

SC-ENC01E-A-S-V2-4K

AV OVER IP / Encoder

Model Number:#2508262033



Features

- Real-time H.265/HEVC and H.264 Ultra HD video encoding
- HDMI 2.0b compatible
- Supports input resolutions up to 3840×2160@60Hz with 4:4:4 color sampling
- Supports video bandwidth up to 18Gbps
- Simultaneous triple-stream output:
- Main stream: H.265 or H.264 up to 4K@60Hz
- Secondary stream: H.264 up to 1080p@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 controls including play, pause and stop
- Audio-only streaming and configurable audio delay
- Supports LPCM 2.0CH audio at 48kHz
- HDMI loop-out for local 4K monitoring
- Analog audio embedding and de-embedding
- Image preview through the management interface
- Supports point-to-point extension and one-to-many signal distribution
- Third-party API integration through Telnet, SSH or TCP socket connections
- 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 OLED status display
- Compatible with 4TheWall 1U and 6U V2 rack-mount systems

Product Overview

The 4TheWall 4K H.265/H.264 AV Streamer is an Ultra HD encoder that distributes 4K HDMI video and audio across 100Mbps or Gigabit Ethernet using bandwidth optimizing H.265/HEVC and H.264 compression. It accepts inputs up to 3840×2160@60Hz with 4:4:4 sampling and 18Gbps bandwidth, outputting three simultaneous streams: a main stream up to 4K@60Hz (H.265/H.264), a secondary stream up to 1080p@30Hz (H.264), and a JPEG preview stream up to 1280×720@5fps. It supports unicast and multicast transmission across RTSP, RTP, MPEG TS, RTMP, and RTMPS protocols for point to point or one to many delivery to decoders, servers, recording platforms, and streaming services. Key hardware and AV features include an HDMI loop out for local monitoring, analog audio embedding and de embedding, audio only streaming, and configurable audio delay. Device control and monitoring are handled via an HTTP/HTTPS Web GUI, third party API integration (Telnet, SSH, TCP socket), and a front panel OLED display. The unit is powered via IEEE 802.3af PoE and includes IEEE 802.1X authentication for secure network deployment.

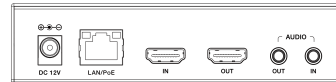
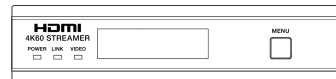
- **4K@60Hz 4:4:4 Input:** Accepts Ultra HD HDMI signals with full color information for detailed images and accurate color reproduction.
- **Simultaneous Triple Streaming:** Generates 4K H.265/H.264, Full HD H.264 and JPEG preview streams at the same time.
- **4K Main Stream:** Delivers the primary H.265 or H.264 stream at resolutions up to 3840×2160@60Hz.
- **Full HD Secondary Stream:** Generates an H.264 stream at up to 1080p@30Hz for remote viewing and lower-bandwidth destinations.
- **JPEG Preview Stream:** Provides images up to 1280×720 at 5fps for source thumbnails, control interfaces and system monitoring.
- **Configurable Encoding Parameters:** Allows bitrate, resolution and frame rate to be adjusted for different network conditions and application requirements.
- **Multiple Streaming Protocols:** Supports RTSP/UDP, RTSP/TCP, RTP/UDP, TS/UDP, RTMP and secure RTMPS.
- **Unicast and Multicast:** Enables direct point-to-point streaming or efficient one-to-many network distribution.
- **Stream Control:** Supports play, pause and stop commands for flexible stream management.
- **HDMI Loop-Out:** Provides a local HDMI output for real-time source monitoring.
- **Analog Audio Embedding:** Inserts an external analog audio signal into the encoded AV stream.
- **Analog Audio De-Embedding:** Extracts audio from the HDMI input for connection to an external audio system.
- **Audio-Only Streaming:** Allows audio to be streamed independently when video transmission is not required.
- **Audio Delay Adjustment:** Helps maintain synchronization between audio and video signal paths.
- **Advanced EDID Configuration:** Helps optimize compatibility between the connected HDMI source and the encoder.
- **Secure Web Management:** Provides configuration, monitoring and preview functions through HTTP or HTTPS.
- **IEEE 802.1X Support:** Enables authenticated access to managed corporate and secure professional networks.
- **OLED Status Display:** Shows essential device, stream and network information directly on the front panel.
- **Rack-Mount Compatibility:** Supports installation in compatible 4TheWall 1U and 6U V2 rack systems.



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Technical Specifications

Input and Output	
Inputs & Outputs	1 x HDMI2.0b input, 1 x HDMI2.0b loopback output Max support 4K@60Hz, 1 x Stereo audio In (3.5 mm) input and output
Inputs Resolution	Up to 4K@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 Bandwidth	18Gbps
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	130mm × 160mm × 30mm - Width/Depth/Height, Metal Enclosure
Weight	659 gr
Power Value/Consumption	7.2W (Max.)
Mounting	Desktop Aluminum+Iron - 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