

PESA SECURA[®] SOFTWARE



CYBERSECURE MISSION VIDEO SYSTEM (MVS) For Situational Awareness and Decision Making



SECURA[®] SOFTWARE Capabilities

- Control Encryption - FIPS 140-3 mTLS using Certificates of Authority and CNSA Elliptical Curve Keys
- MILS Levels—Multiple Independent Levels of Security separating Unclassified, Classified, Secret and beyond enforcing existing policies of security domains and separation of those domains
- Configuration Module to easily manage setups and changes to the video, audio and HID Matrixes.
- Dashboard Module to monitor activity within the matrix and log all events pertinent to active operations
- Switch Module for control over switching video to walls, monitors and other displays
- Switch Module for mouse and keyboard control without disrupting CAC readers
- Individual and separate flow control for encrypted video, audio and HID within an IP fabric
- Supports On-Premise, Hybrid And Multi-Cloud

- ✓ SECURA[®] is Software delivering architected on a group of micro-service applications that can be used both on premise and in networked environments. SECURA[®] supports multi-cloud environments if needed
- ✓ Zero Trust is at the core of both SECURA[®] Control and Data Planes
- ✓ The SECURA[®] Control Plane uses FIPS 140-3 (CMVP pending) and Mutual TLS (1.2) for every connected secure edge device as well as mutual authentication between micro-service applications.
- ✓ SECURA[®] authenticates users from local Active Domain servers maintaining current authentication policies
- ✓ SECURA[®] Control ensures that each flow of video, audio and USB can be assigned a specific security level insuring proper domain isolation
- ✓ Classified users can access certain Classified video from network connected edge nodes



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SECURA® SOFTWARE

SECURA® SOFTWARE Has Eight Modules:

- 1) SECURA® Control
- 2) SECURA® Supervisor
- 3) SECURA® Dashboard
- 4) SECURA® Switching
- 5) SECURA® Maintenance
- 6) SECURA® NIST Certified Crypto
- 7) SECURA® 3rd Party API
- 8) SECURA® DVR (Digital Video Record)

1) **SECURA® Control Module:** The SECURA® Control Module is a group of micro-services applications using mTLS (mutual Transport Layer Security), a cryptographic protocol. Using AD (active domain) and LDAP (directory access protocol), SECURA® Control integrates with existing user authentication constructs. Each and every user, signal, area and workstation can implement unique levels to enforce security policies.

2) **SECURA® Supervisor Module:** The Supervisor Module is used to configure each device and how the system will operate. It establishes what and what the system cannot do based on policy.

3) **SECURA® Dashboard Module:** The Dashboard Module operates and manages the user interface on the control panel. This is a secure app versus a web browser that is a primary attack vector in any system.

4) **SECURA® Switching Module:** The Switching Module manages the switching from sources to destinations real time. Prior to any switch, a mutual TLS connection is established ensuring both ends are authenticated, as well as the source and destination have the rights to connect, following the policy to establish the connection and view the content.

5) **SECURA® Maintenance Module:** The Maintenance Module is used for updates and changes to the micro services platform.

6) **SECURA® NIST Certified Crypto Module:** The NIST certified FIPS 140-3 PESA crypto module is installed on each and every SECURA® device (TX, RX, Control panels, every container on the VM Server(s)).

7) **SECURA® 3rd Party API Module:** The 3rd Party API Module allows for 3rd party devices, which are generally unsecured, to attach to a SECURA® System. This is done thru a 3rd Party API connection to a SECURA® container that implements PESA crypto and mutual TLS. This allows many non-secured devices to be used within the environment.

8) **SECURA® DVR Module:** Module integrates a Digital Video Recording and Playback capability using standard COTS (Commercial off the Shelf) Hardware. This allows for any or all video flows to be recorded for storage or instant playback anywhere on the network.



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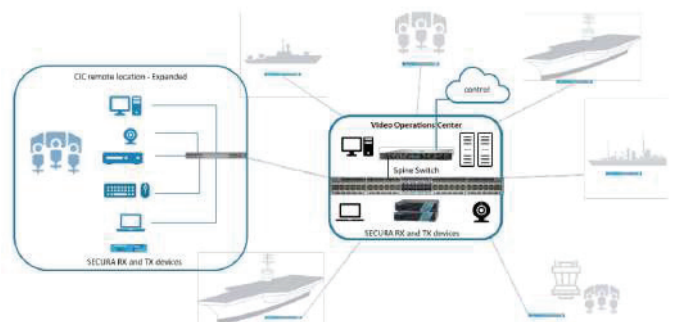
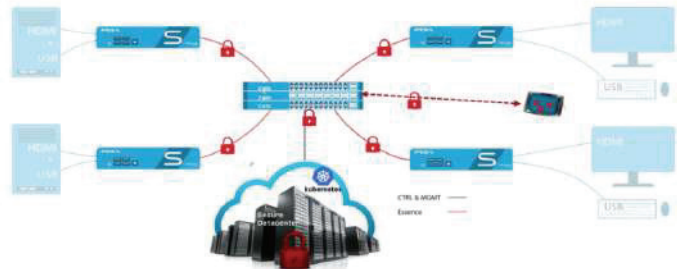


SIGNAL TYPE: VIDEO	
Video Routing Formats	HD, Full HD, 4K UHD (4:4:4) plus HDR
Video Resolution Display	Mixed (Dynamic) EDID
Quadview processing:	Yes
Low Latency	Yes ~1ms
Open Architecture	Yes
SIGNAL TYPE: AUDIO	
Dolby	Yes (HDMI 2.0)
Multiple Audio	Mono/Stereo/5.1 per input
SIGNAL TYPE: USB	
KVM	Yes
HID	Yes
CAC	Yes
SECURITY	
Multi Factor Authentication	Yes
Number of Security Levels	Unlimited
MILS Level	Yes
Key Management	Dynamic Rotating Keys
Video Encrypted	Yes (AES256)
Audio Encrypted	Yes (AES256)
USB Encrypted	Yes (PESA Crypto Module)
Control Encrypted	Yes (PESA Crypto Module)
MILS Level Encrypted	Yes
DoD APL and NIAP Secure Switch	Yes (Arista, Cisco)
NIST Certified FIPS 140 -2 Encryption	Yes – NIST Certified (cert #4021)
Trusted Protection Module	Yes
NODES AND ENDPOINTS	
DisplayPort	Yes, with converter
HDMI 2.0/ HDCP 2.2	Yes* (* HDCP 2.2 for 4K not backwards compatible with HDCP 1.4 (can add externally))
HDMI 1.3/1.4	Yes
SFP/SFP+ Fiber	SFP+ 10Gb Fiber Ethernet (TRX)**
RJ45	1Gb Copper Ethernet (opt. 2.5 Gb Ethernet)
RJ45 SFP	10Gbe Copper Ethernet
USB 2.0	Yes
POE (requires copper ports)	Yes (RJ45)
USB CAC	Yes
USB HID	Yes
10" 15" 32" Touch Panel	Yes

NETWORK	
Maximum Endpoints	~1 Million plus+
SDN	Yes
TCP/IP	Yes
ARP	No
mDNS	Yes
Registration & Discovery (NMOS)	Yes
IGMPv3	Yes
JSON API	Yes
Leaf / Spine Architecture	Yes
LAN/Campus Capable	Yes

CERTIFICATIONS AND EXPORT RESTRICTIONS	
PESA Crypto Module	Yes
NIST FIPS 140-2 Validation (CMVP)	Yes (Cert# 4021)
DoDIN APL Switches	Yes (Arista, Cisco)
NIAP Switches	Yes (Arista, Cisco, Juniper, Others)
TAA Compliant	Yes (100% SW Dev and Assembly in US)
Conforms to National Security Export Restrictions	Yes

SECURA CONFIGURATIONS



PESA

SECURA[®]



**FOR MORE INFORMATION, PLEASE
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