

SC-ENC01E-A-S-V2

AV OVER IP / Encoder

Model Number:#2508262003



Features

- Real-time H.265 and H.264 Full HD video encoding
- HDMI 1.3 and HDCP 1.4 compliant
- Supports input resolutions up to 1920×1200@60Hz with 4:4:4 color sampling
- Supports video bandwidth up to 4.95Gbps
- Simultaneous triple-stream output:
- Main stream: H.265 up to 1080p@60Hz
- Secondary stream: H.264 up to 540p@30Hz
- Preview stream: JPEG up to 1280×720@5fps
- Supports RTSP over UDP or TCP
- Supports RTP/UDP, TS/UDP, RTMP and RTMPS streaming
- Supports unicast and multicast transmission
- Configurable bitrate, resolution, frame rate and EDID
- Stream playback controls, including play, pause and stop
- Audio-only streaming and configurable audio delay
- Supports LPCM 2.0CH at 48kHz
- HDMI loop-out for local monitoring
- Analog audio embedding and de-embedding
- Image preview through the management interface
- Supports point-to-point extension and one-to-many signal distribution
- API integration through Telnet, SSH or TCP socket connections
- RS-232 API command control
- HTTP and HTTPS Web GUI management
- Device discovery with “Show Me” identification
- IEEE 802.1X network authentication
- 100Mbps/Gigabit Ethernet connectivity
- IEEE 802.3af PoE powered-device support
- Front-panel numeric LED display with Up/Down control buttons
- Compatible with 4TheWall 1U and 6U V2 rack-mount systems

Product Overview

The **4TheWall 4×4 HDMI and CAT6 Matrix** is a professional AV distribution solution designed to route four HDMI sources independently to four output channels. Each output channel provides one local HDMI output and one mirrored CAT6 output, allowing the selected source to be displayed simultaneously on a local and remotely located display.

With four HDMI and four mirrored CAT6 outputs, the matrix can feed up to eight display endpoints.

The HDMI and corresponding CAT6 output on each channel always display the same selected source, while each of the four output channels can be independently assigned to any connected input.

The matrix supports resolutions up to 4K@60Hz with YCbCr 4:4:4 color sampling and provides up to 18Gbps of uncompressed HDMI video bandwidth. Advanced HDR formats, including HDR10, HDR10+, Dolby Vision and HLG, are supported to preserve the brightness, contrast and color performance of compatible content.

Each output channel includes an independent 4K-to-1080p downscaler. This allows a 4K source to be displayed simultaneously on both 4K and 1080p displays without changing the source resolution for the entire system.

When used with a compatible CAT receiver, each CAT6 output can extend HDMI video and audio signals up to 70m / 230ft over a single CAT6 cable. Integrated 12V PoC supplies power to compatible receivers through the same CAT cable, eliminating the need for a separate power adapter at the display location.

Advanced EDID management improves compatibility between connected sources and displays.

One-way IR matrix routing enables control signals to be directed to the appropriate source device.

The system can be operated through front-panel buttons, the supplied IR remote, RS-232, LAN or a browser-based Web GUI.

- **Four-Source Matrix Routing:** Routes any of four HDMI inputs independently to any of four output channels.
- **Eight Physical Display Connections:** Provides four HDMI and four mirrored CAT6 outputs for connection to up to eight display endpoints.
- **Mirrored HDMI and CAT6 Outputs:** Each local HDMI output is paired with a CAT6 output that simultaneously displays the same selected source.
- **4K@60Hz 4:4:4 Video:** Delivers Ultra HD video with full color information for clear details and accurate color reproduction.
- **18Gbps Video Bandwidth:** Supports uncompressed HDMI 2.0-class video signals up to 4K@60Hz with 4:4:4 color sampling.
- **Independent Output Downscaling:** Converts 4K content to 1080p separately on each output channel for mixed-resolution display installations.
- **70m CAT6 Extension:** Extends HDMI video and audio signals up to 70m / 230ft over a single CAT6 cable using compatible receivers.
- **12V PoC:** Powers compatible CAT receivers through the CAT6 cable, simplifying installation at remote display locations.
- **Advanced HDR Support:** Passes HDR, HDR10, HDR10+, Dolby Vision and HLG content between compatible source and display devices.
- **HD Audio Support:** Passes LPCM 7.1CH, Dolby TrueHD, Dolby Digital Plus and DTS-HD Master Audio formats.
- **Advanced EDID Management:** Helps optimize resolution and audio compatibility across systems containing different source and display devices.
- **CEC Support:** Passes compatible HDMI CEC commands between connected equipment.
- **One-Way IR Matrix Routing:** Routes IR control signals from remote display locations to the appropriate HDMI source device.
- **Flexible System Control:** Supports operation through front-panel buttons, IR remote, RS-232, LAN and Web GUI.



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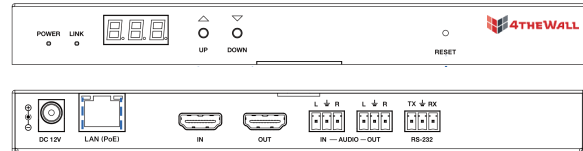
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Technical Specifications

Input and Output	
Inputs & Outputs	1 x HDMI1.3 input, 1 x HDMI1.3 loopback output Max support 1920x1080P@60Hz, 1 x Stereo audio In (3.5 mm) input and output
Inputs Resolution	Up to 1920x1080@60Hz 4:4:4
Outputs Resolution	Push stream resolution: Same as input, 3840x2160, 1920x1080, 1280x720, 640x480 Push stream frame rate: 5~60Hz
Network	1x LAN (POE) (RJ45 connector), Gigabit
General Features	
Video Bandwith	4.95Gbps
Color Space	RGB 4:4:4, YCbCr 4:4:4, YCbCr 4:2:2 Push stream encoding: 4:2:0
Video Compression Standart	H.265/H.264 - 0.1 to 32 Mbps bitrate and 5 to 60 Fps support - VBR or CBR HTTP / HLS / FLV / RTSP / RTMP(S) / UDP/RTP (Unicast/Multicast) ONVIF
Color	8/10/12bit (HDMI Input) 8 bit Push Stream Output
Audio Formats	LPCM 2CH 48KHz
L/R Out Audio Parameters	Output Impedance: 330 Ohms Line Input / Output Level (Maximum): 2Vrms Frequency Response: (+0.5dB, -1dB) 20Hz to 20kHz Audio S/N Ratio: >90dB@2Vrms, 1kHzA-weighted Audio THD+N: <0.05%@2Vrms, 1KHz
Transmission Distance	100m (CAT5E/6/6A/7)
Management Features	
Management and Control	TCP/IP, Web GUI, RS232 with API
Others	
Power Connection	AC100 - 240V 50/60Hz, DC 12V/1A
Working Temperature	32 - 104°F / 0 - 40°C
Humidity Range	20 - 90% RH (no condensation)
Storage Temperature	-4 - 140°F / -20 - 60°C
Dimensions	204mm × 95mm × 21.5mm - Width/Depth/Height, Metal Enclosure
Weight	475 gr
Power Value/Consumption	3.36W (Max.)
Mounting	Desktop Metal - Black, Optional Rack Kit
ESD Protection	IEC 61000-4-2: ± 15kV (Air-gap discharge) & ± 8kV (Contact discharge)
Certifications	
EU/USA	CE/FCC/UL
Package Details	
Package Contents	1 x 1080P60 AV Encoder 3 x 3pin-3.81mm Phoenix Connector (male) 1 x 12V/1A Locking Power Adapter 2 x Mounting Ear 4 x Machine Screw (KM3*4) 1 x User Manual