicator	On	AVP-EN4K-101 is powered on.
		Off	AVP-EN4K-101 is powered off.
2	STATUS Indicator	Solid On	AVP-EN4K-101 is connected to both an active video source and AVP-DE4K-101.
		Blinking	• AVP-EN4K-101 is disconnected from an active video source. • AVP-EN4K-101 is disconnected from AVP-DE4K-101.
		Off	• AVP-EN4K-101 is powered off. • AVP-EN4K-101 is in the boot process. • The network is down.
3	Working Mode Switch	**MODE:** use this switch to toggle between normal and debug modes.	
		NORMAL (Default)	In this mode, you can connect the rear panel RS232 port to a RS232 device such as a computer for bi-directional serial communication with a RS232 device on the IP controller side.
		DEBUG	In this mode, you can connect the rear panel RS232 port to a RS232

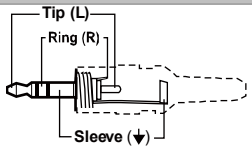
No.	Name	Description
		device such as a computer for debugging AVP-EN4K-101.
4	Link DIP Switch 	**DIP**: this DIP switch consists of four manual switches, which are used to route audio, video together with IR, and USB signals between AVP-EN4K-101 and AVP-DE4K-101 based on their positions. By default, each switch is in the up position. For more information, see "Using DIP Switch to Perform Routing". **Note:** For the DIP switches in both the encoder and decoder, changes to them take effect immediately without rebooting the system.

Rear Panel

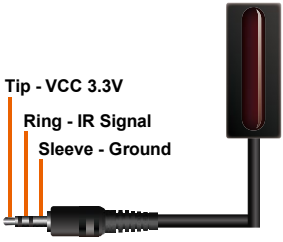
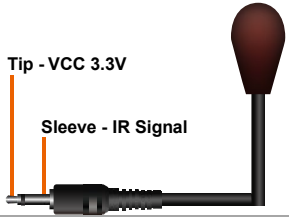


No.	Name	Description
1	Power Input	**DC 12V:** connect this port to the supplied 12 V 1 A power adapter.
2	Reset Button (Recessed)	**RESET:** use this button to reset the device. When AVP-EN4K-101 is powered on, use a pointed stylus to hold down the RESET button for five or more seconds, and then release it, it will reboot and restore to its factory defaults. **Note:** When the settings are restored, your custom data is lost. Therefore, exercise caution when using the RESET button.

<table>
<tr><th>No.</th><th>Name</th><th>Description</th></tr>
<tr><td rowspan="10">3</td><td rowspan="10">IP Stream Output</td><td colspan="2">LAN (POE): 10/100/1000 Base-T port, connect this port to a gigabit Ethernet switch for IP stream output, device control, and device management.</td></tr>
<tr><td colspan="2">Default protocol:</td></tr>
<tr><td>IP address:</td><td>169.254.x.x</td></tr>
<tr><td>Subnet mask:</td><td>255.255.0.0</td></tr>
<tr><td>DHCP:</td><td>Off</td></tr>
<tr><td>Auto-IP:</td><td>On (Default)</td></tr>
<tr><td>Link speed
and duplex level:</td><td>Auto-detected</td></tr>
<tr><td colspan="2">RJ-45 port LEDs:</td></tr>
<tr><td>  </td><td>Link LED (Left): Green LED lights indicate a good network connection.
Activity LED (Right): Yellow LED blinks to indicate network activity.</td></tr>
<tr><td colspan="2">Note:
For both the encoder and decoder,
• Each device can be powered by a PoE-enabled Ethernet switch via the RJ-45 port, eliminating the need for a nearby power outlet.
• Power supply via a power adapter has higher priority as compared to PoE power supply. When the device is connected to both the supplied power adapter and the PoE-enabled Ethernet switch, it receives power from the power adapter instead of the switch.</td></tr>
<tr><td>4</td><td>Audio Input</td><td colspan="2">AUDIO IN: connect this 3.5 mm stereo tip-ring-sleeve port to an audio input device such as a computer to accept unbalanced, stereo audio signals.</td></tr>
</table>

<table>
<tr><th>No.</th><th>Name</th><th colspan="2">Description</th></tr>
<tr><td rowspan="2"></td><td rowspan="2"></td><td>TRS Connector</td><td> 

Note:
This connector illustration applies to both analog audio input and output in AVP-EN4K-101 and AVP-DE4K-101</td></tr>
<tr><td colspan="2">Note:
When this audio port is connected to an audio input device, both the encoder and decoder will output the audio device's audio signals instead of that from the HDMI video source. If this audio port is connected via an audio cable but no audio signals are input, you can get pictures but no sound. The situations above do not apply to the HDMI loop-through port in the encoder, which can still output the AV signals from the video source.</td></tr>
<tr><td>5</td><td>Audio Output</td><td colspan="2">AUDIO OUT: connect this 3.5 mm stereo tip-ring-sleeve port to an audio output device such as a speaker and amplifier to output unbalanced, stereo audio signals.</td></tr>
<tr><td>6</td><td>Serial Communication</td><td colspan="2">RS232: use this port to perform bi-directional serial communication and device debug functions.
• When the front panel "MODE" switch is moved to the "NORMAL" position, connect this port to a RS232 device such as a computer to bi-directionally communicate with a RS232 device at the IP controller side.
• When the front panel "MODE" switch is toggled to the "DEBUG" position, connect this port to a RS232 device such as a computer for debugging AVP-EN4K-101.</td></tr>
<tr><td>7</td><td>USB Port for PC</td><td colspan="2">USB HOST: connect a type A male to a type B</td></tr>
</table>

No.	Name	Description
		male USB cable between this port and the USB port of a desktop or laptop. AVP-EN4K-101 is USB 2.0 compliant.
8	AV Input	**HDMI IN:** connect this port to an HDMI source device.
9	Local AV Output	**HDMI OUT:** connect this port to a local HDMI display device.
10	IR Input	**IR IN:** connect this 3.5 mm tip-ring-sleeve port to an IR receiver for IR communication with an IR emitter in the AVP-DE4K-101 side of the network.
		IR receiver:  **Note:** This IR cable illustration applies to the IR input ports in AVP-EN4K-101 and AVP-DE4K-101.
11	IR Output	**IR OUT:** connect this 3.5 mm tip-sleeve port to an IR emitter for IR communication with an IR receiver in the AVP-DE4K-101 side of the network.
		IR Emitter: 

No.	Name	Description
		Note: This IR cable illustration applies to the IR output ports in AVP-EN4K-101 and AVP-DE4K-101.

AVP-DE4K-101

Front Panel

No.	Name	Description	
1	POWER Indicator	On	AVP-DE4K-101 is powered on.
		Off	AVP-DE4K-101 is powered off.
2	STATUS Indicator	Solid On	AVP-DE4K-101 is connected to AVP-EN4K-101 and the video is displayed.
		Blinking	• AVP-DE4K-101 is disconnected from AVP-EN4K-101. • AVP-EN4K-101 is disconnected from an active video source.
		Off	• AVP-DE4K-101 is powered off. • AVP-DE4K-101 is in the boot process. • The network is down.
3	Working Mode Switch	NORMAL (Default)	In this mode, you can connect the rear panel RS232 port to a RS232 device such as a computer for bi-directional serial communication with a RS232 device on the IP controller side.
		DEBUG	In this mode, you can connect the rear panel RS232 port to a RS232

No.	Name	Description	
			device such as a computer for debugging AVP-DE4K-101.
4	Link DIP Switch 	**DIP**: this DIP switch consists of four manual switches, which are used to route audio, video together with IR, and USB signals between AVP-EN4K-101 and AVP-DE4K-101 based on their positions. By default, each switch is in the up position. For more information, see "Using DIP Switch to Perform Routing".	
5	USB Port for Peripherals	**USB DEVICE**: connect the two USB type A ports to a USB keyboard and mouse. The connections are USB 2.0 compatible, providing +5 VDC at up to 500 mA to connected USB peripherals. **Note:** • This device supports most standard keyboard keys and mouses, including standard 84/101/104 keyboard keys and most multimedia or system control keys. • Wired keyboards and mouses are recommended for optimal performance.	

Rear Panel

No.	Name	Description	
1	Power Input	**DC 12V:** connect this port to the supplied 12 V 1 A power adapter.	
2	Reset Button (Recessed)	**RESET:** use this button to reset the device or quickly remove the link relationship between the decoder and the encoder. • Device reset**:** When AVP-DE4K-101 is powered on, use a pointed stylus to hold down the RESET button for five or more seconds, and then release it, it will reboot and restore to its factory defaults. This function will disconnect the decoder from the encoder. **Note:** When the settings are restored, your custom data is lost. Therefore, exercise caution when using the RESET button. • Remove the decoder and encoder link relationship quickly: When the encoder is routed to the decoder using PC configurator, AGS-i TOUCH, or IP controller, hold down the RESET button for less than five seconds, and then release it, it reverts to the link relationship between the encoder and decoder set via the link DIP switch. This function applies to the decoder only.	
3	IP Stream Input	**LAN (POE):** 10/100/1000 Base-T port, connect this port to a gigabit Ethernet switch for IP stream input, device control, and device management.	
		Default protocol:	
		IP address:	169.254.x.x

No.	Name	Description	
		Subnet mask:	255.255.0.0
		DHCP:	Off
		Auto-IP:	On (Default)
		Link speed and duplex level:	Auto-detected
		RJ-45 port LEDs:	
			**Link LED (Left):** Green LED lights indicate a good network connection. **Activity LED (Right):** Yellow LED blinks to indicate network activity.
4	Audio Output	**AUDIO OUT:** connect this 3.5 mm stereo tip-ring-sleeve port to an audio output device such as a speaker and an amplifier to output unbalanced, stereo audio signals.	
5	Serial Communication	**RS232:** use this port to perform bi-directional serial communication and device debug functions. • When the front panel "MODE" switch is moved to the "NORMAL" position, connect this port to a RS232 device such as a computer to bi-directionally communicate with a RS232 device at the IP controller side. • When the front panel "MODE" switch is toggled to the "DEBUG" position, connect this port to a RS232 device such as a computer for debugging AVP-DE4K-101.	
6	AV Output	**HDMI OUT:** connect this port to an HDMI display device.	
7	IR Input	**IR IN:** connect this 3.5 mm tip-ring-sleeve port to an IR receiver for IR communication with an IR emitter in the AVP-EN4K-101 side of the network.	
8	IR Output	**IR OUT:** connect this 3.5 mm tip-sleeve port to an IR emitter for IR communication with an IR receiver in the AVP-EN4K-101 side of the	

No.	Name	Description
		network.

Warranty Terms and Conditions

For the following cases, Actions Distribution Limited shall charge for the service(s) claimed for the products if the product is still remediable and the warranty card becomes unenforceable or inapplicable.

1. The original serial number (specified by Actions Distribution Limited) labeled on the product has been removed, erased, replaced, defaced, or illegible.
2. The warranty has expired.
3. The defects are caused by the fact that the product is repaired, dismantled, or altered by anyone that is not from an Actions Distribution Limited authorized service partner. The defects are caused by the fact that the product is used or handled improperly, roughly, or not as instructed in the applicable User Guide.
4. The defects are caused by any force majeure including but not limited to accidents, fire, earthquake, lightning, tsunami, and war.
5. The service, configuration, and gifts are promised by the salesman only but are not covered by the normal contract.

Actions Distribution Limited reserves the right to interpretation of these cases above and to make changes to them at any time without notice.