HighSecLabs
Highest Security Solutions ● ● ● Ltd.

Quick Installation Guide
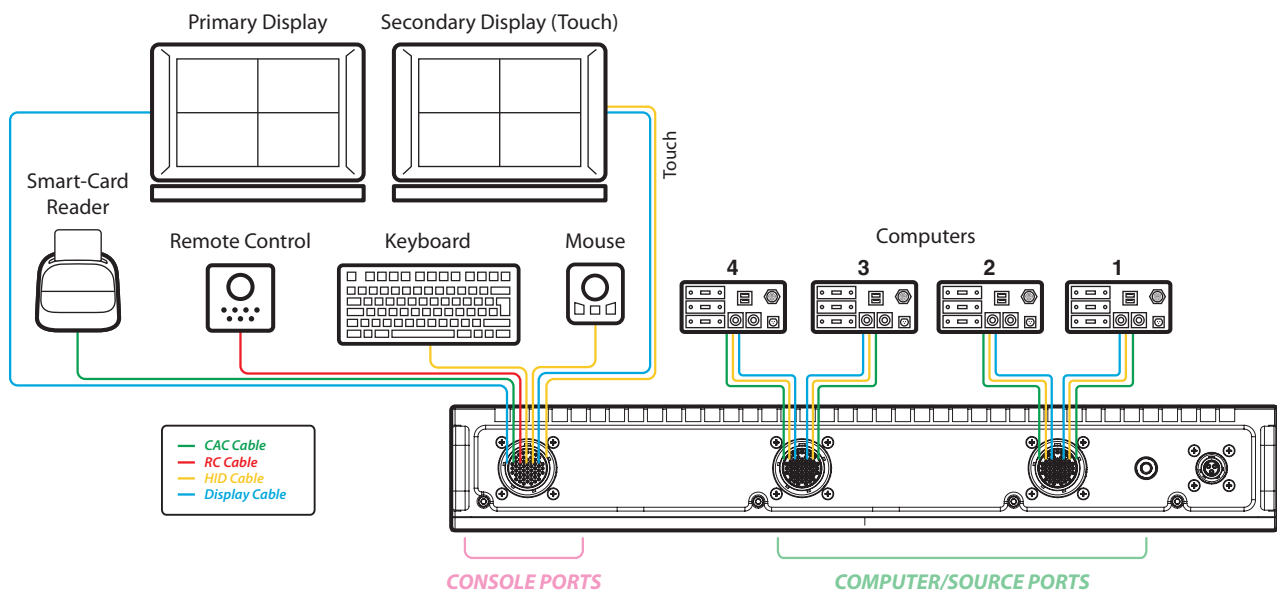## 4-Port Secure Rugged KVM Combiner Switch

Introduction

Thank you for purchasing this HSL Secure 4-Port Rugged KVM Combiner. This rugged KVM Combiner is designed for use in secure defense and intelligence environments across air-gapped networks of varying classification levels.

Unlike a regular secure KVM switch that enables the user to view and interact with one of the connected computers at the time, this secure KVM Combiner enables viewing all connected computers on the same screen simultaneously and interacting with them easily and intuitively.

Objectives

This guide includes instructions for the installation and basic operation of HSL's DP/HDMI Rugged KVM Combiner **SC42PHU-4R**.

For further assistance please refer to HSL's website: http://www.highseclabs.com

Primary Display   Secondary Display (Touch)   Touch

Smart-Card Reader   Remote Control   Keyboard   Mouse   Computers   4   3   2   1

— CAC Cable
— RC Cable
— HID Cable
— Display Cable

CONSOLE PORTS   **COMPUTER/SOURCE PORTS**

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.

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.

- **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 power. Boot time of the KVM Combiner may take several minutes. By default, after product power-up, the active channel will be computer #1, indicated by the applicable front panel push button LED.

EDID Acquisition

When using the HSL Secure KVM Combiner, EDID is acquired from the connected display and duplicated on all channels. EDID is read only in the first few seconds of the Combiner's boot.

Channel Switching

Channel switching is performed using the front panel buttons. The currently active channel is indicated by a light illuminating its corresponding button.

When a remote control is connected to the console cable as shown in the above diagram, channel switching is exclusively controlled via the remote. In this mode, the active channel is indicated on both the remote control and the front panel.

LEDs Index:

a. Power LED
b. CAC Location LEDs
c. Channel LED
d. EDID Capture
e. Keyboard/Mouse LEDs
f. CAC Connected
g. Console (and RCU) Cable Port
h. PC Cable Ports
i. Protective Grounding Terminal
j. Power Input
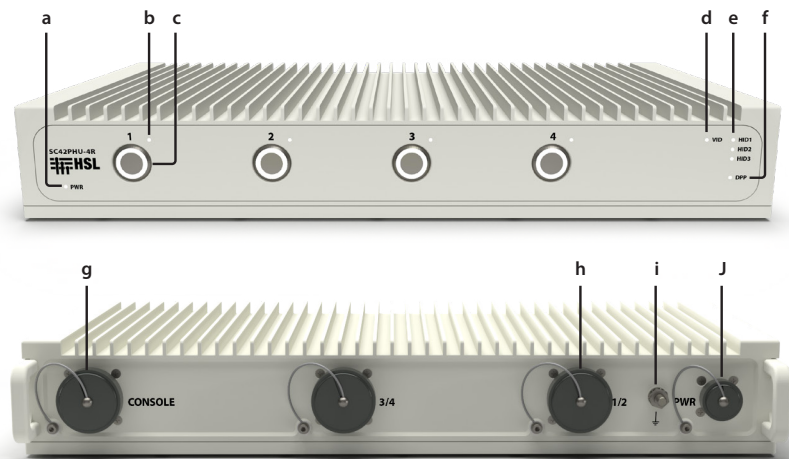
Combiner Rear Panel LED Indications:

HID LEDs:

- Off – no device detected

- RED – device rejected

- GREEN – device approved

Note: For complete operating instructions, please refer to: https://highseclabs.com/downloads/user-manual-pp4-0-secure-4-8-16-port-kvm-combiner/.

Using the HSL 4-Port Rugged KVM Combiner:

HSL's 4-Port Rugged KVM Combiner has three layouts for presenting the 4 sources on the screen :

- **Full screen** – one of the four source PCs is presented on the display in full screen. To get into this mode, use the: "L CTRL | L CTRL | f" keyboard shortcut.

- **Quad** – All channels are shown on the connected display. To get into this mode, use the: "L CTRL | L CTRL | q" keyboard shortcut.

- **Scale** – One channel is presented on two-thirds of the screen with the other 3 channels on the remaining space on the right. To get into this mode, use the: "L CTRL | L CTRL | s" keyboard shortcut.

The HSL Rugged 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:

Full Screen Layout Single/Clone
In Extended mode the second screen will show the remaining 3 channels in Quad mode

Quad Layout Single/Clone

Scale Layout Single/Clone
In Extended mode the second screen will show the remaining 3 channels in Quad mode

- Each channel shown has a frame around it to distinguish between channels.

- To select a channel (map the mouse and KB to it) use the KVM Combiner front panel push buttons.

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

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 the self-test failure will be indicated by abnormal LED behavior. In this case, please call Technical Support and avoid using the product.

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.
- Disconnect the power from the product by unplugging the power cable from either the electrical source or the product.
- This product has no serviceable parts inside the product enclosure. Do not open or remove the product cover.

NIAP Protection Profile

This product is compliant with the NIAP Protection Profile 4.0 PSD certification.

Installation Precautions

Note: HSL Secure KVM Combiner Switches 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.

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.

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