

AVP 6K Series

4K HDMI over IP with KVM Encoder/Decoder/IP Controller

● Product Overview

aegis' 4K60 over IP series adopts JPEG2000 compression technology, encoder (AVP-EN6K-101), decoder (AVP-DE6K-101), IP controller (AVP-CBS2K-101) can provide a complete point-to-point video stream flow system. In the matrix system, audio and video streams, IR, USB, and RS232 are all transmitted over the network, and up to 16 x 16 displays are spliced into a video wall, and the highest resolution of 4K UHD (4K x 2K@60Hz) is supported. The system uses a 1Gbps switch and is powered by PoE. This solution can easily expand the system and maintain the flexibility of future planning. The encoder and decoder can perform basic matrix layout functions, such as adding an IP controller (AVP-CBS2K-101) can also control and arrange the TV wall and matrix wall from the Web GUI and iPad. 4K60 over IP provides a variety of control options, including RS232, IP controller (AVP-CBS2K-101), Windows software HDMIOverIPConsole (for system settings), and iPad application AGS-i TOUCH. According to the needs and budget control of the project, the required equipment and controllers can be purchased, so it also has very high control flexibility in terms of cost. In addition, the decoder supports CEC/RS232 control, which can directly control the power on and off of the display terminal or screen. Aegis' 4K60 over IP has become the best solution for many conference rooms, shopping malls, hotels, monitoring centers, schools, and corporate training environments.

● Features

Hardware

- Transmit HDMI/RS232/infrared/USB signals via IP network.
- The encoder supports up to 4K UHD (4K x 2K@60Hz 4:4:4) resolution Max. Bit Depth per Color is 8 bit.
- HDMI Maximum Data Rate is 18Gbps; the format is RGB and YCbCr Digital Video.
- The decoder supports automatic up/down frequency -- it can output the video resolution suitable for the display according to the EDID of the display. The resolution supports the range from 480p@60Hz to 4K x 2K@60Hz.
- Provided two IP streams output.
- One mainstream is output to the decoder, supporting resolutions ranging from 480p@60Hz to 4K x 2K@60Hz.
- Another stream can be output to a third-party device for preview, supporting a resolution of 360 x 240@15Hz.
- Provide one RJ-45 port and one SFP optical fiber port.
- Provide S/PDIF digital audio port.
- Support up to 16 x 16 monitors to form a video wall.
- Provide API commands to facilitate the integration and management of third-party control systems, and support IP controller (AVP-CBS2K-101), PC setting software (HDMIoverIPConsole), and the application program AGS-i TOUCH on iPad and other control methods.
- Support RS232.
- Support IR function.
- Support USB 2.0 pass-through function from the decoder to the encoder (keyboard/mouse/touch screen only).



- Support cross-host roaming of the mouse pointer through the KVM function in special matrix mode. (see Mouse roaming settings for details)
- Support Audio(Analog Audio).
- Support both unicast and multicast modes (in unicast mode no need to configure the network switch).
- The encoder supports EDID import, and the decoder supports EDID export (EDID is transmitted from the display to the decoder).
- Support to control display terminal standby/power switch via CEC.
- When the signal source is not detected, the decoder can be controlled to turn off the output through the API.
- The decoder can receive the CEC command from the display terminal and report it to the IP controller.
- Support HDMI 2.0; HDCP 2.2/2.3; VESA; CEA-861F.
- Encoder average data rate 3840 x 2160@60Hz: about 650 Mbps.
- Support seamless switching.
- Support cross-host roaming of the mouse pointer through the KVM function in special matrix mode.
- Support Maintain Tool software update.
- Support PoE power supply function.
- Support Auto IP (zero configuration) – this product can automatically generate an IP address without connecting to a DHCP server.
- Support HTTP, TCP/IP, Telnet, UDP, IGMP, and other communication protocols.
- Support partition TV wall group management.
- Support heterogeneous splicing function.
- Fanless design.
- Support stand-alone RESET to restore the default value function, without affecting the operation of the whole area.

Management(IP Controller)



- IP control via LAN (Web GUI and Telnet) and third-party controllers.
- Two Ethernet ports and two RS232 ports.
- Auto-detect encoder and decoder.
- Support matrix switching between encoder and decoder.
- Compatible with the setting files in the PC setting tool, which can quickly perform operations on encoders and decoders such as matrix and video wall.
- Web configuration page.



Product Specifications

Product Number		AVP-CBS2K-101
Product Name		IP Controller
Product Image		
Technical	I/O Connections	1 x LAN1 (AV/PoE)(10/100Mbps) 1 x LAN2 (C)(10/100Mbps) 2 x RS232
	LED	1 x STATUS LED 1 x POWER LED
	Button	1 x RESET Button
	Control Method	LAN (Web GUI & Telnet), RS232 and a third-party controller
General	Power Supply	12 VDC 1A
	Power Consumption	4.5W Max. (without outputting 12 V 0.5 A using RS232port) 10.5W Mas. (with outputting 12 V 0.5 A using RS232 port)
	Surge Protection	Voltage: ±1kV
	ESD Protection	Human body model: ±8kV (air-gap discharge) / ±4kV (contact discharge)
Physical	Product Dimension	(L) 3.67" X (W) 1.02" X (H) 5.4" (93.2mm X 26mm X 138.7mm)
	Product Weight	0.38kg/0.84lbs (without accessories)
Environmental	Operation Temperature	32°F - 113°F (0°C - 45°C)
	Storage Temperature	-4°F - 140°F (20°C - 70°C)
	Humidity	20% - 90% (Non-Condensing)



Product Model		AVP-EN6K-101	AVP-DE6K-101
Product Name		4K over IP Encoder	4K over IP Decoder
Product Image			
Video	Input Port	1 x HDMI	1 x LAN, 1 x Optical
	Input Type	HDMI 2.0, HDCP 2.2/2.3	JPEG2000
	Input Resolutions	From 480p@60Hz to 4K x 2K@60Hz	From 480p@60Hz to 4K x 2K@60Hz
	Input Signal	0.5~1.0V p-p	0.5~1.0V p-p
	Output Port	1 x LAN, 1 x Optical	1 x HDMI
	Output Type	JPEG2000	HDMI 2.0, HDCP 2.2/2.3
	Output Resolution	*Large IP stream: from 480p@60Hz to 4K x 2K@60Hz *Small IP stream: 360x240@15Hz	from 480p@60Hz to 4K x 2K@60Hz
	Local Output	1 X HDMI Up to 3840 x 2160@60Hz 4:4:4	
	Encoding Data Rate (TCP/IP throughput)	3840 x 2160@60Hz: 650Mbps (avg) / 900Mbps (max)	
	End-to-End Time Latency	1 fps	1 fps
Audio	Impedance	100Ω	100Ω
	Input DDC Signal	5V p-p(TTL)	5V p-p(TTL)
	Input Port	1 x HDMI	1 x LAN, 1 x Optical, 1 x S/PDIF In
	Input Format	PCM 2.0/5.1/ 7.1 Dolby True HD/Atmos DTS-HD Master Audio/DTS:X	S/PDIF In: digital audio PCM 2.0/5.1/ 7.1 Dolby True HD/Atmos DTS-HD Master Audio/DTS:X
	Analog audio input	1 x 3.5 mm stereo jack, 2 channel; tip (L), ring (R), sleeve (ground)	
	Output Port	1 x LAN, 1 x Optical, 1 x S/PDIF Out	1 x HDMI
	Output Format	S/PDIF Out: digital audio PCM 2.0/5.1/ 7.1 Dolby True HD/Atmos DTS-HD Master Audio/DTS:X	PCM 2.0/5.1/ 7.1 Dolby True HD/Atmos DTS-HD Master Audio/DTS:X
KVM	Analog audio output	1 x 3.5 mm stereo jack, 2 channels; tip (L), ring (R), sleeve (ground)	1 x 3.5 mm stereo jack, 2 channel; tip (L), ring (R), sleeve (ground)
	Port	USB Host-B type x 1	USB A type x 2 ; support 5V output
General	Control Method	AVP-CBS2K-101, HDMI over IP Console (PC Configuration Software), AGS-iTOUCH (iPad software)	AVP-CBS2K-101, HDMI over IP Console (PC Configuration Software), AGS-iTOUCH (iPad software)
	ESD Protection	Human body model: ±8kV (air-gap discharge) ±4kV (contact discharge)	Human body model: ±8kV (air-gap discharge) ±4kV (contact discharge)
	Surge Protection	Voltage: ±1kV	Voltage: ±1kV
	Power Supply	12 V 1A DC	12 V 1A DC
	Power Consumption	7W (Max.)	8.5W (Max.)
Physical	Product Dimension	220mm X 130.2mm X 25mm (L) 8.7" X (W) 5.1" X (H) 1.0"	220mm X 130.2mm X 25mm (L) 8.7" X (W) 5.1" X (H) 1.0"
	Product Weight	0.74kg / 1.63lbs	0.74kg / 1.63lbs
Environmental	Operation Temperature	0°C - 45°C (+32°F ~ - 113°F)	0°C - 45°C (+32°F ~ - 113°F)
	Storage Temperature	-20°C - 70°C (-4°F ~ - 140°F)	-20°C - 70°C (-4°F ~ - 140°F)
	Humidity	10% - 90% (non-condensing)	10% - 90% (non-condensing)

