

# SECURE 8/16-PORT KVM COMBINER SWITCHES

Interact with multiple computers on one or two displays simultaneously while using a single keyboard and mouse set.

HSL's KVM Combiners are the perfect combination of a KVM switch, multi-viewer and a scaler. The HSL KVM Combiner allows users to easily interact with multiple computers simultaneously.

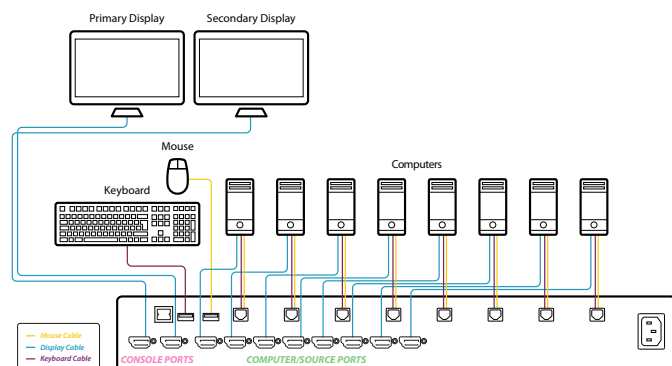
HSL's Combiner switch enables the user to:

- View all computers on one or two displays. The Combiner functions as a KVM switch, a scaler, and a multi-viewer – all in one.

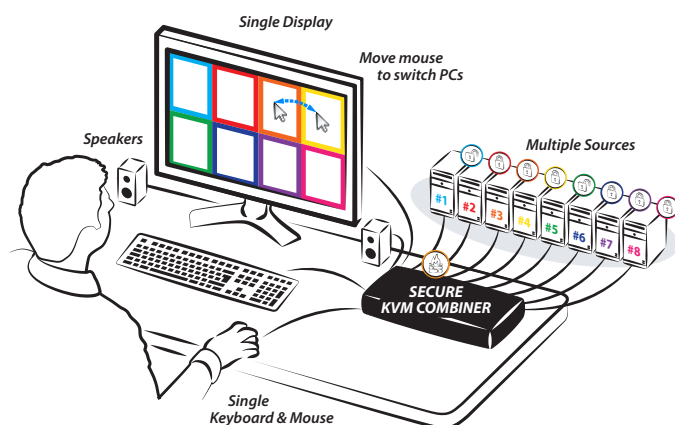
## KVM COMBINER HIGHLIGHTS

### View and control multiple computers simultaneously

With a single Combiner, view and control up to 16 computers at the same time.



HSL 8 Ports KVM Combiner with two connected displays



HSL 8-Port Secure Combiner KVM Switch System Diagram



NIAP PP PSD 4.0  
CERTIFIED  
COMMON CRITERIA

- Switch the mouse and keyboard control freely between all computers.
- Create custom view modes and quickly switch between them for easy interaction with the environment.

## SECURITY FEATURES

- **Video Security**
  - Computer video input interfaces are isolated through the use of unique electronic components, power, and ground domains.
  - The display is isolated by a dedicated, read-only, Extended Display Identification Data (EDID) emulation for each computer.
  - Access to the monitor's EDID is blocked.
  - Access to the Monitor Control Command Set (MCCS commands) is blocked.
- **Dual Head Support**
  - Support for dual head computer inputs connecting two sources to assure smooth mouse switching across all displays.
- **Keyboard and 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 activates 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 in 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.

SCAN  
QR CODE  
TO WATCH  
VIDEO



## 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. The peripherals then switch to the next computer – without the need to press any buttons.
- View applications in Ultra-High Definition (UHD) 4K video quality**  
 Never compromise on video quality. Run graphic-intensive, ultra-high definition applications on all single and dual-monitor KVM models.
- Native touch-screen support**  
 Interact with all the computers connected to a KVM Combiner, using touch-screen gestures. No need to install drivers or software.
- Flexible screen layout**  
 Resize source scaling and aspect ratio, to create tile, scale, and custom display layouts that fit the user's needs. Supports screen-duplication and extended screen-view modes.
- Dual DisplayPort and HDMI connector**  
 Connect either DisplayPort or HDMI sources into the same port, with the new dual-source video connector. Eliminates the need for adapters and converters.
- State-of-the-art conversion scaler**  
 Rapidly convert any input and output resolution (up to 4K) to optimal quality display, on a 4K screen, using the built-in scaler.
- Extremely low latency viewing**  
 View the input channel with extra low latency – below 10ms – using the direct mode feature.

## SPECIFICATION

PART NUMBER	SC82PH-M	SC162PH-M
No. of Sources	8	16
CONSOLE PORTS		
Displays	2 x DP/HDMI	2 x DP/HDMI
Mouse and Keyboard	USB Type A	USB Type A
Audio Jack	N/A	N/A
fUSB Port	N/A	N/A
COMPUTER PORTS		
Display Type	DP/HDMI	DP/HDMI
Max Resolution	Supporting UHD 4K resolutions up to 3840x2160	
Mouse and Keyboard	USB Type B	USB Type B
Audio Jack	N/A	N/A
fUSB Port	N/A	N/A
PHYSICAL		
Dimensions	439x250x58 mm / 17.3x9.8x2.3 in	439x222x89 mm / 17.3x8.7x3.5 in
Weight	3.7 kg (8.1 lbs)	7.0 kg (15.4 lbs)
POWER		
Power Requirements	35W Max	
AC Input	100 to 240V AC	
Power Type	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 for Peripheral Sharing Devices (PSD)	
Product Certification	CE, RCM, FCC class B, VCCI, TUV US, TUV Canada	
GENERAL INFO		
Product Life-cycle	10 years	
Warranty	2 Years	

OSD - VIDEO SETTINGS



SC82PH-M



SC162PH-M

