

SC-IPKVM01E-TX

AV OVER IP / IPKVM

Model Number:#130920231421



Features

- HDMI 1.3 and HDCP 1.4 compliant
- Supports resolutions up to 1920×1200@60Hz with 4:4:4 color sampling
- Supports video bandwidth up to 4.95Gbps
- Configurable H.265 and H.264 video compression
- Extends signals up to 100m / 328ft per network link over CAT5e/6/6A/7 cable
- Supports point-to-point signal extension
- Supports one-to-many signal distribution and multicast
- Supports distributed matrix switching over a Gigabit Ethernet network
- Supports video wall configurations up to 9×9
- Intelligent video wall management for flexible screen layouts
- Encoder provides a local HDMI loop output
- Supports main-stream and sub-stream encoding
- Supports LPCM 2.0CH audio at 32, 44.1 and 48kHz
- Analog audio embedding and de-embedding
- USB/KVM extension in one-to-one and one-to-many configurations
- Bi-directional IR and RS-232 pass-through
- RS-232 Guest Mode for external device control
- Standalone matrix switching using local IR or RS-232 without a controller
- Stream parameters configurable through Web GUI or Controller Box
- Controlled via IR, RS-232, TCP/IP, Web GUI or Controller Box
- IEEE 802.3af Class 3 PoE powered-device support
- Smart network-based architecture for flexible and scalable installation

Product Overview

The **4TheWall H.265/H.264 Full HD AV over IP System** is a flexible network-based solution designed to distribute multiple high-definition video, audio, USB/KVM and control signals to multiple displays over standard 100Mbps or Gigabit Ethernet infrastructure. Using configurable H.265/H.264 compression, the system delivers high-quality video while reducing network bandwidth requirements. It supports source resolutions up to 1920×1200@60Hz with 4:4:4 color sampling, making it suitable for Full HD video and professional computer-based content.

The system supports point-to-point extension, one-to-many distribution, multicast, distributed matrix switching and video wall applications. When connected through a managed Gigabit Ethernet switch, compatible encoders and decoders can be configured as a scalable AV matrix, allowing sources to be routed to selected displays across the network.

Video wall configurations up to 9×9 are supported, together with intelligent layout management for flexible screen arrangements. System expansion can be achieved by adding compatible encoders and decoders without replacing the core infrastructure. Each network link can extend signals up to 100m / 328ft over CAT5e/6/6A/7 cable. For larger systems, standard Ethernet network infrastructure can be used to distribute signals across multiple locations. The encoder features a local HDMI loop output for real-time monitoring of the connected source. Analog audio embedding and de-embedding provide flexible integration with external audio sources, amplifiers and sound systems. Integrated USB/KVM functionality enables remote access to connected computers in both one-to-one and one-to-many configurations. Bi-directional IR and RS-232 pass-through allow source and display equipment to be controlled remotely. RS-232 Guest Mode provides an additional communication channel for controlling compatible external devices. The system can operate with or without a dedicated controller. In standalone installations, matrix switching can be performed using local IR or RS-232 commands. Larger systems can be centrally configured and managed through a Web GUI or a compatible 4TheWall Controller Box.

Key Capabilities

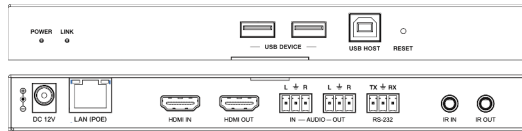
- **H.265/H.264 Compression:** Provides configurable high-quality video encoding while optimizing network bandwidth.
- **Up to 1920×1200@60Hz 4:4:4:** Supports Full HD and professional computer resolutions with full color information.
- **100m Signal Extension:** Extends AV, KVM and control signals up to 100m / 328ft per Ethernet link over CAT5e/6/6A/7 cable.
- **Point-to-Point Extension:** Connects one encoder directly or through a network switch to one decoder for basic signal extension.
- **One-to-Many Distribution:** Distributes a single source to multiple displays using compatible decoders.
- **Multicast Transmission:** Efficiently delivers AV streams to multiple network destinations without duplicating the source bandwidth for every receiver.
- **Distributed Matrix Switching:** Routes multiple sources independently to multiple displays through standard Gigabit Ethernet infrastructure.
- **Video Wall Support:** Creates video wall systems with configurations up to 9×9 using compatible decoders.
- **Flexible Video Wall Layouts:** Intelligent management tools enable content placement and configurable screen arrangements.
- **Main and Sub-Stream Encoding:** Generates streams optimized for primary distribution and lower-bandwidth monitoring applications.
- **HDMI Loop-Out:** Provides a local HDMI output on the encoder for real-time source monitoring.
- **USB/KVM Extension:** Enables remote keyboard and mouse control of connected computers in one-to-one or one-to-many configurations.
- **Audio Embedding:** Inserts an external analog audio source into the transmitted AV stream.
- **Audio De-Embedding:** Extracts transmitted audio for connection to an external amplifier or audio system.
- **Bi-Directional IR Control:** Transfers infrared commands between source and display locations.
- **Bi-Directional RS-232:** Passes serial control commands in both directions for professional AV control and automation.



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Technical Specifications

Input and Output	
Inputs & Outputs	1 x HDMI1.3 IN with HDCP1.4, 1 x HDMI1.3 OUT (Loop) 1 x AUDIO IN [3-pin phoenix connector], 1 x AUDIO OUT [3-pin phoenix connector] 1 x IR IN [3.5mm audio jack, 12V IR], 1 x IR OUT [3.5mm audio jack, 12V IR] - Wideband 20K - 60 KHz, 12Vp-p 1 x USB Host [Type B, 4-pin female] 2 x USB Devices [Type A, 4-pin female]
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 Bandwidth	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 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
L/R Out Audio Parameters	
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	14 - 113°F / -10 - 45°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	470 gr
Power Value/Consumption	3.48W (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 1080p@60 over IP 100M/1GbE TX 3 x 3pin-3.81mm Phoenix Connector (male) 1 x IR Blaster Cable (1.5 meters) 1 x IR Receiver Cable (1.5 meters) 1 x 12V/1A Locking Power Adapter 2 x Mounting Ear 4 x Machine Screw (KM3*4) 1 x User Manual