KA261 AV OVER IP TRANSCEIVER WITH KVM AND RS-232 4K60HZ

Introduction

This 4K@60 H.264/H.265 transceiver is an All-In-One AV over IP solution that supports fiber and copper, and supports automatic switching between two options, the copper has a higher priority. This product provides highest-quality and ultra-low latency audio/video extension over a standard 1G Network Switch, and the transmission distance is up to 328ft/100m. It supports seamless switching, video wall, Multiview and KVM seat management functions. Flexible transceiver design (one box can be set to encoder or decoder) is much convenient in a real installation site and inventory control.

In encoder mode, it supports one HDMI 2.0 input and one HDMI loop out, with analog audio embedding/de-embedding function. In decoder mode, it supports one HDMI 2.0 decoding output, with analog audio de-embedding function. The encoder supports H.264 video preview stream.

The system is based on Linux for software development, providing flexible control methods. The best digital audio and video processing management solution is created using technologies such as audio and video processing, networking, visualization and centralized control, and full network distribution. It is committed to quickly establish a high-performance, reliable and easy-to-use visualization application platform for users. Based on distributed interconnection, a comprehensive visualization solution is built that integrates audio and video comprehensive management, matrix switching, splicing and fusion, window roaming, KVM collaborative management, POE power supply application.
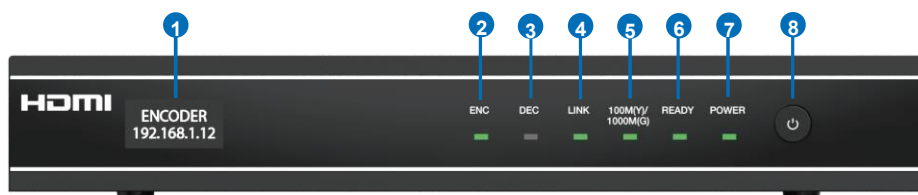
Features

- HDCP 2.2 compliant
- Support video resolution up to 4K60Hz (4:4:4), 18Gbps video bandwidth, as specified in HDMI 2.0b
- Audio formats support LPCM 2.0CH 48kHz
- Integrated design of encoder and decoder, supporting fiber and copper
- Support window roaming function: a unit as decoder can process up to 16 signals, enabling arbitrary windowing, roaming, overlaying, and splicing
- KVM seat management (one-to-one & one-to-many), supporting one person manages multiple PCs
- Universal H.264/265 protocol, supporting IPC access and seamless integration with security camera products
- Support high-definition background image (both video and picture are available), as well as multi-screen splicing display
- Support scrolling subtitles and character overlay
- Support point-to-point signal extension
- Support signal distribution, multicast mode, matrix and video wall functions over a 1G Network Switch
- Integrated central control function over RS-232, APP on portable devices available
- Support user rights management
- Flexible control via KVM, APP and Control Server (CTL500H or SVR9300AX2/AX3/AX5)
- Standard POE supported (802.3af Class 3, PD mode)
- Encoder supports HDMI local loop out
- Encoder supports audio embedding and de-embedding function
- Comprehensive visual interaction mode, signal source, large screen status, scene preview and environmental visualization control

Specifications

| Technical	
HDMI Compliance	HDMI 2.0b
HDCP Compliance	HDCP 2.2
Video Compression Standard	H.264/H.265
Video Bandwidth	18Gbps
Network Port	1000M Base-T (supporting POE)
Video Resolution	Up to 4K@60Hz 4:4:4 (Note: The decoder supports custom resolution output.)
Color Space	RGB 4:4:4, YCbCr 4:4:4/4:2:2/4:2:0
Color Depth	8/10/12bit
Encoding Sampling Rate	48KHz
HDMI Audio Formats	LPCM 2.0CH, 16bit, 48k
Analog Audio Formats	Left and right stereo analog audio
ESD Protection	IEC 61000-4-2: ±8kV (Air-gap discharge) & ±4kV (Contact discharge)
Connection	
Input	1x HDMI IN [Type A, 19-pin female] 1x AUDIO IN [3-pin phoenix connector, stereo balanced linear interface]
Output	1x HDMI OUT [Type A,19-pin female] 2x AUDIO OUT [3-pin phoenix connector, stereo balanced linear interface]
Control	1 x LAN (POE) [RJ45, supporting POE] 1 x RS-232 [3-pin phoenix connector] 1 x USB HOST [Type B, 4-pin female] 2 x USB DEVICE [Type A, 4-pin female] 1 x SFP [Fiber slot]
Mechanical	
Housing	Metal Enclosure
Color	Black
Dimensions	204mm [W] × 131.5mm [D] × 30mm [H]
Weight	760g
Power Supply	Input: AC 100 - 240V 50/60Hz Output: DC 12V/2.5A (US/EU standards, CE/FCC/UL certified)
Power Consumption	Encoder: 10.22W; Decoder: 7.04W
Operating Temperature	0°C ~ 40°C / 32°F ~ 104°F
Storage Temperature	-20°C ~ 60°C / -4°F ~ 140°F
Relative Humidity	20~90% RH (non-condensing)

Operation Controls and Functions

Front Panel

No.	Name	Function Description
1	OLED display screen	The name and IP address of the device will be displayed after the device is turned on. The screen will go off after 90 seconds.
2	ENC LED	When the device is in Encoder mode, the green ENC LED is on.
3	DEC LED	When the device is in Decoder mode, the green DEC LED is on.
4	LINK LED	When the network is connected normally, the green LINK LED flashes.
5	100M(Y)/ 1000M(G) LED	Network connection rate indicator: ▪ When the device is connected to a 100M network, the yellow indicator is on. ▪ When the device is connected to a 1000M network, the green indicator is on.
6	READY LED	▪ When the system is running normally and no fault occurs, the green LED is on. ▪ When the device is in standby mode, the green LED is on. ▪ When a fault occurs while the system is running, the green LED flashes at a frequency of 1Hz.
7	POWER LED	▪ When the device is working normally, the green POWER LED is on. ▪ When the device is in standby mode or powered off, the green POWER LED is off.
8	Power button	The power button supports power-off memory function. 1. When the device is working normally, power off and power on the device again, it will enter the system directly and work normally. 2. When the device is in standby mode, power off and power on the device again, it will enter the standby mode automatically. Then short press the power button to turn on the device. 3. When the device is working normally, short press the power button to view the current encoder/decoder mode and IP address on the OLED display screen; press and hold the power button for more than 2 seconds to turn off the device.

Rear Panel
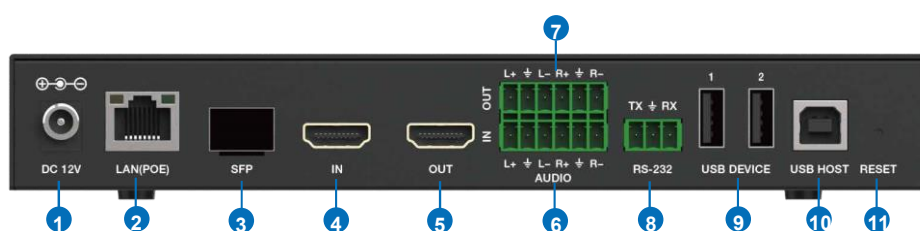
No.	Name	Function Description
1	DC 12V	DC 12V/2.5A power input port. Note: The device can be powered via two methods: ① Local DC 12V power supply ② POE from Network Switch. Device acts as PD mode. When the two power supply modes are used at the same time, the local DC 12V power supply is preferred.
2	LAN (POE) port	1G network port, connected to Switch for audio/video transmission. This port supports POE power supply.
3	SFP port	1G fiber port, connected to Switch for audio/video transmission.
4	IN port	HDMI signal input port, connected to HDMI signal source device such as PC or PS4 with HDMI cable.
5	OUT port	HDMI signal output port, connected to HDMI display device such as TV or monitor with HDMI cable.
6	AUDIO IN port	Stereo balanced line input port, connected to audio source device through 6pin-3.81mm phoenix connector.
7	AUDIO OUT port	Stereo balanced line output port, connected to audio playback device through 6pin-3.81mm phoenix connector.
8	RS-232 port	RS-232 serial port, relay RS-232 command transmission from the Control Server.
9	USB DEVICE	USB device ports, connected to keyboard and mouse in DEC mode.
10	USB HOST	USB Host port, connected to computer in ENC mode.
11	RESET button	System reset button. ▪ Long press this button for 5 seconds and reboot the device manually, the system will be restored to the factory default setting. ▪ Long press this button for 15 seconds, the software will be restored to the factory default version.

Application Example