AVP 4K Series

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

● Product Overview

aegis' AVP 4K Series includes JPEG2000 encoder (AVP-EN4K-101), decoder (AVP-DE4K-101), IP controller (AVP-CBS2K-101) to provide a complete peer-to-peer streaming system. In the matrix system, audio and video streams, IR, USB, and RS232 are all transmitted through the network, and the size of the video wall can be spliced up to 16 x 16 monitors, with a maximum resolution of 4K x 2K@30Hz. The system uses a 1G switch with a PoE power supply. This solution can easily expand the system with the flexibility of future planning. The encoder and decoder can perform basic matrix layouts, such as adding an IP controller (AVP-CBS2K-101) can also control and arrange the TV wall and matrix wall from the Web and iPad. AVP 4K Series provides a variety of control options, including RS232, IP controller (AVP-CBS2K-101), Windows software HDMIOverIPConsole (for system settings), and iPad application AGS-iTouch. According to the needs and budget control of the project, the required equipment and controllers can be purchased, so it also has the flexibility of cost control. In addition, the decoder supports CEC/RS232 control, which can directly control the power on and off of the display terminal or screen. aegis' AVP 4K Series has become the best solution for many conference rooms, shopping malls, hotels, monitoring centers, schools, and corporate training environments.

● Features

Hardware

- Transmit HDMI/RS232/far infrared/USB signals via IP network.
- The encoder supports up to 4K x 2K@30Hz 4:4:4 or 4K x 2K@60Hz 4:2:0 resolution, Max. Bit Depth per Color is 8 bit.
- Maximum Data Rate is 8.91 Gbps; the format is RGB and YCbCr Digital Video.
- The decoder supports automatic up/down frequency -- it can output and adapt the video resolution of the display according to the EDID of the display, and the resolution supports a range from 480p@60Hz to 4K x 2K@30Hz.
- Can output two IP streams.
- One mainstream is output to the decoder, supporting resolutions ranging from 480p@60Hz to 4K x 2K@30Hz.
- Another stream can be output to a third-party device for preview, supporting a resolution of 360 x 240@15Hz.
- Support video walls up to 16 x 16.
- Provide an API port to facilitate the integration and management of third-party control systems, and support IP controller (AVP-CBS2K-101), PC configurator (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 Audio(Analog Audio).
- Support two modes of unicast and multicast (in unicast mode, there is 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 1.4; HDCP 2.2; VESA; CEA-861F.
- Encoder average data rate 3840 x 2160@30Hz: about 250 Mbps,
  1080p@60Hz: about 150 Mbps.
- 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.
- Support cross-host roaming of the mouse pointer through the KVM function in special matrix mode. (see Mouse roaming settings for details)
- 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 or Telnet) or third-party controllers.
- Two Ethernet ports and two RS232 ports.
- Auto-detect encoder and decoder.
- Support matrix switching between encoder and decoder.
- Compatible with configuration files in HDMIOverIPConsole for fast execution on encoders and decoders such as matrix and video walls.
- 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℉ - 113℉ (0℃ - 45℃)	
	Storage Temperature	-4℉ - 140℉ (20℃ - 70℃	
	Humidity	20% - 90% (Non-Condensing)	

Product Model	AVP-EN4K-101	AVP-DE4K-101
Product Name	AVP 4K Series Encoder	AVP 4K Series Decoder
Product Image		

		AVP-EN4K-101	AVP-DE4K-101
Video	Input Port	1 x HDMI	1 x LAN
	Input Type	HDMI 1.4, HDCP 2.2	JPEG2000
	Input Resolutions	From 480p@60Hz to 4K x 2K@30Hz	From 480p@60Hz to 4K x 2K@30Hz
	Input Signal	0.5~1.0V p-p	
	Output Port	1 x LAN	1 x HDMI
	Output Type	JPEG2000	HDMI 1.4, HDCP 2.2
	Output Resolution	*Large IP stream: from 480p@60Hz to 4K x 2K@30Hz *Small IP stream: 360x240@15Hz	from 480p@60Hz to 4K x 2K@30Hz
	Local Output	1 X HDMI Up to 3840 x 2160@60Hz 4:2:0	
	Encoding Data Rate	*Large IP stream: Up to 250 Mbps, configurable *Small IP stream: 512 Kbps by default, configurable	
	End-to-End Time Latency	1~2fps	1~2fps
	Impendence	100Ω	100Ω
	Input DDC Signal	5V p-p(TTL)	5V p-p(TTL)
Audio	Input Port	1 x HDMI	1 x LAN
	Input Format	LPCM 2.0/2.1/5.1/ 7.1 Dolby 5.1/7.1/Atmos DTS 5.1/7.1/DTS:X	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	1 x 3.5 mm stereo jack, 2 channel; tip (L), ring (R), sleeve (ground)	
	Output Port	1 x LAN	1 x HDMI
	Output Format	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	LPCM 2.0/2.1/5.1/ 7.1 Dolby 5.1/7.1/Atmos DTS 5.1/7.1/DTS:X
	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 channels; tip (L), ring (R), sleeve (ground)
KVM	Port	USB Host-B type x 1	USB A type x 2 ; support 5V output
General	Control Method	Front panel DIP switch IP Control Box, PC configurator (HDMI over IP Console), iPad software	Front panel DIP switch IP Control Box, PC configurator (HDMI over IP Console), 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 Power Supply	Voltage: ±1kV 12 V 1A DC	Voltage: ±1kV 12 V 1A DC
	Power Consumption	6W (Max.)	4W (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℃ - 45℃ (+32℉~ - 113℉)	0℃ - 45℃ (32℉ - 113℉)
	Storage Temperature	-20℃ - 70℃ (-4℉~ - 140℉)	-20℃ - 70℃ (-4℉ - 140℉)
	Humidity	10% - 90% (Non-Condensing)	10% - 90% (Non-Condensing)