



Quick Installation Guide

8/16 Ports High Security DP/HDMI KVM Combiner Switches

Introduction

Thank you for purchasing this HSL Secure KVM Combiner. This KVM Combiner is designed for use in secure defense and intelligence environments across wide security gaps.

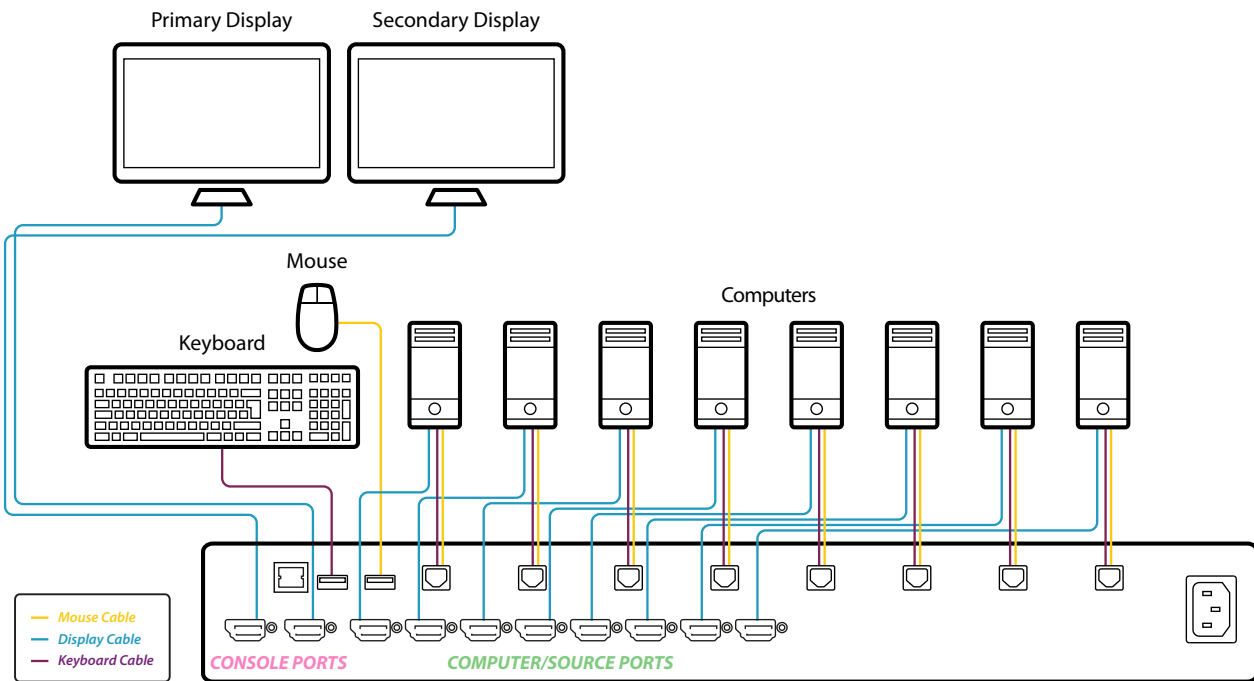
Unlike a regular secure KVM switch which allows the user to view and interact with one of the connected computers at the time, this secure KVM Combiner allows to view all connected computers on the same screen simultaneously and interact with both easily and intuitively.

Objectives

This guide includes instructions for installing and basic operation of HSL's DP\HDMI KVM Combiner **SC82PH-4, SC162PH-4** device.

For further assistance please refer to HSL website: <http://www.highseclabs.com>

SC82PH-4 Model diagram is shown:



Installation Precautions:

Do not connect this product to computing devices that:

- Are TEMPEST computers
- Include telecommunication equipment
- Include frame grabber video cards
- Include special audio processing cards.

WARNING: Peripherals' Warning - For security reasons, this product does not support wireless keyboards. It is recommended not to connect a microphone or headset to the audio output port.



Installation:

- Verify that all peripherals and computers are turned OFF prior to connecting them to the product.
- Connect the computers and peripherals to the HSL Combiner as shown in the above diagram.
- The 8 and 16 ports combinars are designed to be mounted in a rack hence will not be in sight of the user. To control the combinars use HSL's AFP and AFP splitters (included with the product) based on the above system diagram.

- **Power ON** the monitors and the PCs: Make sure that the monitors and the connected PCs are turned ON prior to powering ON the Combiner.
- **Power ON** the system: Power ON the Combiner by plugging it to the AC wall outlet and press the Power button (k) (for 16 ports connect two power cords to the unit and press also the Secondary Power Button – l). Boot time of the KVM Combiner is about 40-60 seconds. By default, after product power-up, the active channel will be computer #1, indicated by the applicable front panel push button LED lit.

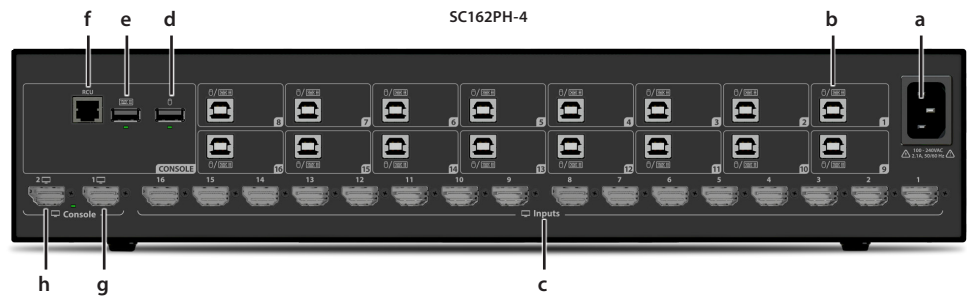
NOTE: HSL devices covered by this manual include a special DP/HDMI connector, enabling the user to use the product with both video formats as input and output.

EDID Acquisition

The HSL KVM combiner has a fixed EDID file which is transmitted to all connected PCs. At no point will the actual connected display EDID be transferred to the connected PCs.

Index:

- a. Primary Power
- b. Keyboard/Mouse USB
- c. DP/HDMI Inputs
- d. Mouse USB
- e. Keyboard USB
- f. Remote Control
- g. Primary HDMI Output
- h. Secondary HDMI Output



AFP Splitter WX12N-4



AFP remote control WR40-3

Rear Panel LED Indications:

HID LEDs (rear panel):

- Off – no device detected
- Flicker – device rejected
- On- device approved

Notes

Power ON Self-Test Procedure: As the product powers-up it performs a self-test procedure. In case of self-test failure for any reason, including jammed buttons, the product will be Inoperable and self-test failure will be indicated by abnormal LED behavior. In this case, please call Technical Support and avoid using the product.

Using the HSL Combiners:

HSL's 8 Port and 16 Port KVM Combiners have three layouts for presenting the sources on the screen:

- **Full screen** – one of the 8 or 16 source PCs is presented on the display in full screen. To enter this mode, use the: "L CTRL | L CTRL | f" keyboard shortcut.
- **Quad** – All channels are shown on the connected display. To enter this mode, use the: "L CTRL | L CTRL | q" keyboard shortcut.
- **Scale** – one channel is presented on two thirds of the screen with rest of the channels on its right and under it. To enter this mode, use the: "L CTRL | L CTRL | s" kb short cut.

The HSL KVM Combiner also supports a second display that can be used in clone or extend modes.

To change between display modes, use the following keyboard shortcuts:

- L CTRL | L CTRL | F11 | s | 0 – single display (default)
- L CTRL | L CTRL | F11 | s | 1 – clone display
- L CTRL | L CTRL | F11 | s | 2 – extended display

Please see below a diagram of each mode of operation on one and two displays:

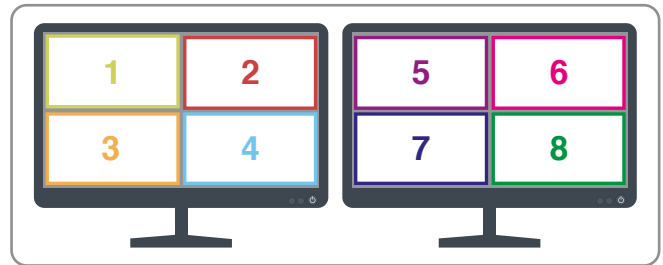
8 and 16 Ports Full Screen layout Single/Clone/Extended mode – the second screen will show the remaining 7 or 15 channels in Quad Layout



8 Ports Quad Layout Single/Clone –



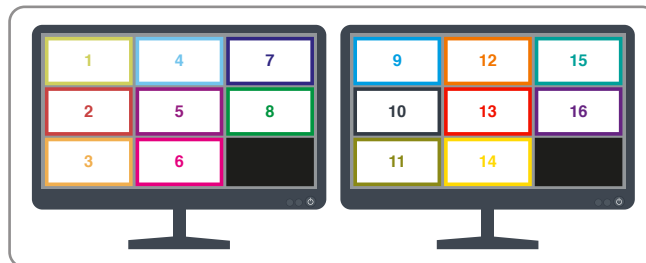
8 Ports Quad Extend Display 4-4 –



16 Ports Quad Layout Single/Clone display mode –



16 Ports Quad Layout Extended Display mode 8 - 8 –



8 Ports Scale Layout Single/Clone display – in Extended mode the primary display will show one channel in Full layout and the secondary in will show the other 7 in Quad



16 Ports Scale Layout Single/Clone display – in Extended mode the primary display will show one channel in Full layout and the secondary in will show the other 15 in Quad



- Each channel shown has a frame around it to distinguish between the channel.
- To select a channel (map the mouse and KB to it) use the connected AFP remote control push buttons.

- As a secondary switching method, the user can use CNS (curser navigation switching). Curser navigation switching is enabled by default and requires the user to drag the mouse while pressing and holding the left CTRL key.

Safety and Regulatory Statements

Safety Symbols

One or more of the following symbols may be included in your product documentation and/or on the product.



Instructions: This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the product user manual.



Dangerous Voltage: This symbol is intended to alert the user to the presence of uninsulated dangerous voltage within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



Power On: This symbol indicates the principal on/off switch is in the ON position.



Power Off: This symbol indicates the principal on/off switch is in the OFF position.



Protective Grounding Terminal: This symbol indicates a terminal which must be connected to earth ground prior to making any other connections to the equipment.

Safety Precautions

WARNING: To avoid a potentially fatal shock hazard and possible damage to equipment, please observe the following precautions.

- Do not disable the power grounding plug. The grounding plug is an important safety feature.
- Plug the power cord into a grounded (earthed) outlet that is easily accessible at all times.
- Disconnect the power from the product by unplugging the power cord from either the electrical outlet or the product. The AC inlet is the main disconnect for removing power to this product. For products that have more than one AC inlet, to remove power completely, all AC line cords must be disconnected.
- This product has no serviceable parts inside the product enclosure. Do not open or remove product cover.

CAUTION: Some HSL products contain a lithium battery. This battery is not a field replaceable item, and replacement should not be attempted by a user. If errors occur when using the product and the battery is suspected, contact HSL Technical Support.

WARNING: For Service Personnel Only - There is a risk of explosion if the battery is replaced with an incorrect type. Dispose of used batteries according to the manufacturer's instructions.

This product is for use with other products that are Listed or Certified by a Nationally Recognized Testing Laboratory (NRTL).

NIAP Protection Profile

This product is compliant with the NIAP Protection Profile PSD version 4.0 certification for peripheral sharing switch devices.

Installation Precautions

Note: HSL Secure KVM Combiners are protected with Holographic Tamper-Evident Labels on the product's enclosure to provide a visual indication in case the enclosure has been opened or compromised.

Security Vulnerability

If you are aware of a potential security vulnerability while installing this product, contact Technical Support immediately by:

- Web form: www.highseclabs.com/support/case/
- Email: security@highseclabs.com
- Tel: +972-4-9591191/2

WARNING: Unit Enclosure Warning - If the unit's enclosure appears disrupted or if all LEDs flash continuously, remove the product from service immediately and contact Technical Support.