HighSecLabs
Highest Security Solutions • • • Ltd.

Quick Installation Guide
4/8 Ports High Security Mini-Matrix KVM Switches

Objectives

- This guide includes instructions for installing HSL Mini-Matrix **SX42PH-4, SX42PHU-4, SX42PHU-4T, SX82PH-4, SX82PHU-4, SX82PHU-4T** devices.
- A Mini-Matrix allows sharing keyboard, video, mouse, audio and USB peripherals between multiple computers.
- For further assistance please refer to HSL website http://www.highseclabs.com.

General

- Verify that all peripherals and computers are turned off prior to connecting them to the product.
- The Mini-Matrix's back panel is divided into Console Ports and Computer Ports sections.
  - Connect peripherals which are due to be shared by the Mini-Matrix to the Console ports.
  - Connect each computer that requires access to the shared peripherals to a Computer port group.
  - Make sure that every computer is connected to a separate Computer port group.
  - Computer port group numbers are represented by push buttons on the product's front panel.
  - Switch peripherals between computers by pressing the push buttons on the product's front panel.

SX42PHU-4 Model is shown

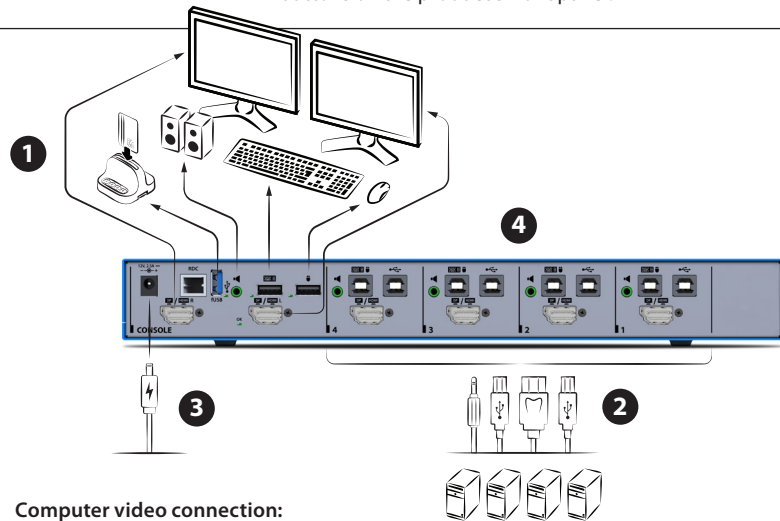**❶ Connect peripherals to the Mini-Matrix Console ports:**

- **Keyboard:** Connect a USB keyboard to the corresponding Mini-Matrix console keyboard port.
- **Video:** Connect two monitors to the Mini-Matrix console video ports.
- **LEFT & RIGHT display screen size:** It is highly recommended to use identical LEFT and RIGHT display monitors. EDID information is taken from the LEFT display (console port "L") and sent to all connected computers. In case of using non-identical displays, connect the lowest resolution display to the LEFT console display port.
- **Mouse:** Connect a USB mouse to the corresponding Mini-Matrix console mouse port.
- **Audio peripherals:** Connect headphones / speakers to the Mini-Matrix console audio-out port.
- **USB peripherals:** Connect USB peripherals to the Mini-Matrix console fUSB port.

> **Note:** Authentication devices such as smartcard and biometric readers are enabled by default, other devices must be explicitly whitelisted – for further information please refer to the Mini-Matrix Administrator's guide.

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

❷ Connect computers to the Mini-Matrix Computer ports:

- **Computer keyboard & mouse connection:** Connect each computer to the Mini-Matrix keyboard & mouse computer port using a USB A to USB B cable. Connect the USB A end to the computer and the USB B end to Mini-Matrix.

- **Computer video connection:** Connect each computer to the Mini-Matrix computer video port using the corresponding video cable (HDMI/DP).
- When using dual screen computers with a 4-port Mini-Matrix, connect PC#1 to video port 1 & 2 and PC#2 to video port 3 & 4. In order to activate this mode see user manual.
- **Dual screen support:** Download and install the HSL Multi Display Driver on computers that have multiple screens (currently available only for Windows - https://highseclabs.com/downloads/km-multi-display-drivers/).
- **Computer audio connection:** Connect each computer to the Mini-Matrix audio-in port using an audio cable. Connect one end of the cable to the computer's audio-out port using the 1/8" (3.5mm) stereo plug. Connect the other end of the audio cable to the Mini-Matrix audio-in computer port.
- **Computer USB peripherals:** Connect each computer to the Mini-Matrix fUSB computer port using a USB A to USB B cable. Connect the USB A end to the computer and the USB B end to Mini-Matrix.

❸ Power ON your system:

- **Power ON the monitor:** Make sure that the monitors are turned ON prior to powering ON the Mini-Matrix.
- **Power ON the system:** Connect all peripherals and computers to the Mini-Matrix prior to powering it up. Power ON the Mini-Matrix by plugging it to the DC outlet. By default, after product power-up, the active channel will be computer #1, indicated by the applicable front panel push button LED lit.

> **Note:** Power ON self-test: 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. Self-test failure will be indicated by abnormal LED behavior – for further information please refer to the Mini-Matrix setup guide.

❹ Switching between computers:

- Switch between computers by pressing the corresponding front panel button on the Mini-Matrix. The front panel button of the selected computer will illuminate.

Supported Hardware

The KVM switches support most standard speakers, headsets and USB keyboards and mice.

Environmental

- Operating temperature is 32° to 104° F (0° to 40° C).
- Storage temperature is -4° to 140° F (-20° to 60° C).
- Humidity requirements are 0-80% relative humidity, non-condensing.

SX42x-4/4T Dimensions

342 (W) x 148 (D) x 42 (H) mm, Weight: 1.6 kg

SX82x-4/4T Dimensions

440 (W) x 192 (D) x 48 (H) mm, Weight: 2.6 kg

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:** 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.

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:** Peripheral Warning - For security reasons, this product does not support wireless keyboards. Do not connect a microphone or headset to the audio output port.

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 an always-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 (Reset to Factory Default) was not improperly used to override the current device policy by an unauthorized person.