



# M-LINE SECURE 2-PORT SINGLE-HEAD KVM SWITCHES

Securely share keyboard, video, mouse and audio devices to simplify user experience when working with two computers.

Keyboard Video Mouse (KVM) switch offered by HSL allows securely sharing of keyboard, video, mouse and audio peripherals between two computers while maintaining the highest isolation.

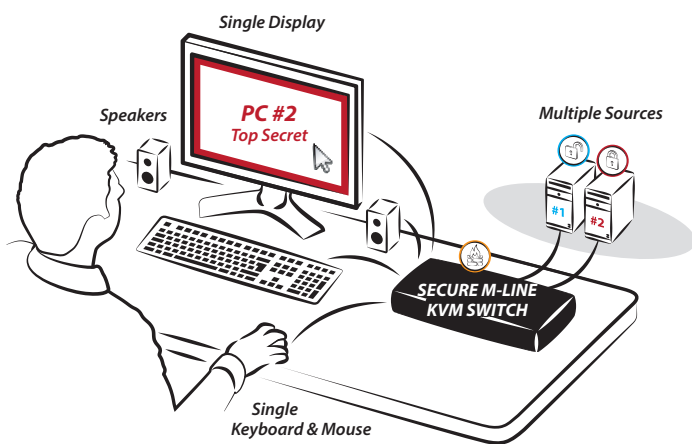
Obviate the need for purchasing and installing dedicated, per-computer peripheral sets.

## KVM HIGHLIGHTS

- **For Israeli market**
- **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**  
Obstacle threats derived from sharing and switching of vulnerable, untrusted or unauthorized peripheral devices. Block peripheral exploits, information leaks, eavesdropping, signal transmission, computer malware, hardware and firmware tampering by enforcing multilayered security mechanisms.

## SECURITY FEATURES

- **Video Security**
  - Computer video input interfaces are isolated through the use of different electronic components, power and ground domains.
  - The display is isolated by a dedicated, read-only, EDID emulation for each computer.
  - Access to the monitor's Extended Display Identification Data (EDID) is blocked.
  - Access to the Monitor Control Command Set (MCCS commands) is blocked.
- **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**
  - 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 the user with a clear visual indication of failure.



HSL Single-Head 2-Port Secure KVM Switch System Diagram



SK21D-M



SK21H-M



SK21P-M

## OPERATIONAL HIGHLIGHTS

- Smoothly switch between computers (Virtual Display Technology)**  
 Automatically switch control from one computer to another by dragging the mouse cursor over the computer's display border. Peripherals switch to the next computer without having to press any buttons once the mouse is passing the display border.
- View applications in Ultra High Definition (UHD) 4K video quality.**  
 Never compromise on video quality. Run graphic-intensive, ultrahigh definition applications on all single and dual monitor KVM models.
- Avoid typing mistakes**  
 Since two-way communication is blocked by the KVM security, keyboard lock LEDs do not function. Help users avoid typing mistakes by visually indicating the status of keyboard locks (CAPS-LOCK | NUM LOCK | SCROLL LOCK) on the product's front facing panel.
- Keep up with future requirements through interchangeable KVM / KM functionality**  
 Adjust with versatile setup scenarios. The device can be configured in two modes, KVM and KM. In KVM mode (default) one display, keyboard and mouse set is shared between all computers. In KM mode each computer is connected to a separate display while keyboard and mouse are shared, thus allowing simultaneous work on multiple computers.

## SPECIFICATION

PART NUMBER	SK21D-M	SK21H-M	SK21P-M
<b>No. of Sources</b>	2	2	2
<b>CONSOLE PORTS</b>			
<b>Displays</b>	1 x DVI-I, single-link/ dual-link	1 x HDMI 1.4	1 x DisplayPort 1.2
<b>Max Resolution (Input &amp; Output)</b>	<b>UHD 4K -</b> 3840X2160 @ 30 Hz (via DVI to HDMI cable) <b>DVI dual-link -</b> 2560X1600 @ 60 Hz (via DVI cable)	Supporting UHD 4K resolutions up to 3840x2160	Supporting UHD 4K resolutions up to 3840x2160
<b>Mouse and Keyboard</b>	USB Type A	USB Type A	USB Type A
<b>Audio Jack</b>	3.5 mm Jack	3.5 mm Jack	3.5 mm Jack
<b>COMPUTER PORTS</b>			
<b>Display Type</b>	2 x DVI-I, single-link/ dual-link	2 x HDMI 1.4	2 x DisplayPort 1.2
<b>Mouse and Keyboard</b>	USB Type B	USB Type B	USB Type B
<b>Audio Jack</b>	3.5 mm Jack	3.5 mm Jack	3.5 mm Jack
<b>PHYSICAL</b>			
<b>Dimensions</b>	177 x 82 x 35 mm / 7 x 3.2 x 1.4 inches		
<b>Weight</b>	0.52 kg (1.1 lbs)		
<b>POWER</b>			
<b>Power Requirements</b>	12V DC, 1.5A		
<b>AC Input</b>	100 to 240V AC		
<b>Power Type</b>	External		
<b>ENVIRONMENTAL</b>			
<b>Operating Temperature</b>	32° to 104° F (0° to 40° C)		
<b>Storage Temperature</b>	-4° to 140° F (-20° to 60° C)		
<b>Humidity</b>	0-80% RH, non-condensing		
<b>SOFTWARE</b>			
<b>Supported OS</b>	Windows, Linux, Mac		
<b>CERTIFICATION</b>			
<b>Product Certification</b>	CE, RCM, FCC class B, VCCI, TUV US, TUV Canada		
<b>GENERAL INFO</b>			
<b>Made In</b>	ISRAEL		
<b>Product life-cycle</b>	10 years		
<b>Warranty</b>	2 Years		

