The PESA Secura family of products has one main feature: Military-grade security. Secura units can carry HDMI 2.0 4K/60 video, Audio, and Ancillary Data. For KVM applications, secure USB is added to connect HID devices such as keyboards and mice as well as USB CAC and Token readers. PESA’s KVM and A/V over IP solutions can transport all of these critical media signals using Arista network COTS (Commercial Off-The-Shelf) enterprise switches. The PESA Secura KVM uses FIPS 140-2 Level 3 encryption making it the kind of case-hardened security our Military customers expect. It’s no wonder why more Military, Government and Corporations choose PESA for critical Command and Control environments.

**FEATURES**

- AES 256 encryption with static key
- 1 GB/s payloads using JPEG light compression for extremely low latency (< 15ms)
- PESA’s exclusive Secura Control Suite for IP configuration/control, endpoint management, and virtual matrix KVM routing
- HDMI audio including Dolby, AES67, and others
- KVM control using PESA’s suite of router control panels or most third party controllers including Creston/AMX
- Video scaling

**TYPICAL KVM SYSTEM**

```
Thin client Source 1

Thin client Source 2

USB (Control)

HDMI (Video)

Secure KVM Tx Mode

IP

Secure, AES-256 encrypted data over IP

1Gbps IP Switch

Secure KVM Rx Mode

KVM Workstation 1

Secure KVM Rx Mode

KVM Workstation 2

USB

HDMI
```

```
USB (Control)

HDMI (Video)

Secure KVM Tx Mode

IP

Secure KVM Rx Mode

KVM Workstation 1

Secure KVM Rx Mode

KVM Workstation 2

USB

HDMI
```
FIPS 140-2 Level 3 Encryption

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SECURA®

Contract No.: GS-03F-062BA
Cage Code: OMJ96
DUNS No.: 793013822
Schedule: 58I; SIN 58-1

PESA has been a leading provider of secure professional-grade audio and video products for over 45 years. Video Distribution Systems (VDS), Routers, Signal processing devices, and Control & Management systems have all been a part of the complete PESA system portfolio. PESA continues to lead in developing innovative IP media solutions with the new Secura® brand of Media Management and secure Endpoints. Secura products ensure military-grade protection for mission critical media signals for military, government, corporate and broadcast environments. PESA proudly supports our many customers with a 24/7/365 round the clock technical support team. PESA is located in Huntsville, Alabama with regional sales offices throughout North America, China, Europe and the Middle East.

Learn more about PESA on our website at http://www.pesa.com and follow us on Twitter: @PESA_ONLINE and LinkedIn: PESA.

Specifications

AV Connectivity | HDMI 2.0, compliant 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
Video codec | JPEG
Video processing | Upscaling/downscaling at receive, side cropping, padding, logo and text insertion
Audio | Up to 8 channels, 14 sampling rates including High Bit-Rate Audio (HBR) LPCM, DTS, and Dolby formats (incl. Atmos) External analog audio embedding/de-embedding AES557
Latency | 15 ms end-to-end (encoder + decoder)
Security | FIPS 140-2 Level 3 Encryption
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 | 100 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)
Power consumption | 15 W typical

KVM Control Like No Other

Secura KVM modules are configured as a paired transmitter/receiver set, and any module can be configured as a transmitter or receiver using Secura Control software.

- Each transmitter encrypts KVM data from the host for secure, encoded broadcast over an Ethernet infrastructure.
- Secure KVM data is received by a Secura KVM receiver module, which decrypts data broadcast by the transmitter module and delivers the data as KVM outputs to the work station components.
- Encrypted data is routed between Secura KVM modules through a common COTS IP switcher or router device. Only a properly configured and identified Secura KVM receiver module can decrypt the IP stream broadcast by a Secura KVM transmitter.

Secure and reliable KVM data transmission

KVM data between the transmitter and receiver is protected with NSA compliant, AES 256 encryption in order to guarantee confidentiality of the streamed content.

Analog audio embedding/de-embedding

Embed an external analog audio to replace original HDMI audio, if desired. Output audio over HDMI video or de-embed HDMI audio to a rear panel audio connector.

Power over Ethernet

Using Secura KVM’s Power-over-Ethernet (PoE+) feature, networking communication and operating power can be provided over a single Cat6 Ethernet cable. Secura KVM is compliant with PoE+ standard IEEE 802.3at. An external power supply can also be added for power redundancy.

AES 256 encryption with dynamic keys available soon

ABOUT PESA

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