Quick Installation Guide

4/8 Ports High Security DP/HDMI Mini-Matrix KVM Switches

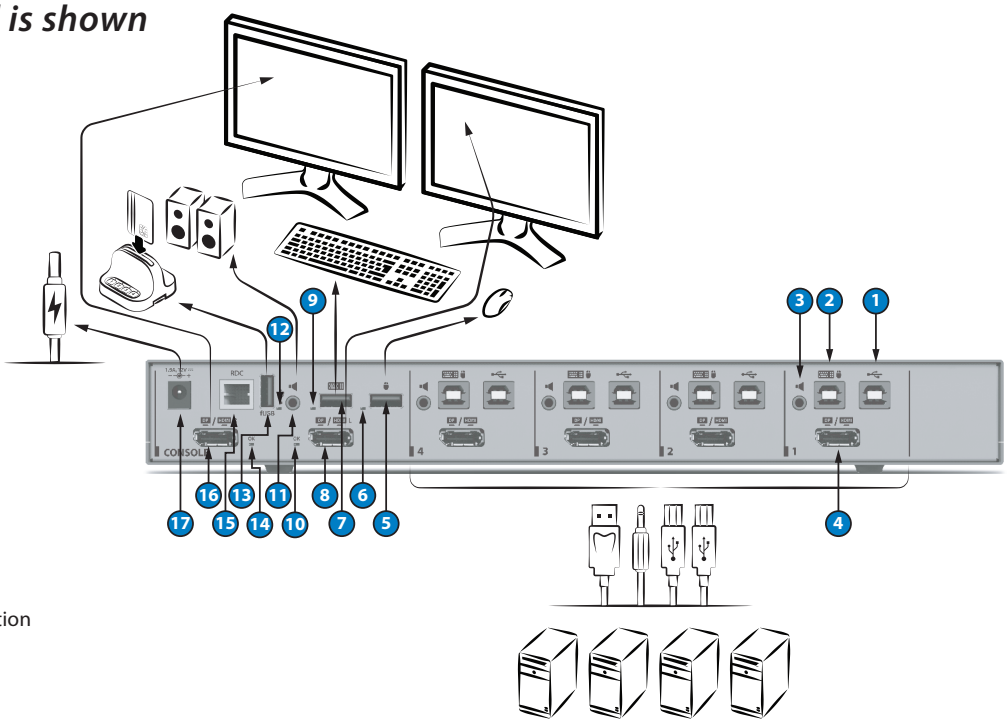
Introduction

- Thank you for purchasing this HSL Secure Mini-Matrix KVM Switch. This Mini-Matrix Switch is designed for use in secure defense and intelligence environments across wide security gaps.
- Unlike a regular secure KVM switch that enables the user to view and interact with only one of the connected computers at a time, this secure mini-matrix enables viewing two of the connected computers and interact with them easily and intuitively.

Objectives

- This guide includes instructions for installing and basic operation of HSL's DP/HDMI Mini-Matrix **SX42PH-4, SX42PHU-4, SX82PH-4, SX82PHU-4** devices.
- For further assistance please refer to HSL website: http://www.highseclabs.com
- The following diagram references the SX42PHU-4 device but it is applicable to devices covered in this manual.

SX42PHU-4 Model is shown



Rear Panel Index:

1. PC fUSB input
2. PC Keyboard/Mouse input
3. Analog audio input
4. DP/HDMI input
5. Console Mouse USB
6. Mouse LED
7. Console Keyboard USB
8. Left Display DP/HDMI Out
9. Console Keyboard LED
10. Left Display EDID LED
11. Audio out
12. fUSB LED
13. fUSB out
14. Right Display EDID LED
15. RDC in – remote AFP connection
16. Right Display DP/HDMI Out
17. DC in

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.

NOTE: In order to comply with the product's Common Criteria evaluation and to prevent unauthorized administrative access to the product, the default administrator username and password must be changed prior to first product use.

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 Mini-Matrix as shown in the above diagram.
- It is possible to connect an HSL AFP (remote control) to the RDC port of these devices. Please refer to the AFP datasheet on how to connect it.

Power ON the monitors and the PCs:

- Make sure that the monitors are turned ON prior to powering ON the Mini-Matrix

Power ON the system:

- Power ON the KVM by plugging it to the AC wall outlet. By default, after product power-up, the active channel will be computer #1

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.

NOTE : In models supporting fUSB, it is possible to connect additional USB devices and use them on the host PCs. By default, authentication devices such as CAC readers, smart card readers, and biometric readers are enabled. It is possible to enable other USB devices. Please refer to HSL's administrator manual on how to enable additional USB devices.

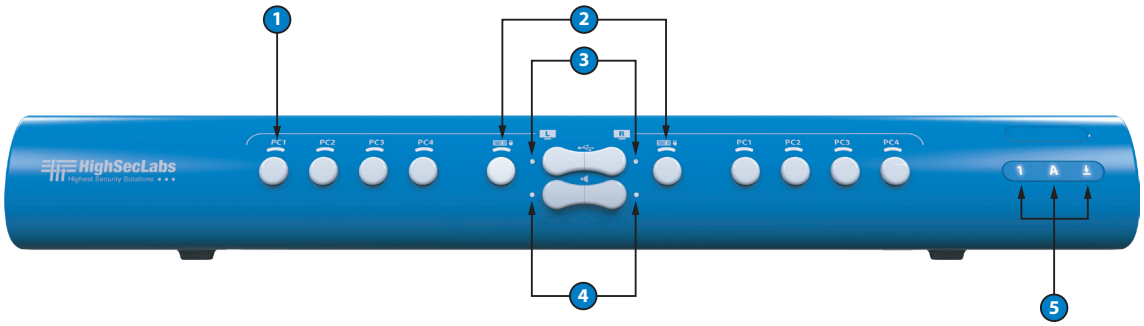
Using the HSL Mini-Matrix:

Control of the HSL Mini-Matrix is done, primarily, using the illuminated push buttons on the product front panel.

- **Display association:** Users can control which of the connected PCs is projected on either the left or right display, using the right and left channel select buttons accordingly.
- **The HID devices:** (mouse and keyboard), audio, and fUSB (when applicable) are controlled by the central control keys. The user has complete flexibility regarding which computers to project and to control including viewing the same PC on both displays.By default the HID devices will follow the display association.
- **Cursor Navigation:** The second mode of operation is by using CNS (cursor navigation switching) in which users can move their HID devices between the left and right display, using mouse movement. This function is enabled by default and requires the user to press and hold the CTRL key, while dragging the mouse between the left and right display (changing control between the left and right projected PC).

EDID Acquisition

When using the HSL Mini-Matrix, it is assumed that both connected displays are the same or use the same native resolution. EDID is acquired from the left display only and duplicated to all channels. **If the two displays are not the same**, place the display with the lower native resolution on the left display console port.



Front Panel LEDs Index:

1. Active Channel LED indicator
2. Left/Right Keyboard/Mouse control LEDs
3. Left/Right fUSB freeze LED indicators
4. Left/Right audio freeze LED indicators
5. Keyboard LEDs for Num/CAPS/SCRL locks

Mini-Matrix Front Panel/Rear Panel LED Indications:

The HSL Mini-Matrix has several indications on its front and rear panels:

EDID LED (rear panel):

- Off – no EDID
- Flicker – EDID read in progress
- On – EDID received

Note: EDID is only read in the first few seconds of device boot. The secure switch does not support hot plug or swap of display while working. in every swap of display it is recommended to restart the KVM.

fUSB LED:

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

HID LED:

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

Important Notes:

1. Anti-Tampering System: This HSL high security product is equipped with an always-on active anti-tampering system. If mechanical intrusion is detected, the product is permanently disabled and abnormal LED behavior is activated, with all LEDs blinking continuously.
2. 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 is inoperable and self-test failure is indicated by abnormal LED behavior.

In the above-mentioned cases, please call Technical Support and avoid using the product. For further information please refer to the product administrator and setup guides.

Safety and Regulatory Statements

Safety Symbols

This 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.

- Instructions: 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 certified to the NIAP Protection Profile PSD version 4.0 certification for peripheral sharing switch devices.

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

CAUTION: Anti-tamper Caution - This product is equipped with analways-on, active anti-tampering system. Any attempt to open the product enclosure will activate the anti-tamper triggers, rendering the unit inoperable and voiding its warranty.

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.

Change Management

For change management tracking, perform a quarterly log check to verify that the RFD was not improperly used to override the current device policy by an unauthorized person.