HighSecLabs
Highest Security Solutions

SECURE KM SWITCHES

Work simultaneously with multiple computers connected to multiple displays using one set of USB, audio, keyboard, and mouse peripherals.

Ultra HD **4K**

NIAP PP PSS 4.0 COMPLIANT COMMON CRITERIA

The Keyboard/Mouse (KM) Switch from High Sec Labs allows interaction with multiple computers directly connected to multiple displays, using a single keyboard and mouse. By eliminating the need to purchase and install dedicated peripheral sets for each computer, the KM Switch frees up space and reduces clutter in the workspace.

KM HIGHLIGHTS

- **NIAP Common Criteria PP4.0 Compliant:**
  HSL's KM Switches comply with the latest NIAP Common Criteria Protection Profile version 4.0 (PP4.0) certification for peripheral Sharing Devices (PSD).

- **Securely share peripherals across different security domains:**
  Securely share peripherals between computers that belong to different security classifications levels while keeping the highest possible data separation security.

- **Prevent information leaks:**
  Mitigate threats derived from sharing and switching of vulnerable, untrusted or unauthorized peripheral devices. Block peripheral exploits, information leaks, eavesdropping, signal transmissions, and computer malware. Prevent hardware and firmware tampering attacks by enforcing multi-layered security mechanisms.

- **Control multi-monitor computers:**
  Support multi-monitor computers with up to 4 displays per computer in duplicate or extended modes (Requires driver installation, currently available only for Windows)..
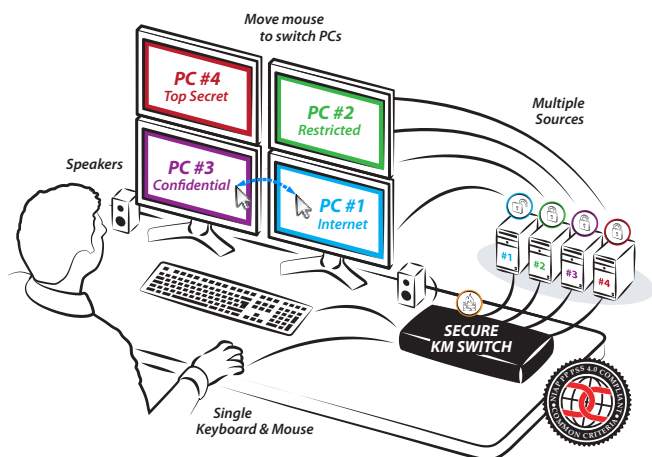
HSL 4-Port Secure KM Switch System Diagram

SECURITY FEATURES

- **USB Security**
  - Block unauthorized USB devices.
  - Whitelist and blacklist specific USB devices based on VID/PID characteristics.
  - USB CAC Readers are authorized by default (SM40NU-4 / SM80NU-4 only).

- **Keyboard & Mouse Security**
  - The keyboard and mouse are isolated by a dedicated, USB device emulation for each computer.
  - One-way, peripheral-to-computer data flow is enforced through unidirectional optical data diodes.
  - Communication from computer-to-keyboard/mouse is blocked.
  - Non-HID (Human Interface Device) data transaction is blocked.

- **Audio Security (SM40NU-4 and SM80NU-4)**
  - Enforce computer-to-speaker, one-way flow of sound through unidirectional optical data diodes.
  - Prevent eavesdropping and line-in re-tasking by blocking speaker-to-computer communication.

- **Hardware Anti-Tampering**
  - Any attempt to open the product enclosure will activate an anti-tamper system, making the product inoperable.
  - Blinking LEDs provide a clear indication of a tampering event.
  - Special holographic tampering evident labels on the product's enclosure provide a clear visual indication if the product has been opened or compromised.

- **Firmware Anti-Tampering**
  - There is no access to the product's firmware or memory through any port.
  - Firmware is permanently stored on a non-reprogrammable Read Only Memory (ROM) to prevent any modification.
  - Firmware integrity is verified through a self-test procedure during power-up. Upon detection of a critical failure, the device disables normal operation and provides a clear visual indication of failure.

OPERATIONAL HIGHLIGHTS

- **Smoothly Switch Between Computers:** Switch between connected computers simply by moving the cursor from screen to screen; the keyboard will automatically switch to follow the mouse.

- **Avoid typing mistakes**: Since the KM Switch's security features do not allow two-way communication, the LEDs on a keyboard's lock keys (Caps Lock | Num Lock | Scroll Lock) will not function. To help users avoid typing mistakes, the KM Switch's front panel has LEDs which light up to indicate the status of the lock keys.

- **Support various display layouts**: HSL's KM Switches have built-in presets to accommodate multiple display configurations.

SM20N-4

SM40N-4

SM40NU-4

SM80N-4

SM80NU-4

SPECIFICATION

PART NUMBER	SM20N-4	SM40N-4	SM40NU-4	SM80N-4	SM80NU-4
No. of Sources	2	4		8	
CONSOLE PORTS					
Mouse and Keyboard	USB 2.0 Type A				
Audio Jack	N/A	N/A	3.5mm jack	N/A	3.5mm jack
fUSB Port	N/A	N/A	USB Type A	N/A	USB Type A
COMPUTER PORTS					
Mouse and Keyboard	USB 2.0 Type B				
Audio Jack	N/A	N/A	3.5mm jack	N/A	3.5mm jack
fUSB Port	N/A	N/A	USB Type A	N/A	USB Type A
PHYSICAL					
Dimensions	177 x 82 x 35 mm / 7 x 3.2 x 1.4 inches	342 x 148 x 42 mm / 13.7 x 5.8 x 1.7 inches		440 x 192 x 48 mm / 17.3 x 7.5 x 1.9 inches	
Weight	0.52 kg (1.1 lbs)	1.3 kg (2.8 lbs)		2.4 kg (5.3 lbs)	
POWER					
Power Requirements	12V DC, 1.5A			35W Max	
AC Input	100 to 240V AC			100 to 240V AC	
Power Type	External			Internal	
ENVIRONMENTAL					
Operating Temperature	32°F to 104°F (0°C to 40°C)				
Storage Temperature	-4°F to 140°F (-20°C to 60°C)				
Humidity	0%-80% RH, non-condensing				
SOFTWARE					
Supported OS	Windows, Linux, Mac				
CERTIFICATION					
Security Certification	**Certified** for NIAP Common Criteria PP4.0 PSD Protection Profile[S2]	**Certified** for NIAP Common Criteria PP4.0 PSD Protection Profile	**Compliant** with NIAP Common Criteria PP4.0 PSD Protection Profile	**Certified** for NIAP Common Criteria PP4.0 PSD Protection Profile	**Compliant** with NIAP Common Criteria PP4.0 PSD Protection Profile
Product Certification	CE, RCM, FCC class B, VCCI, TUV US, TUV Canada				
GENERAL INFO					
Product life-cycle	10 years				
Warranty	2 Years				

4 Ports KM list of predefined presets (Additional presets can be created and loaded externally)

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