SECURA™

SECURA KVM

keyboard, video, mouse - usb

AES 256 ENCRYPTION
SMPTE ST 2110 IP
4K HDMI 2.0
JPEG 2000

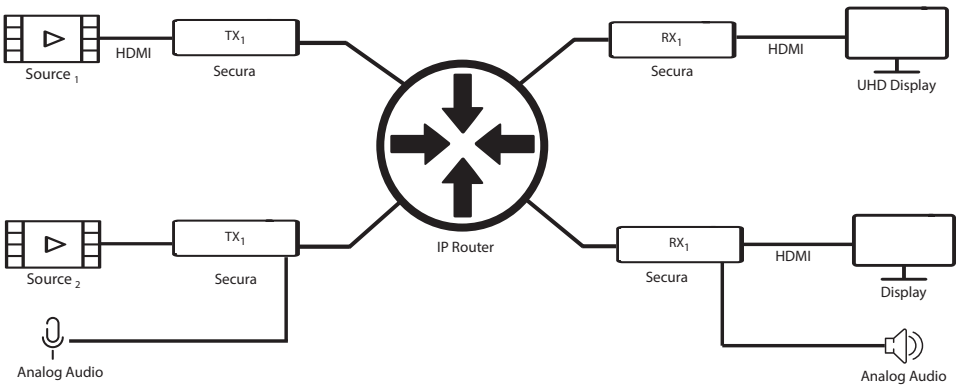
Secura KVM delivers KVM control for facilities hosting restricted content to tightly define and construct security based on Ethernet distribution KVM. Organizations can now ensure only authorized users can receive AES 256 encrypted audio and video signals according to designated security domains using the latest in KVM technologies. Secura KVM is perfect for Military, Government, Corporate or other sensitive environments such as healthcare organizations and educational environments. Where there is a need for KVM, PESA offers Secura KVM.

Providing ultimate flexibility, Secura KVM can be configured as either a transmitter or receiver through Secura Control software. Secura KVM transports HDMI 1.4 (HD) or HDMI 2.0 (4K) signals over Ethernet fabric using Single or Multi-Mode fiber at resolutions of up to 4K (3860 x 2140 @60fps). It can also operate on Ethernet fabric using Common Off-the-Shelf (COTS) 1 Gb/S switches.

Using JPEG 2000 or VC-2 light compression Secura KVM achieves latency less than 25 mS (about a half frame of video) and still fits within 1 Gb/S. Secura IP utilizes SMPTE ST 2110 as a standards-based IP method to organize separate audio, video and metadata Real Time Protocol (RTP) multicast flows to allow for maximum flexibility. With Secura KVM users can use the power of Ethernet to help transition to the next generation of high-performance audio, video and metadata.

KVM control like no other

Secura KVM adds the ability to take control of Servers, PC's and other devices requiring access by Keyboard or Mouse and does so with the latest in encryption and compression technologies assuring close to real-time performance so that latency isn't a factor in critical control environments.



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Specifications: Audio/Video Networking

	JPEG 2000 version	VC-2 HQ version
AV Connectivity	HDMI 2.0 with HDCP 1.4/2.2	
Video format	All resolutions and frame rates up to 4096x2160 at 60fps 8-bit, 10-bit and 12-bit, 4:4:4, 4:2:2 and 4:2:0 HDR10 and HLG	
Max video format	4K60 4:4:4	4K60 4:2:0
Video codec	JPEG 2000	VC-2 HQ (SMPTE 2042)
Video processing	Upscaler/downscaler at receive side Cropping, padding, logo and text insertion	
Audio	Up to 8 channels, all sampling rates including High Bit-Rate Audio (HBR) LPCM, DTS, and Dolby formats (incl. Atmos) External analog audio embedding/de-embedding AES67	
Latency	15 ms end-to-end (encoder + decoder)	5 ms end-to-end (encoder + decoder)
Security	AES encryption, HDCP 1.4/2.2, 802.1x authentication	
Reliability	Forward Error Correction (FEC) and Quality of Service (QoS)	
Clock Synchronization	Precision Time Protocol (PTP) IEEE 1588-2008, slave/master	
AV transport protocols	IP (unicast/multicast), UDP, RTP, RTCP, SAP/SDP, SMPTE ST 2110	
Network protocols	DHCP, mDNS, IGMP, TCP/IP, ARP	

Configuration

Network-based	Web-based configuration manager (GUI) JSON API over WebSocket, Secure Remote System console
COM port	Command line interface
Upgrade	Firmware field upgradable

Interfaces

Audio/Video	HDMI 2.0 Input (encoder only) HDMI 2.0 Output (decoder only) 3.5mm jack (TRS) analog audio input (encoder only), and output (decoder only)
Communication	1Gb Ethernet RJ45, Serial RS-232
Others	I2C, SPI, GPIO for additional interfaces (LED, IR, button, display...)

Other specifications

Temperature	Operating: 0° C to +55° C	
Dimensions (L x W x H)	200 x 116 x 23 mm (7.9 x 4.6 x 0.9 in)	
Power supply	12 V DC – Power connector	
Power over Ethernet	PoE+ (IEEE 802.3at)	PoE (IEEE 802.3af)
Power consumption	15 W typical	12 W typical

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Flexible networking capabilities for video and audio

Each Secura IP device can be configured as a Transmitter or Receiver to encrypt or decrypt HDMI signals using AES 256 encryption with Dynamic key technology; recommended for stringent NSA security standards. Secura IP delivers safe signal transport through Ethernet fabric controlled by the Secura Control system. This ensures security domains and proper signal authorization is maintained. Using the SMTPE ST 2110 standard for Ethernet allows for continuous development and prevents single vendor proprietorship.

Analog audio embedding/de-embedding

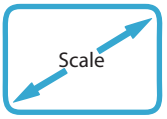
Secura IP facilitates analog audio input and output in addition to the HDMI audio. Each input audio stream is individually routed. The receiver can be configured to output audio over HDMI or an analog audio connector.

Secure and reliable audio/video transmission

The transmission of the audio and video from the encoder to the decoder board can be protected with AES encryption in order to guarantee confidentiality of the streamed content. Additionally, forward error correction (FEC) provides a reliable audio/video transmission in case of packet loss or corruption. The device can be authenticated on the network with 802.1x protocol.

Advanced image processing

Secura IP supports video upscaling, downscaling and cropping as well as matches output to the receiving display either automatically or manually. Administrators can easily superimpose logo's, images or scrolling text onto the video content. Secura IP features flexible configuration, supporting various display layouts, including delivering a single video to a display array.



AES67 and SMPTE ST 2110

Secura IP is based on open standards including the audio/video transport over IP (SMPTE ST 2110). This includes the transport of uncompressed audio with the AES67 protocol. AES67 protocol adds interoperability with most common IP standards and allows the use of various AES67 audio devices.

Power over Ethernet (PoE)

With the Power-over-Ethernet feature, networking communication and power supply can be provided over a single Ethernet cable. The external power supply is not required anymore. Secura IP is compliant with the IEEE 802.3af/at.

ABOUT PESA

As a leading provider of secure audio/video (A/V) Baseband and IP connectivity products, PESA offers a wide selection of multi-path streaming products, routing switchers, matrix switchers, extenders, converters, media extenders, and signal processing gear to support government, military, industrial, commercial, medical, broadcast, and mobile truck applications. From large to small-scale A/V routing and extender products to multiple IP streaming appliances, PESA offers a diverse suite of AV products, all of which are supported by 24/7 technical support. PESA is located in Huntsville, Alabama, with regional sales offices throughout North America, Europe and China. Our cost effective solutions are available around the world through our industry leading team of Channel Partners offering local support and installation. All products mentioned herein are trademarked property.

Learn more: www.pesa.com

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