



NEOUS™

SECURE MULTI-DOMAIN KVM OVER IP MATRIX SOLUTIONS

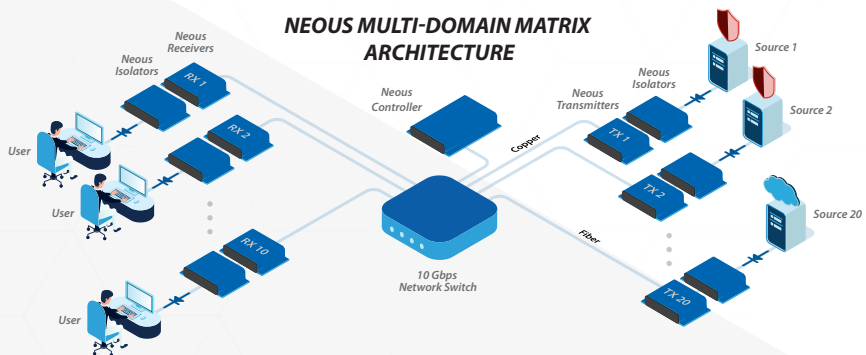
Built for Zero Trust, High-Assurance
Environments

 **HighSecLabs**
Highest Security Solutions ●●●

THE SOLUTION WHAT IS NEOUS?

Neous is a secure KVM over IP solution, implementing flexible and scalable KVM/AV matrix solutions for working securely with multiple sources of different classifications when users and sources are physically separated from each other. Neous implements multi-layer security integrating NIAP certified and FIPS 140-3 compliant components, and is fully compatible with HSL's family of secure KVM switching products for the utmost flexibility, user experience and data protection.

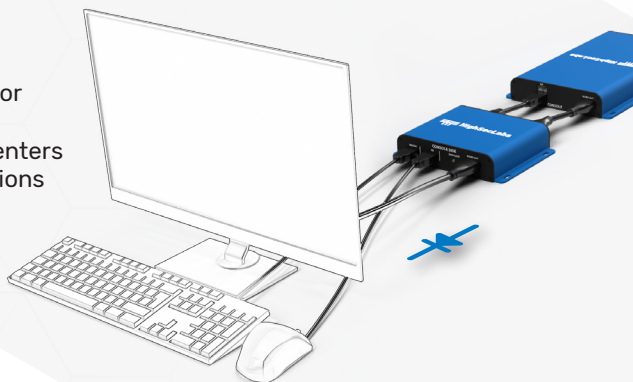
- **Flexible and scalable** – Supports up to 300 endpoints and enables seamless post-deployment expansion.
- **TAA and BAA** compliant products manufactured using a secure supply chain
- **On-Screen Display** to easily configure the matrix
- **Secure** - Prevents data leakage in a cross-domain, multi-classification environment using NIAP certified components, FIPS 140-3 compliant encryption and Network Access Control (NAC).
- **Fast zero-latency switching**



Using Neous, securely implement the most common cross-domain matrix solutions:

- **KVM matrix**
- **Video matrix**

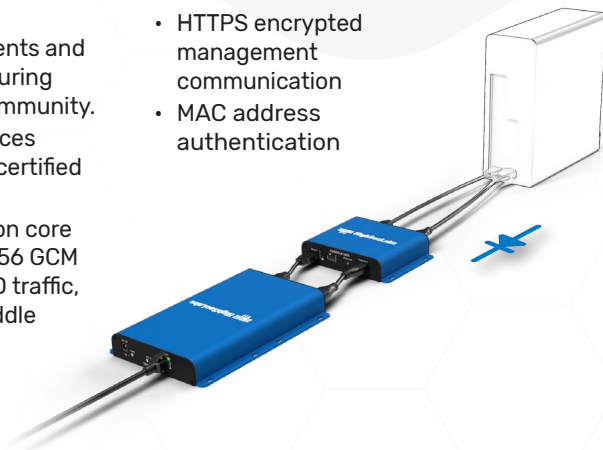
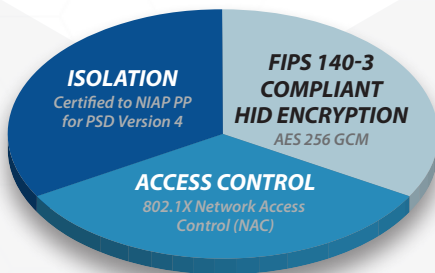
Neous is the perfect solution for control rooms, command and control centers, operational centers and other demanding applications where multiple users interact with many sources across multiple domains.



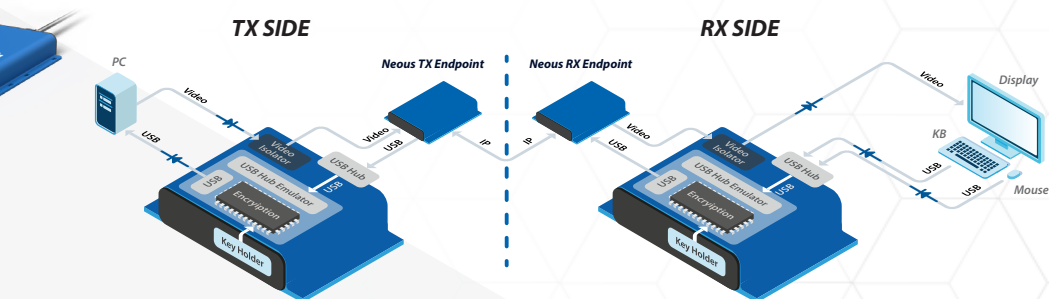
SECURITY HIGHLIGHTS

With Neous, work in a cross-domain, multi-classification environment securely without the threat of data leaks, insertion of malicious code or unauthorized use by using the highest security components available:

- Host and destination isolation using NIAP PP4.0 for PSD certified KVM and video isolators create a domain agnostic network for KVM and video matrix implementations.
- Uses pre-certified components and Industry standard tools assuring isolation and data leakage immunity.
- Isolator auto-sensing enforces system use only with NIAP certified isolators.
- The Neous Phylax encryption core performs FIPS 140-3 AES 256 GCM compliant encryption of HID traffic, preventing man-in-the-middle attacks.
- Secure EDID pass-through assures unidirectional information flow
- 802.1X NAC compliance prevents unauthorized connections.
- HTTPS encrypted management communication
- MAC address authentication



The Neous isolation core implements HW enforced unidirectional data flow and uses the Phylax core to encrypt or decrypt the data, according to the latest NIAP and FIPS 140-3 standards.



NEOUS COMPONENTS



Neous components are available for 10Gbps fiber and PoE copper networks.

TRANSMITTER

- **Video Matrix:** Zero-latency video encoding and transmission
- **KVM Matrix:** Zero-latency video encoding and transmission, and reception of HID.

Both types of transmitters are operational only when connected to the linked Neous Isolator.

Transmitter



RECEIVER

- **Video Matrix:** Zero-latency video reception, decoding and multiview support.
- **KVM Matrix:** Zero-latency video reception and decoding with Multiview support, and HID transmission.

Both types of receivers are operational only when connected to the linked Neous Isolator.

Receiver



ISOLATOR

- **Video Matrix:** NIAP PP4.0 PSD certified video isolator.
- **KVM Matrix:** NIAP PP4.0 PSD certified KVM isolator.
- **Encrypts/Decrypts** HID using AES-256 GCM.

All Neous Transmitter and Receiver sets include a linked Isolator.

Secure Isolators



NEOUS MANAGEMENT SYSTEM

Implements the logic for the solution type (KVM or Video matrix), performs the mapping of sources to users, along with user/source permissions. Manages the distribution of encryption keys.



* High Sec Labs reserves the right to change the Neous Management System hosting platform. Core IP Matrix management functionality remains independent of the underlying hardware platform.

TRANSMITTER & RECEIVER MAIN FEATURES

- DP/HDMI 4K30Hz 4,4,4
- USB HID Type B/A (TX/RX) (KVM only)
- 10Gb Ethernet for video/audio, 1Gb for control
- SFP+ port for fiber
- FIPS 140-3 compliant AES 256 GCM encryption
- NAC, 802.1X, SSL
- **Important Note:** The Neous IP Matrix requires connection to a 10Gbps network.



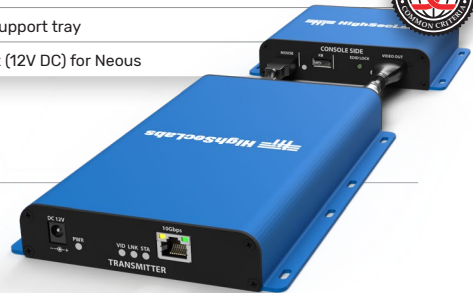
NEOUS MANAGEMENT SYSTEM FEATURES

- KVM switching
- Video only switching
- Video matrix multiview support
- TX/RX configuration
- Permissions Management
- NAC



ORDERING INFORMATION

MODEL	TYPE	CONNECTION	PWR SOURCE
SVFX10PHT-M	Neous Fiber Video Matrix TX with Linked Isolator	Fiber	External
SVFX01PHR-M	Neous Fiber Video Matrix RX with Linked Isolator	Fiber	External
SKFX10PHT-M	Neous Fiber KVM Matrix TX with Linked Isolator	Fiber	External
SKFX01PHR-M	Neous Fiber KVM Matrix RX with Linked Isolator	Fiber	External
SVCX10PHT-ME	Neous Video Matrix TX with Linked Isolator	Copper	PoE or External
SVCX01PHR-ME	Neous Video Matrix RX with Linked Isolator	Copper	PoE or External
SKCX10PHT-ME	Neous KVM Matrix TX with Linked Isolator	Copper	PoE or External
SKCX01PHR-ME	Neous KVM Matrix RX with Linked Isolator	Copper	PoE or External
SVCX10PHT-M	Neous Video Matrix TX with Linked Isolator	Copper	External
SVCX01PHR-M	Neous Video Matrix RX with Linked Isolator	Copper	External
SKCX10PHT-M	Neous KVM Matrix TX with Linked Isolator	Copper	External
SKCX01PHR-M	Neous KVM Matrix RX with Linked Isolator	Copper	External
MCK11EC-MD	Neous KVM Matrix Controller	Copper	External
RK-1U-NEOUS	3 Neous Secure Endpoint Rack Mount Kit		
RK-4U-HKS-10	10 Isolator RackMount KIT 4U Support tray		
PDU10SR	10-Port Power Distribution Unit (12V DC) for Neous		



HIGH SEC LABS (HSL)

DEVELOPS HIGH-QUALITY
CYBER-DEFENCE SOLUTIONS
FOR PROTECTING NATIONAL
ASSETS AND INFRASTRUCTURE
IN THE FIELD OF NETWORK AND
PERIPHERAL ISOLATION.



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