Models:

SX42xU-3 – Secure 4P to 2P DVI-I / HDMI / DP Video KVM Mini-Matrix w/fUSB, PP 3.0
SX82xU-3 – Secure 8P DP to 2P DP / DVI-I Video KVM Mini-Matrix w/fUSB

HDC12275 Rev. 1.4

TABLE OF CONTENTS

INTRODUCTION

HSL Secure Mini-Matrix

Optimizes user experience when working with multiple computers. Enables you to view and control two out of four computers, at the same time, while securely sharing keyboard, video, mouse, audio, and USB devices.

The Mini-Matrix KVM switch provides increased productivity in challenging multi-computer environments, where users are required to view and interact with several computers, while maintaining the highest isolation between computers and peripherals.

Prevents the need for purchasing and installing dedicated, per computer peripheral sets.

This guide refers to the following models:

SX42DU-3 - Secure 4P to 2P DVI-I Video KVM Mini-Matrix w/fUSB, PP 3.0
SX42HU-3 - Secure 4P to 2P HDMI Video KVM Mini-Matrix w/fUSB, PP 3.0
SX42PPU-3 - Secure 4P to 2P DP to DP Video KVM Mini-Matrix w/fUSB, PP 3.0
SX82DU-3 - Secure 8P to 2P DVI video KVM Mini-Matrix, w/fUSB, PP 3.0
SX82PU-3 - Secure 8P to 2P DP to DP Video KVM Mini-Matrix w/fUSB, PP 3.0

INTRODUCTION

Package Contents

Inside the product packaging is the following:

Model	Description	Qty
SX42xU-3	Secure 4P to 2P DVI-I / HDMI / DP Video KVM Mini-Matrix w/fUSB, PP 3.0	1
	Power cable	1
SX82xU-3	Secure 8P to 2P DP to DP Video KVM Mini-Matrix w/fUSB	1
	Rack mount kit	1
	Power cable	1

INTRODUCTION

Before Installation

Unpacking the Product

- Before opening the product's sealed packaging, inspect the seal's condition to assure that the product was not accessed or tampered with during delivery. If the packaging seal looks suspicious contact the HSL support team and do not use the product.

- After seal removal, inspect the packaging content to verify that the required components are included. See the packaging content list on page 4 above.

- After the Mini-Matrix KVM Switch is removed from its packaging materials, carefully inspect the tampering-evident label to assure that product is properly sealed. If the label is damaged or missing, contact HSL support and do not use the product.

INTRODUCTION

Tamper-Evident Labels

- The Mini-Matrix KVM Switch uses a holographic tamper evident label to provide visual indications in case of enclosure intrusion attempts. These labels indicate white dots or the text "VOID", once removed. When opening the product's packaging, inspect the tampering evident label.

- If for any reason, one or more tamper-evident labels are missing, appear disrupted, or look different than the example shown here, please call HSL Technical Support and avoid using that product.

HSL Holographic Tamper-Evident Label

INTRODUCTION

Active Anti-Tampering System

- The Mini-Matrix KVM Switch is equipped with an always-on active antitampering system. If mechanical intrusion is detected by this system, the switch is permanently disabled and the LED blinks continuously.

- If the product indicates a tampered state (all LEDs blinking) - call HSL Technical Support and avoid using the product.

INSTALLATION

Installing the Mini-Matrix

Step 1 – Install Cables

1. Connect the console port peripherals:

   • Connect the video displays to the Mini-Matrix primary and secondary display ports.

    Note: It is highly recommended to use identical primary and secondary display models. EDID information is taken from the primary console display port (#1) and sent to all connected computers. When using non-identical displays, connect the smaller display to the primary console display port.

    • Connect keyboard, mouse, and audio peripherals to the Mini-Matrix console ports. These are shared securely between all sources.

    • Connect a smartcard/biometric reader to the Mini-Matrix's console fUSB secure port, to support user authentication across multiple isolated sources.

2. Connect the computer/source channel ports: For each source, connect the video, keyboard, mouse, fUSB, and audio cables to the Mini-Matrix source ports.

3. To receive dual-screen support: Download and install HSL's multi-display driver on source computers that have multiple screens (currently available only for Windows) (http://highseclabs.com/dl.php?fid=446).
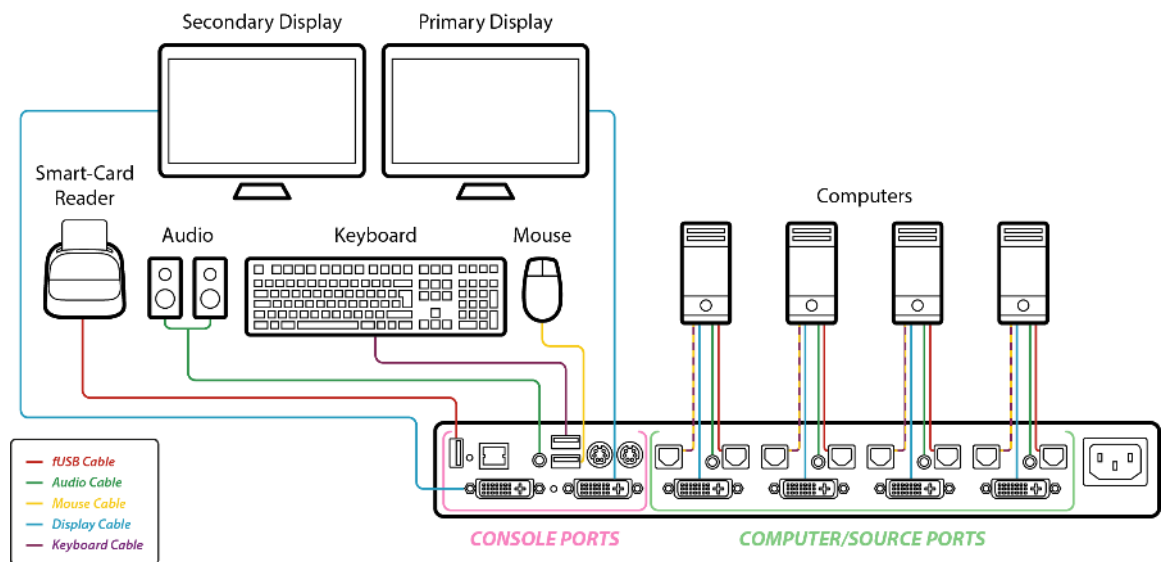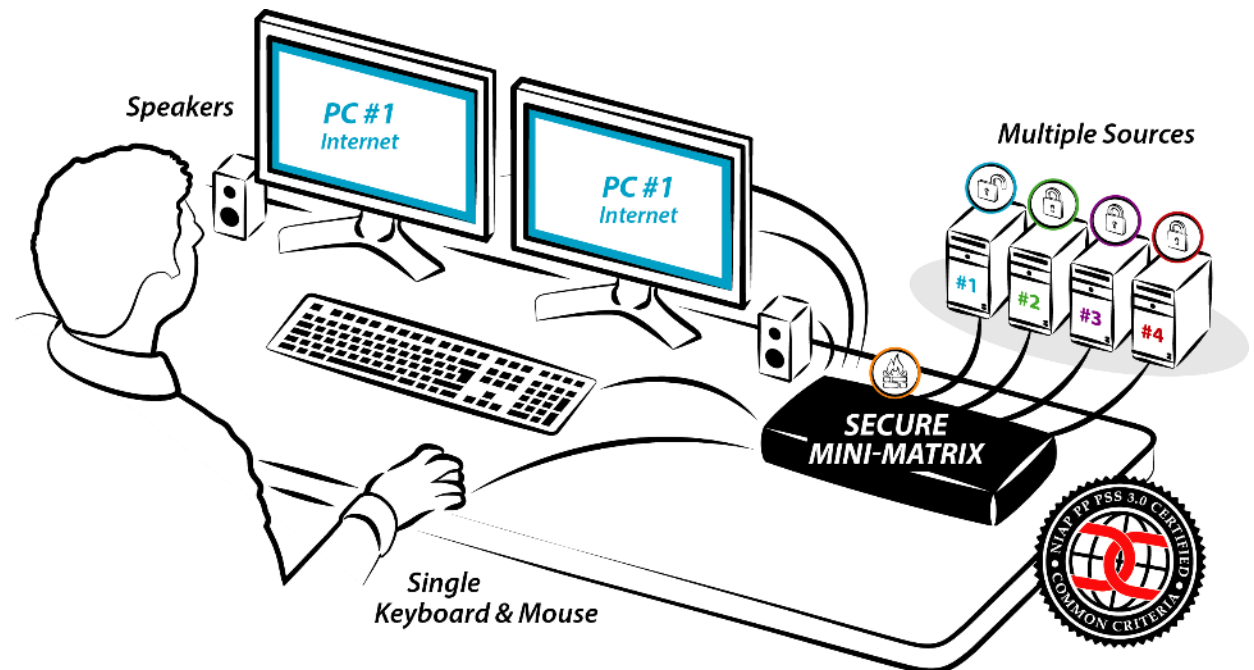
INSTALLATION

Step 2 - Power ON the Mini-Matrix

1. Turn ON all the PCs.

2. Connect the power supply and power ON the Mini-Matrix (approximate boot time is 10 seconds).

   The Mini-Matrix boots in to duplicate mode, where the source number 1 is presented on both displays.

Note: In case no picture is presented after powering ON, switch between the primary and secondary displays, or connect an alternate display, or perform a reset to factory default.

INSTALLATION

Step 3 - Reset to Factory Defaults

Reset to factory defaults clears the device settings and restores the device to its original configuration. You have the following options:

- System reset: Clears behavioral characteristics such as mouse settings and display presets.
  Type the: { **L Ctrl | L Ctrl | F11| r** } key combination.

- Complete reset: Clears all device settings and resets to factory defaults. From the Terminal menu, select the "Reset to Factory Defaults" option (refer to terminal mode guide).

Important Notes:

1. Always use the **left control key (Ctrl)** unless otherwise specified.

2. Keyboard shortcut keys are to be pressed sequentially

3. Do not use the numeric keypad for toggling shortcuts, unless otherwise specified.

4. ALL KEYBOARD SHORTCUTS REFER TO QWERTY KEYBOARDS. For non-qwerty keyboards, keep using the QWERTY layout.
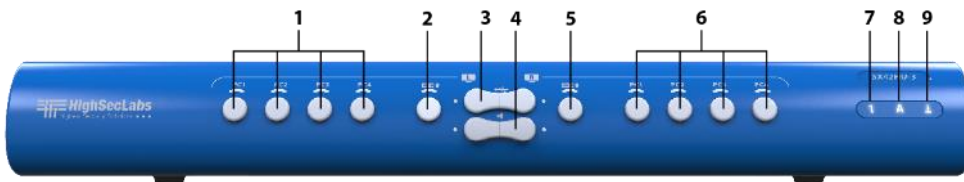
OPERATION

Operating the Mini-Matrix

Step 1 - Display and Control Options
Display and control options define which source to display and control on each screen. Source selection is done using the source selection buttons on the front panel or via the DCU (dedicated control unit) port.

1 No. 1-4 Computer No. 1 display Push-Button **6** No. 1-4 Computer No. 2 display Push-Button
2 Keyboard and Mouse toggle   **7** Num Lock LED
3 fUSB Freeze toggle   **8** Caps Lock LED
4 Audio Freeze toggle   **9** Scroll Lock LED
5 Keyboard and Mouse toggle

- Use the source selection panels to choose which source to display on each screen.
- The left panel controls which source to display on the primary display, while the right panel controls the secondary display. For example, as seen in the illustration, when #1 is selected on the primary panel and #3 is selected on the secondary panel, the selected sources are presented accordingly.
- A source can be duplicated, by selecting its number on both panels.
- By default, mouse, keyboard, audio, and fUSB peripherals follow the display association.
- Independently switch the video/usb /audio /keyboard and mouse ports between computers.

- Use the front-panel push buttons to independently switch the video/usb /audio/keyboard and mouse ports between the primary and secondary computers. This is useful for various scenarios, for example:
  - It is possible to switch every peripheral device group independently between the two projected computers.
  - Video, HID (keyboard and Mouse), audio, and fUSB can be switched independently.
  - When a user wants to listen to audio originating from one computer while, working on another computer.
- Additional options are described later under the Advanced Presets section.

Screen Border
Mouse Cursor Path
Mouse Cable
Display Cable
Keyboard Cable
Controlled PC Screens
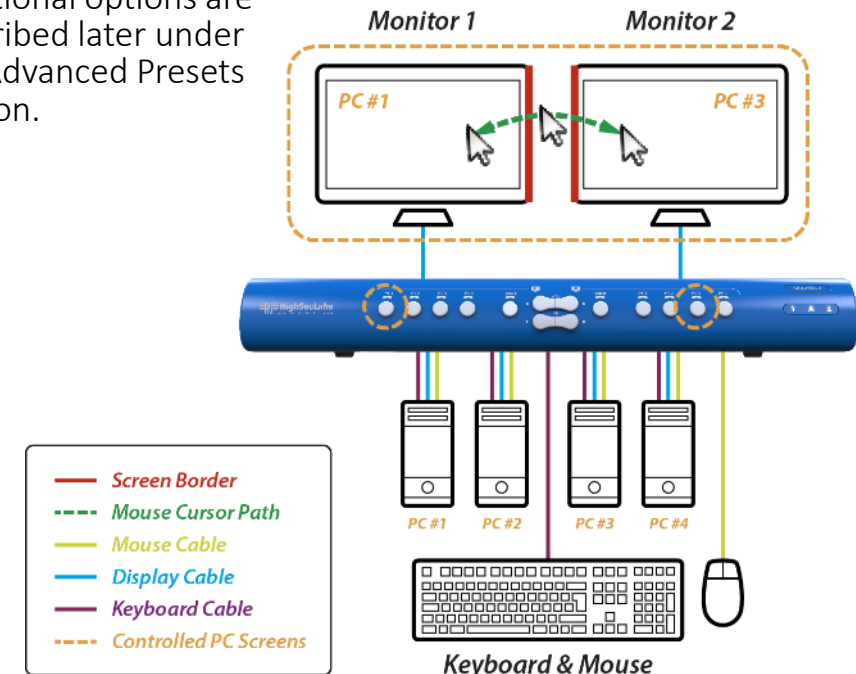
OPERATION

Step 2 - Relative vs. Absolute Mouse

The Mini-Matrix is set up with the following mouse settings:

- **Relative mouse** (default) confines the mouse movement to the screen of each selected computer. To switch the mouse between sources, use the front panel push buttons.

- **Absolute mouse** (Virtual Display Technology - VDT) enables switching the mouse between sources, by moving the mouse cursor across display boarders.

Cursor Navigation (Virtual Display Technology - VDT):

- With cursor navigation, the user can move from one highly isolated computer system to another, by simply moving the mouse cursor across display borders.

- Once the cursor crosses the display border, the keyboard, mouse, audio, and USB mapping switches to the computer that is connected to that display.

- No need to push any buttons.

How to define the mouse state

- Use the key combination { **L Ctrl | L Ctrl | F11 | c** } to enable absolute mouse (VDT).

- Use the key combination { **L Ctrl | L Ctrl | F11 | b** } to enable relative mouse (this is the default mode).
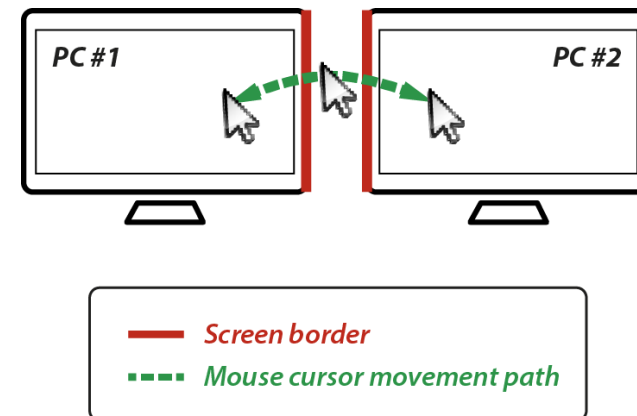
Note: It is possible to enable a safety trigger for more controlled switching between channels. Using: **L-Ctrl | L-Ctrl | F11 | L** requires pressing the left Ctrl button while dragging the mouse to switch channels.

OPERATION

Step 3 - Predefined Display Layouts (Presets)

What are presets?

- Presets reflect the layout and boarders of computer displays to the Mini-Matrix.

- The Mini-Matrix includes six predefined presets, described below.

What are presets for?

- Presets enable the Mini-Matrix to correctly associate the mouse with each source, based on the physical display positioning and the respective number of displays associated with each source.

- Presets enable cursor navigation switching that enables switching control between PCs, by moving the mouse cursor across display boarders.

How to switch between presets?

- Use the key combination { **L Ctrl | L Ctrl | F11 | F1-to-F10** } to toggle between presets.

To enable absolute-mouse prior to working with presets, type:
{ L Ctrl | L Ctrl | F11 | c }.

Note: Additional presets are possible using an external configuration tool. For more information, contact HSL support.

Note: Presets do not apply to 2P SX22x-3.

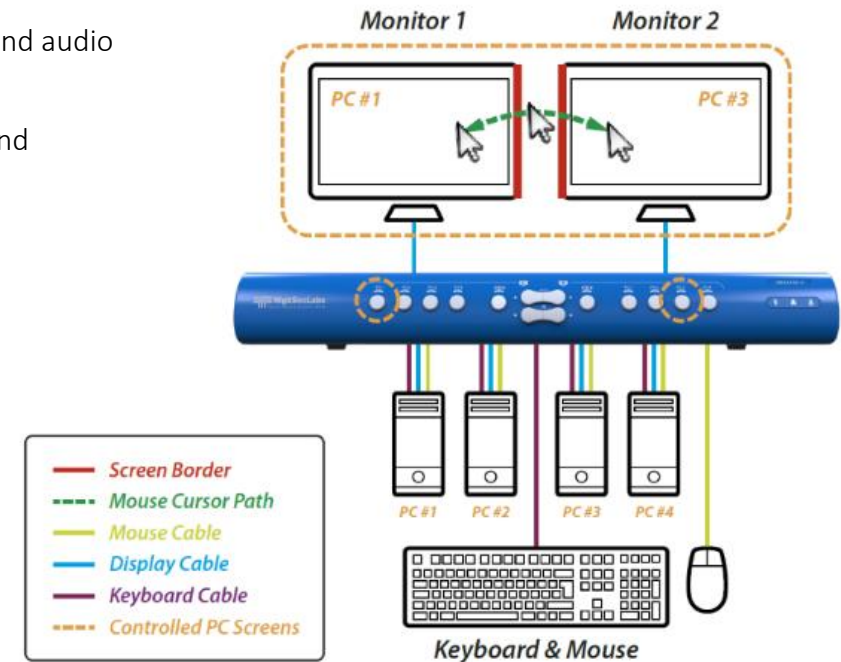## OPERATION - 4-PORT ADVANCED PRESETS

Preset #1 (default) { L Ctrl | L Ctrl | F11 | F1 } (applicable for both 4P and 8P)

Setup:

- **Connect PCs to the computer/source ports:** Connect each computer's display, USB, and audio cables to the corresponding computer port.

- **Connect peripherals to the console ports:** Connect two displays, keyboard, mouse, and speaker/headphone to the console ports.

To use:

- Choose which computer to display on each screen, using the source selection panels.

- The left panel controls which computer to display on the primary display. The right panel controls the secondary display.

- Seamlessly switch between computers, by moving the mouse cursor across display boarders.

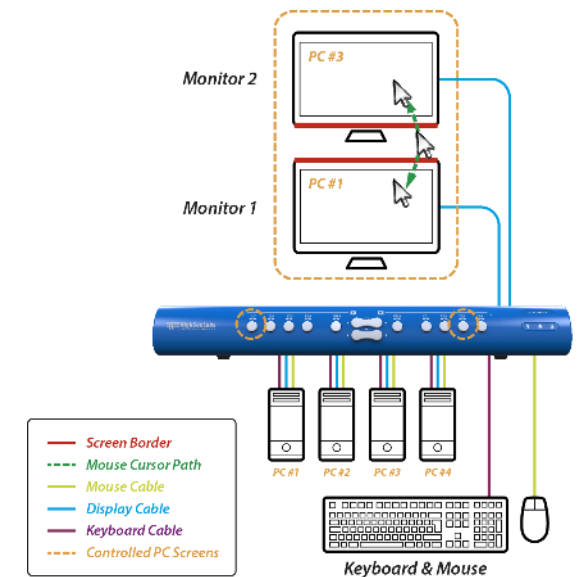- Keyboard, audio, and USB peripherals follow the mouse association.

OPERATION - 4-PORT ADVANCED PRESETS

Preset #2 { L Ctrl | L Ctrl | F11 | F2 } (applicable for both 4P and 8P)

- Two displays/monitors (monitors 1 and 2) are connected to the primary and secondary console ports.

- Four single-display sources (PCs 1-4) are connected to the Mini-Matrix source ports 1-4.

- Display/monitors are aligned vertically so that the secondary screen is on top of the primary screen.

- The VDT mouse cursor movement axis is vertical.

Highlights:

- Use the source selection panel to choose which sources to display.

- Switch between selected sources, by dragging the mouse cursor vertically.

Preset #3 { L Ctrl | L Ctrl | F11 | F3 }

- Two displays/monitors (monitors 1 and 2) are connected to the primary and secondary console ports.
- One display/monitor (monitor 3) is connected directly to the PC #1 primary-display adapter.
- The PC #1 secondary-display adapter is connected to the Mini-Matrix source port 1.
- Three single-display sources (PC 2, 3, and 4) are connected to the Mini-Matrix source ports 2, 3, and 4.
- All displays/monitors are aligned horizontally so that the primary screen of PC#1 is on the left, the Mini-Matrix primary screen is in the middle, and the Mini-Matrix Secondary screen is on the right.
- The VDT mouse cursor movement axis is horizontal.

Note: Any externally connected display should have the same native resolution of the primary display connected directly to the matrix.

Download and install HSL's Multi Display Driver on source computers that have multiple screens (currently available for Windows only).
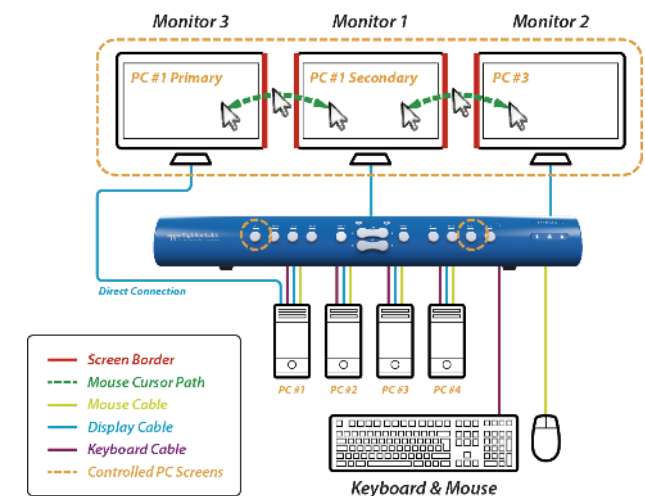
OPERATION - 4-PORT ADVANCED PRESETS

Preset #4 { L Ctrl | L Ctrl | F11 | F4 }

- Same as Preset #3 when source #4 is directly connected to a primary screen.
- Two display/monitors (monitors 1 and 2) are connected to the primary and secondary console ports.
- One display/monitor (monitor 4) is connected directly to the PC #4 primary-display adapter.
- The PC #4 secondary-display is connected to the Mini-Matrix source port 4.
- Three single-display sources (PC 1, 2, and 3) are connected to the Mini-Matrix source ports 1, 2, and 3.
- All displays/monitors are aligned horizontally so that the Mini-Matrix primary screen is on the left, the Mini-Matrix secondary screen is in the middle, and the primary screen of PC#4 is on the right.
- The VDT mouse cursor movement axis is horizontal.

Note: Any externally connected displays should have the same native resolution of the primary display connected directly to the matrix.
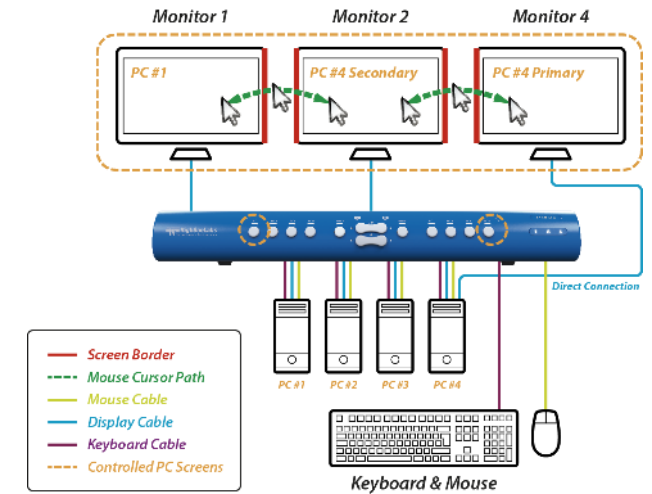
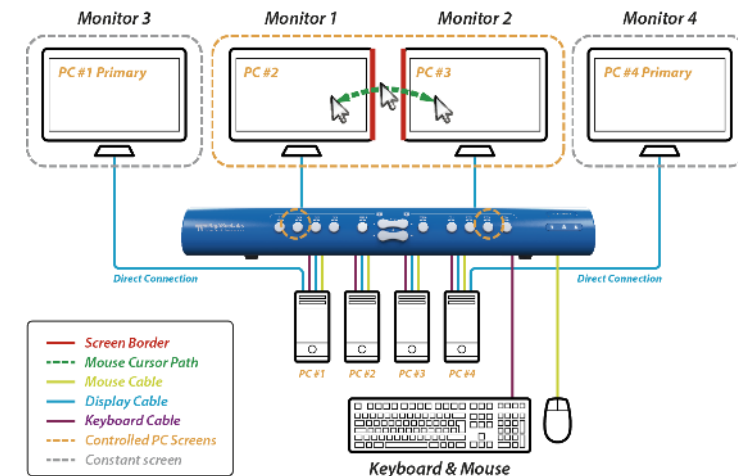### Preset #5 { L Ctrl | L Ctrl | F11 | F5 }

Combines preset #3 with preset #4, as follows:

- Two displays/monitors (monitor 1 and 2) are connected to the primary and secondary console ports.
- Two displays/monitors (monitor 3 and 4) are connected directly as primary displays to PCs #1 and #4, respectively.
- PCs #1 and #4 secondary-display adapters are connected to the Mini-Matrix source ports 1 and 4.
- Two single-display sources (PC 2 and 3) are connected to the Mini-Matrix source ports 2 and 3.
- All displays/monitors are aligned horizontally so that the primary screen of PC#1 is on the left and the primary screen on PC#4, is on the right. The Mini-Matrix primary and secondary screens are in the middle.
- The VDT mouse cursor movement axis is horizontal.

Highlights:

- Displays and controls PC#1 and PC#4 dual displays.
- Controls PC#2 and PC#3 while displaying the primary screens of PCs 1 and 4.

Note: Any externally-connected display should have the same native resolution of the primary display connected directly to the matrix.
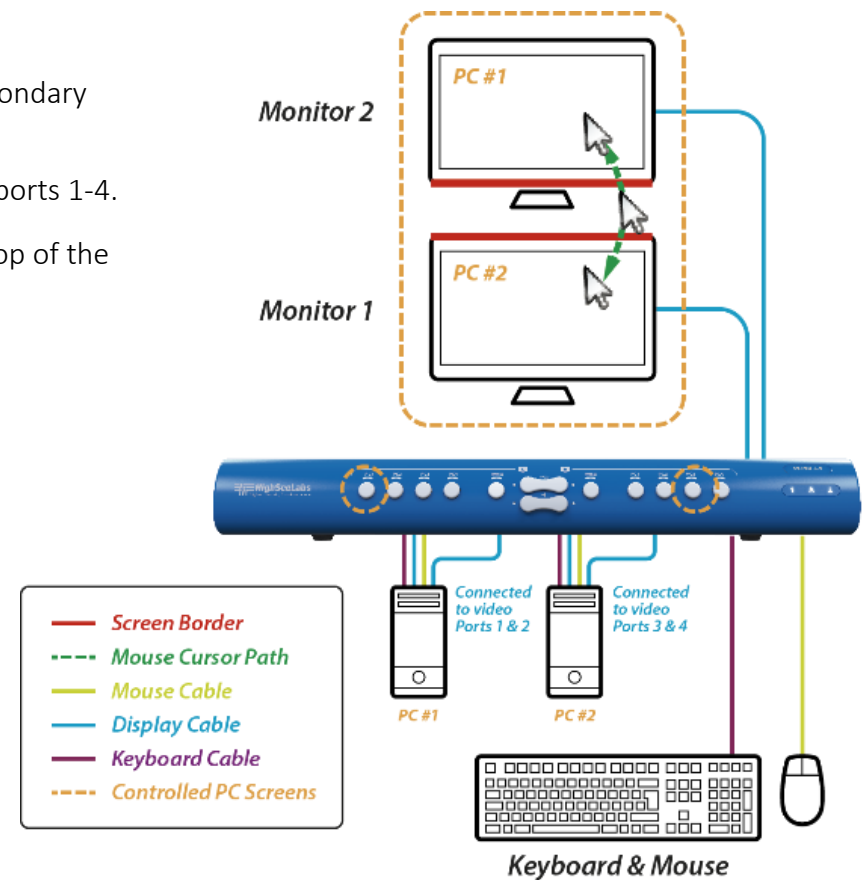
OPERATION - 4-PORT ADVANCED PRESETS

Preset #6 { L Ctrl | L Ctrl | F11 | F6 }

- Two displays/monitors (monitors 1 and 2) are connected to the primary and secondary console ports.

- Two dual-display sources (PC 1 and 2) are connected to the Mini-Matrix source ports 1-4.

- The displays/monitors are aligned vertically so that the secondary screen is on top of the primary screen.

- The VDT mouse cursor movement axis is vertical.

Highlights:

- Use the source selection panel to choose which sources to display.

- View and control any monitor combination, such as:

  ○ PC#1 primary and secondary screens

  ○ PC#2 primary and secondary screens

  ○ PC#1 and #2 primary screens

  ○ PC#1 and #2 secondary screens

  ○ PC#1 primary and PC#2 secondary

  ○ PC#2 primary and PC#1 secondary

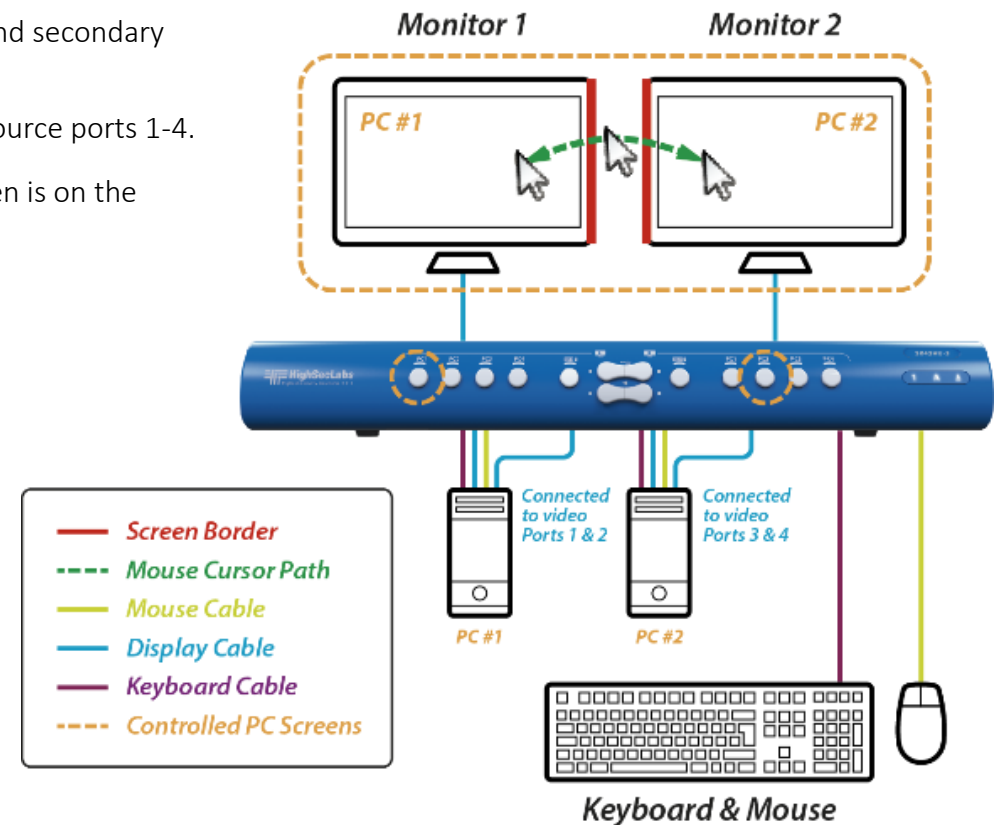- Switch between selected sources by dragging the mouse cursor vertically.

OPERATION - 4-PORT ADVANCED PRESETS

Preset #7 { L Ctrl | L Ctrl | F11 | F7 }

- Two displays/monitors (monitors 1 and 2) are connected to the primary and secondary console ports.

- Two dual-display sources (PC 1 and 2) are connected to the Mini-Matrix source ports 1-4.

- The displays/monitors are aligned horizontally so that the secondary screen is on the right of the primary screen.

- The VDT mouse cursor movement axis is horizontal.

Highlights:

- Use the source selection panel to choose which sources to display.

- View and control any monitor combination, such as:

  ○ PC#1 primary and secondary screens

  ○ PC#2 primary and secondary screens

  ○ PC#1 and #2 primary screens

  ○ PC#1 and #2 secondary screens

  ○ PC#1 primary and PC#2 secondary

  ○ PC#2 primary and PC#1 secondary

- Switch between selected sources by dragging the mouse cursor vertically.

OPERATION - 4-PORT ADVANCED PRESETS

Preset #8 { L Ctrl | L Ctrl | F11 | F8 }

- Two displays/monitors (monitors 1 and 2) are connected to the primary and secondary console ports.

- Two single-display sources (PCs 1 and 2) and one dual-display source (PC 3) are connected to the Mini-Matrix source ports 1-4.

- Displays/monitors are aligned horizontally so that the secondary screen is on the right of the primary screen.

- The VDT mouse cursor movement axis is horizontal.

Highlights:

- Use the source selection panel to choose which sources to display.

- View and control any monitor combination, such as:

  ◦ PC#1 and #2 primary screens

  ◦ PC#1 and #2 secondary screens

  ◦ PC#1 primary and PC#2 secondary

  ◦ PC#2 primary and PC#1 secondary

  ◦ PC#3 primary and secondary screens

  ◦ PC#1 primary and PC#3 secondary

- Switch between selected sources by dragging the mouse cursor horizontally.
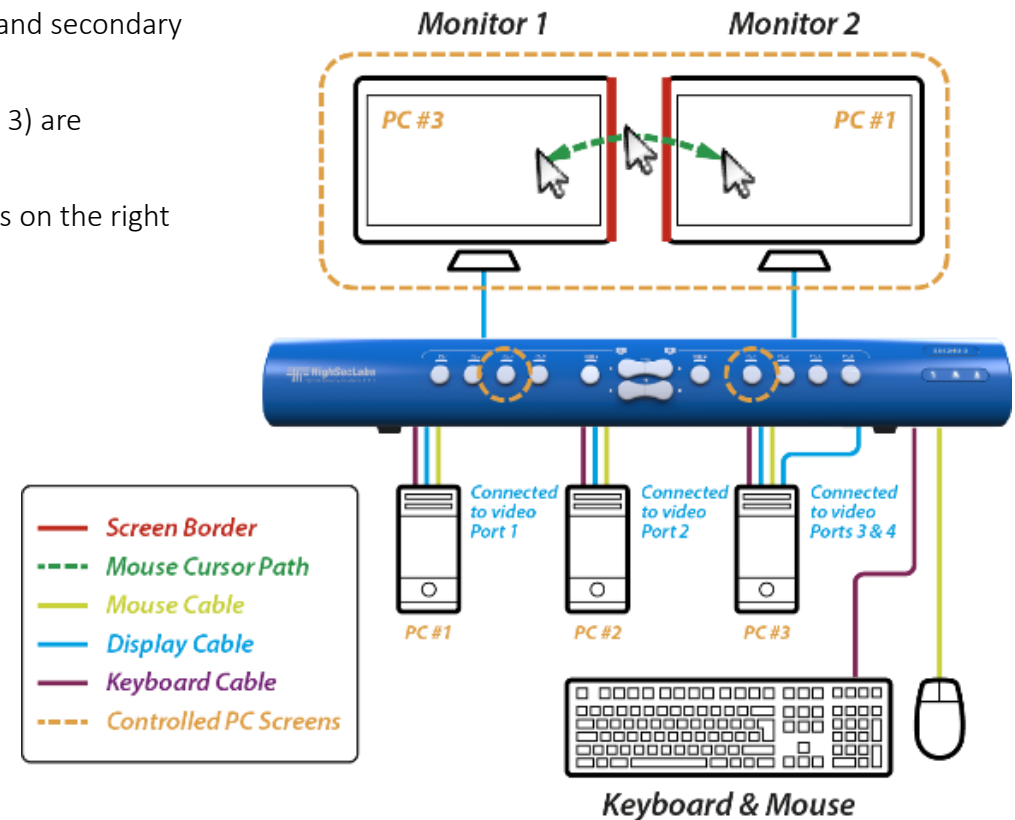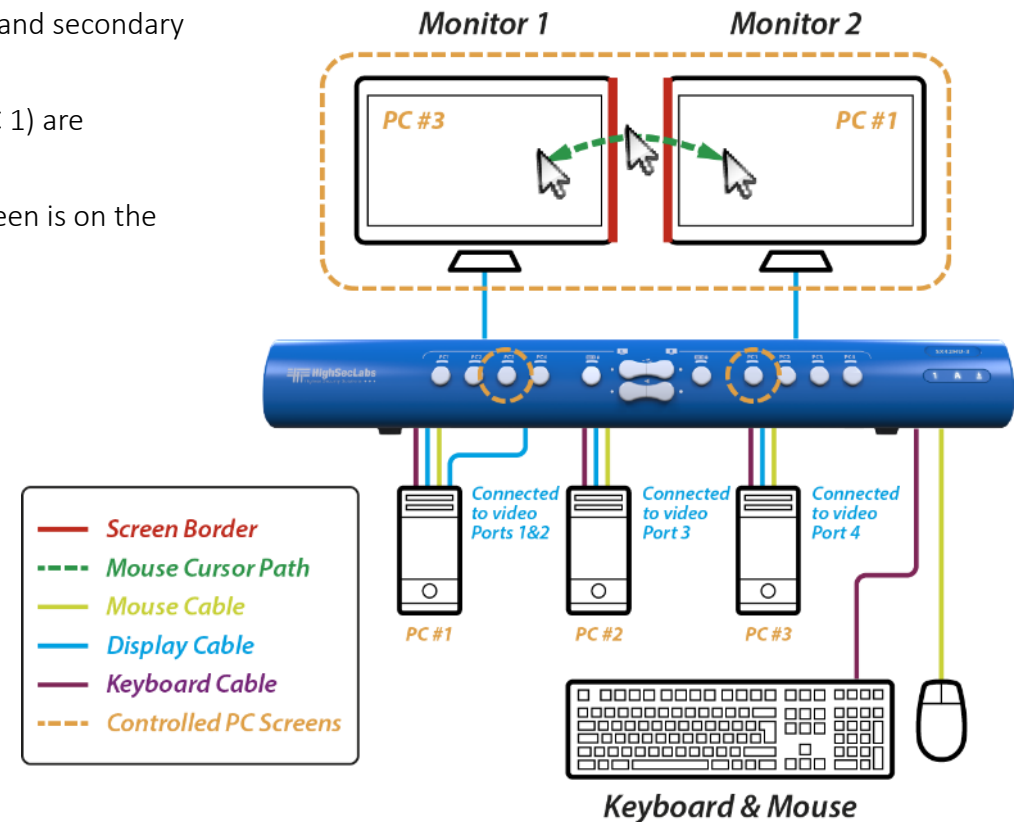
OPERATION - 4-PORT ADVANCED PRESETS

Preset #9 { L Ctrl | L Ctrl | F11 | F9 }

- Two displays/monitors (monitors 1 and 2) are connected to the primary and secondary console ports.

- Two single-display sources (PCs 2 and 3) and one dual-display source (PC 1) are connected to the Mini-Matrix source ports 1-4.

- The displays/monitors are aligned horizontally so that the secondary screen is on the right of the primary screen.

- The VDT mouse cursor movement axis is horizontal.

Highlights:

- Use the source selection panel to choose which sources to display.

- View and control any monitor combination, such as:

  ◦ PC#2 and #3 primary screens

  ◦ PC#2 and #3 secondary screens

  ◦ PC#2 primary and PC#3 secondary

  ◦ PC#3 primary and PC#2 secondary

  ◦ PC#1 primary and secondary screen

  ◦ PC#3 primary and PC#1 secondary

- Switch between selected sources by dragging the mouse cursor horizontally.
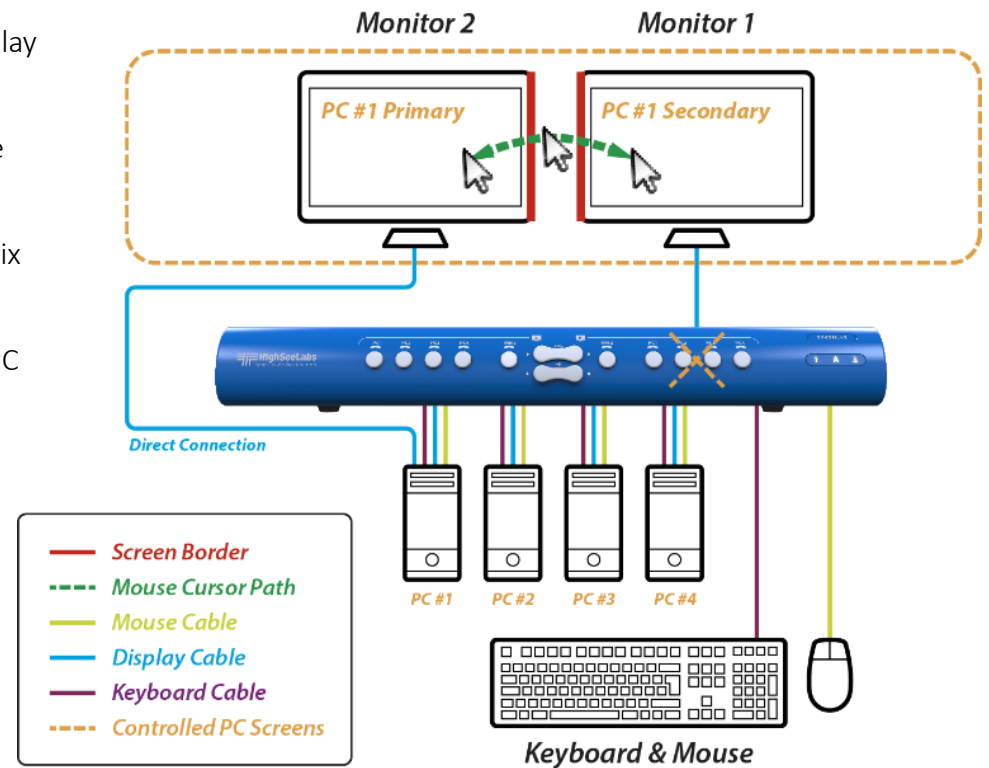
OPERATION - 4-PORT ADVANCED PRESETS

Preset #10 { L Ctrl | L Ctrl | F11 | F10 }

- One display/monitor (monitor 1) is connected to the primary console port.

- One display/monitor (monitor 2) is connected directly to PC #1 primary-display adapter.

- The PC #1 secondary-display adapter is connected to the Mini-Matrix source port 1.

- Three single-display sources (PC 2, 3, and 4) are connected to the Mini-Matrix source ports 2, 3, and 4.

- All displays/monitors are aligned horizontally so that the primary screen of PC #1 is on the left, and the Mini-Matrix primary screen is on the right.

- The right side of the Mini-Matrix is cancelled.

- The VDT mouse cursor movement axis is horizontal.

Note: Any externally connected display should have the same native resolution of the primary display connected directly to the matrix.

Download and install HSL's Multi Display Driver on source computers that have multiple screens (currently available for Windows only).
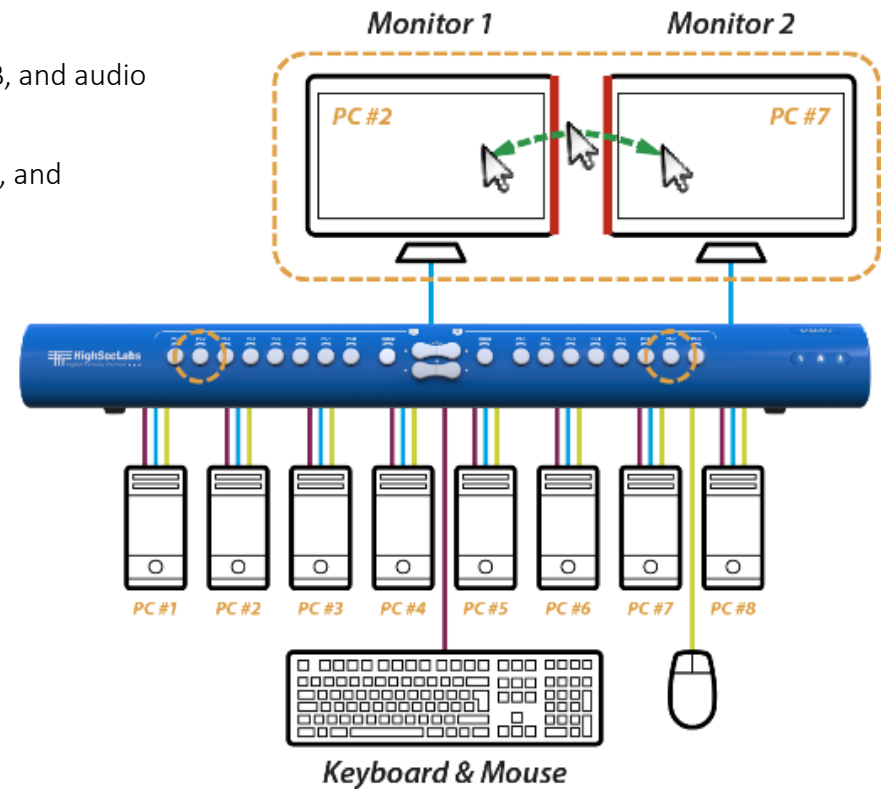
OPERATION - 8-PORT ADVANCED PRESETS

Preset #1 (default) { L Ctrl | L Ctrl | F11 | F1 } (applicable for both 4P and 8P)

Setup:

- **Connect PCs to the computer/source ports:** Connect each computer's display, USB, and audio cables to the corresponding computer port.

- **Connect peripherals to the console ports:** Connect two displays, keyboard, mouse, and speaker/headphone to the console ports.

To use:

- Choose which computer to display on each screen using the source selection panels.

- The left panel controls which computer to display on the primary display while the right panel controls the secondary display.

- Seamlessly switch between computers by moving the mouse cursor across display boarders.

- Keyboard, audio, and USB peripherals follow the mouse association.

OPERATION - 8-PORT ADVANCED PRESETS

Preset #2 { L Ctrl | L Ctrl | F11 | F2 } (applicable for both 4P and 8P)

- Two displays/monitors (monitors 1 and 2) are connected to the primary and secondary console ports.

- Eight single-display sources (PC s1-8) are connected to the Mini-Matrix source ports 1-8.

- The displays/monitors are aligned vertically so that the secondary screen is on top of the primary screen.

- The VDT mouse cursor movement axis is vertical.

Highlights:

- Use the source selection panel to choose which sources to display.

- Switch between selected sources by dragging the mouse cursor vertically.
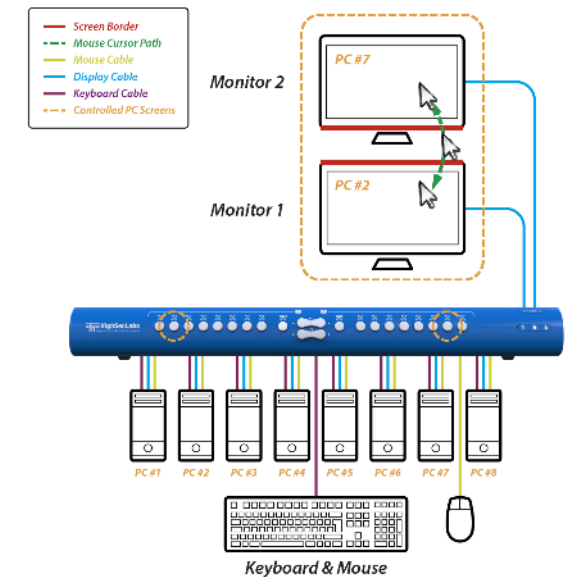
Preset #3 { L Ctrl | L Ctrl | F11 | F3 }

- Two displays/monitors (monitors 1 and 2) are connected to the primary and secondary console ports.

- The dual-display source (PC 1) is connected to the Mini-Matrix source ports 1 and 2.

- Single-display sources (PC 2-7) are connected to the Mini-Matrix source ports 3-8.

- The displays/monitors are aligned horizontally so that the secondary screen is on the right of the primary screen.

- The VDT mouse cursor movement axis is horizontal.

Highlights:

- Use the source selection panel to choose which sources to display.

- Switch between selected sources by dragging the mouse cursor vertically.
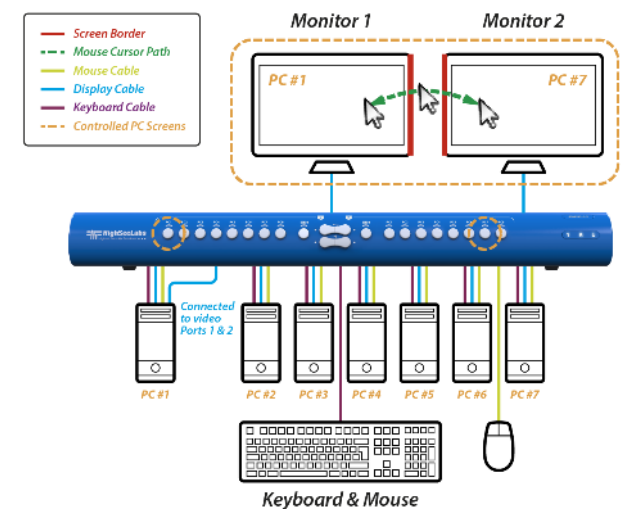
OPERATION - 8-PORT ADVANCED PRESETS

Preset #4 { L Ctrl | L Ctrl | F11 | F4 }

- Two display/monitors (monitors 1 and 2) are connected directly to the PC #6 and PC #7 primary-display adapter.

- Two display/monitors (monitor 3 and 4) are connected to the primary and secondary console ports.

- The dual-display source (PC 1) is connected to the Mini-Matrix source ports 1 and 2.

- The PC #6 secondary-display adapter is connected to the Mini-Matrix source port 7.

- The PC #7 secondary-display adapter is connected to the Mini-Matrix source port 8.

- Four single-display sources (PC 2, 3, 4, and 5) are connected to the Mini-Matrix source ports 3, 4, 5, and 6.

- Two display/monitors (monitors 1 and 2) are aligned vertically so that the Mini-Matrix primary screens are on top, and the Mini-Matrix secondary screens are at the bottom.

Note: Any externally connected display should have the same native resolution of the primary display connected directly to the matrix.
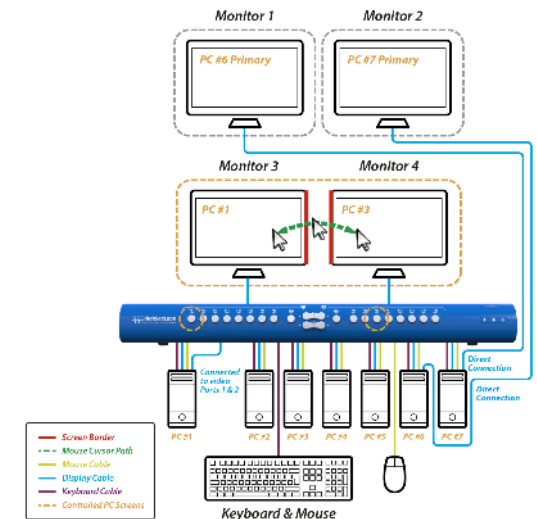
Preset #5 { L Ctrl | L Ctrl | F11 | F5 }

- Two displays/monitors (monitors 1 and 2) are connected to the primary and secondary console ports.

- One display/monitor (monitor 3) is connected directly as the primary-display to PC #7.

- The dual-display source (PC 1) is connected to the Mini-Matrix source ports 1 and 2.

- Five single-display sources (PC 2, 3, 4, 5, and 6) are connected to the Mini-Matrix source ports 3, 4, 5, 6, and 7.

Note: Any externally connected display should have the same native resolution of the primary display connected directly to the matrix.
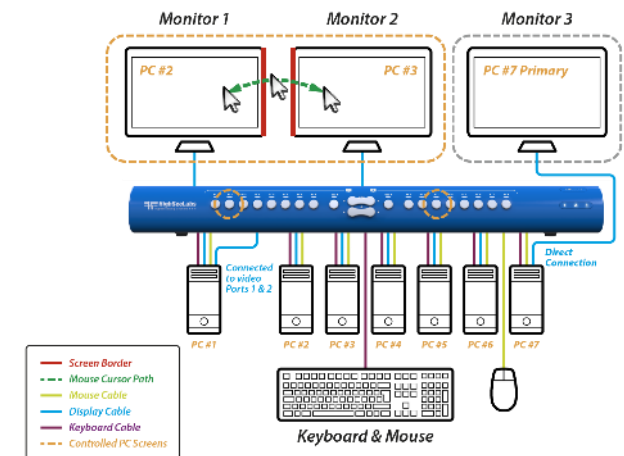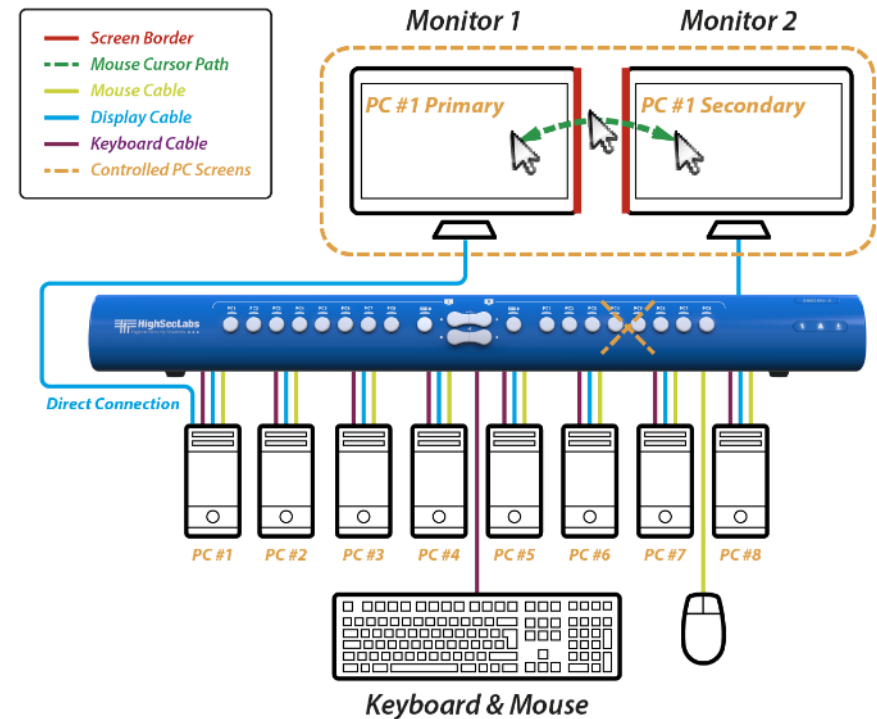
OPERATION - 8-PORT ADVANCED PRESETS

Preset #6 { L Ctrl | L Ctrl | F11 | F6 }

- One display/monitor (monitor 2) is connected to the primary console port.

- One display/monitor (monitor 1) is connected directly to the PC #1 primary-display adapter.

- The PC #1 secondary-display adapter is connected to the Mini-Matrix source port 1.

- Seven single-display sources (PCs 2-8) are connected to the Mini-Matrix source ports 2-8.

- All display/monitors are aligned horizontally so that the primary screen of PC #1 is on the left, and the Mini-Matrix primary screen, is on the right.

- The right side of the Mini-Matrix is disabled.

- The VDT mouse cursor movement axis is horizontal.

Note: Any externally connected display should have the same native resolution of the primary display connected directly to the matrix.

Download and install HSL's Multi Display Driver on source computers that have multiple screens (currently available for Windows only).
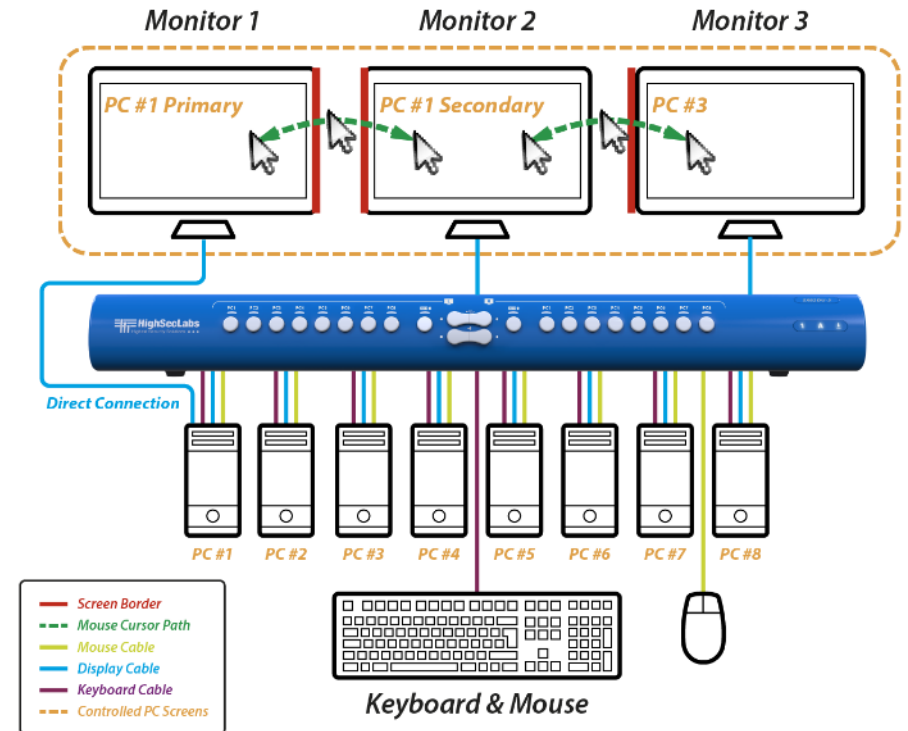
OPERATION - 8-PORT ADVANCED PRESETS

Preset #7 { L Ctrl | L Ctrl | F11 | F7 }

- One display/monitor (monitor 2) is connected to the primary console port.

- **One display/monitor (monitor 3) is connected to the secondary console port.**

- One display/monitor (monitor 1) is connected directly to the PC #1 primary-display adapter.

- The PC #1 secondary-display adapter is connected to the Mini-Matrix source port 1.

- Eight single-display sources (PCs 2-8) are connected to the Mini-Matrix source ports 2-8.

- All displays/monitors are aligned horizontally so that the primary screen of PC #1 is on the left, and the Mini-Matrix primary screen is on the right.

- The VDT mouse cursor movement axis is horizontal.

Note: Any externally connected display should have the same native resolution of the primary display connected directly to the matrix.

Download and install HSL's Multi Display Driver on source computers that have multiple screens (currently available for Windows only).
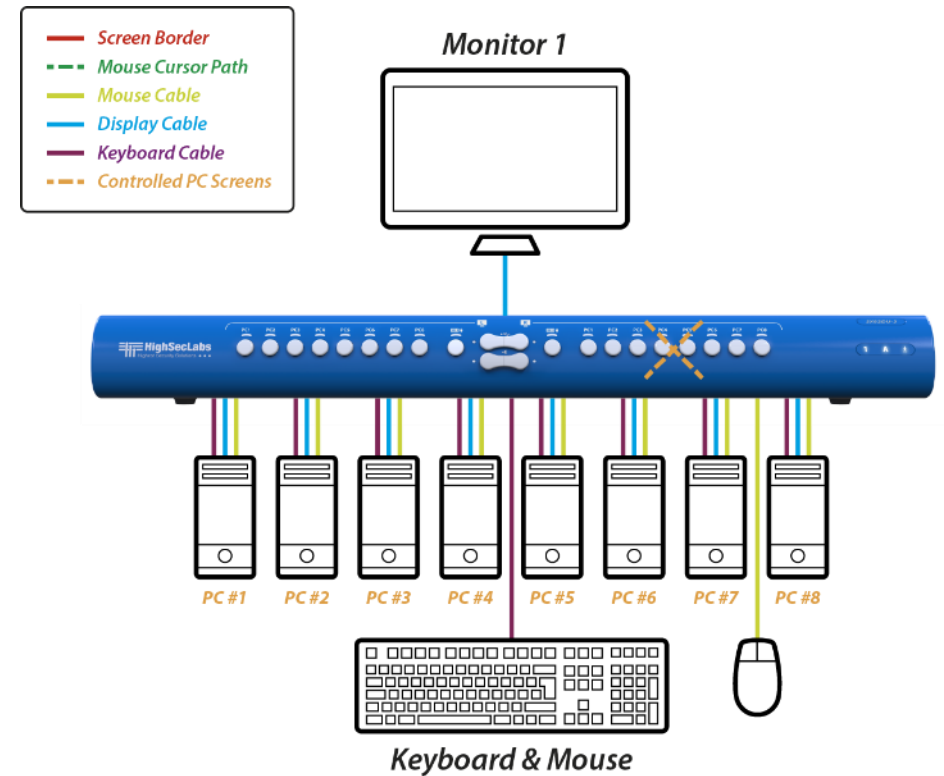
OPERATION - ADVANCED PRESETS

Preset { L Ctrl | R Ctrl | M } - Legacy Mode - functioning as KVM (applicable for both 4P and 8P)

- One display/monitor is connected to the primary console ports.

- Eight single-display sources (PCs 1-8) are connected to the Mini-Matrix source ports 1-8.

- The right side of the Mini-Matrix is disabled.

Download and install HSL's Multi Display Driver on source computers that have multiple screens (currently available for Windows only).

OPERATION - ADVANCED PRESETS

Preset { L Ctrl | L Ctrl | F11 | D } - Switch to dual-head KVM preset

(applicable for both 4P and 8P)

The KVM behaves like a 2P or 4P dual head KVM.

e. g. - PC#1 is connected to ports1and 2, PC#2 is connected to ports 3 and 4

• Pressing the #1 button switches the left side to source 1, and the right side to source 2.

• Pressing the #3 button switches the left side to source 3, and the right side to source 4.

Download and install HSL's Multi Display Driver on source computers
that have multiple screens (currently available for Windows only).
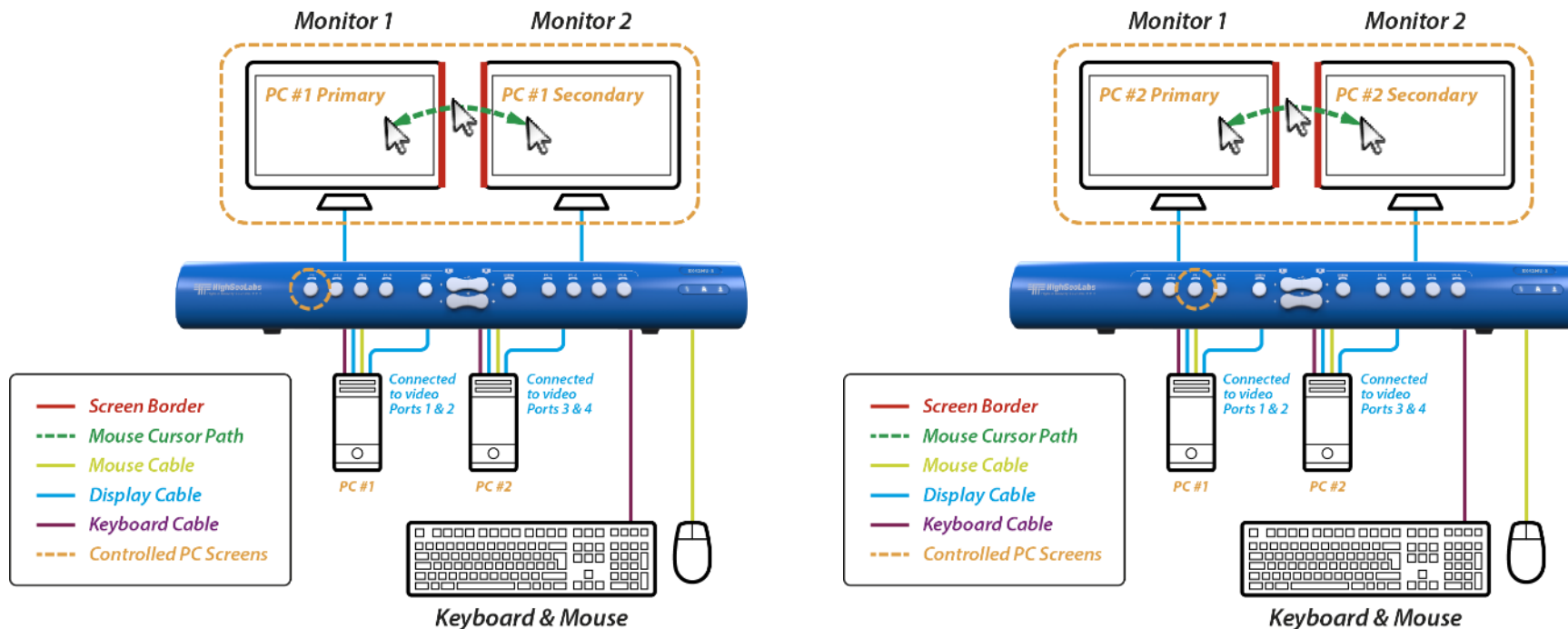
OPERATION

Keyboard shortcut options

#	Action Description	Keyboard
1	Reset to factory defaults	L-Ctrl | L-Ctrl | F11 | R
2	Activate relative mode	L-Ctrl | L-Ctrl | F11 | B
3	Activate absolute mode	L-Ctrl | L-Ctrl | F11 | C
4	Enable preset Fx (e.g. LCtrl LCtrl F11 F3 - enable preset F3)	L-Ctrl | L-Ctrl | F11 | Fx
5	Enable legacy mode	L-Ctrl | R-Ctrl | M
6	Switch to dual-head preset	L-Ctrl | L-Ctrl | F11 | D
7	Switch channels on primary	L-Ctrl | L-Ctrl | 1-8
8	Switch to channel x on the right (e.g. RCtrl RCtrl 3 - switch to channel 3 on the right)	R-Ctrl | R-Ctrl | 1-8
9	Switch kbd/mouse to the left	L-Ctrl | L-Ctrl | [Arrow] left
10	Switch kbd/mouse to the right	L-Ctrl | L-Ctrl | [Arrow] right
11	Switch sound to the left (press second time to lock, press third time to unlock)	R-Ctrl | R-Ctrl | [Arrow] left
12	Switch sound to the right (press second time to lock, press third time to unlock)	R-Ctrl | R-Ctrl | [Arrow] right
13	Switch DPP to the left (press second time to lock, press third time to unlock)	R-Ctrl | R-Ctrl | [Arrow] up

#	Action Description	Keyboard
14	Switch DPP to the right (press second time to lock, press third time to unlock)	R-Ctrl | R-Ctrl | [Arrow] down
15	Lock both directions (in and out) on all channels (require to hold CTRL while switching)	L-Ctrl | L-Ctrl | F11 | L
16	Unlock both directions (in and out) on specified channels (e.g. LCtrl LCtrl A 3 1 2 4 – unlock three channels: 1, 2 and 4)	L-Ctrl | L-Ctrl | F11 | A | N | N1 .. NN
17	Unlock one direction (in) on specified channels (e.g. LCtrl LCtrl I 3 1 2 4 – unlock three channels: 1, 2 and 4)	L-Ctrl | L-Ctrl | F11 | I | N | N1 .. NN
18	Unlock one direction (out) on specified channels (e.g. LCtrl LCtrl O 3 1 2 4 – unlock three channels: 1, 2 and 4)	L-Ctrl | L-Ctrl | F11 | O | N | N1 .. NN
19	Enter the switch to loading state	L-Ctrl | R-Ctrl | L
20	Switch to custom preset [external loading]	L-Ctrl | L-Ctrl | F11 | F12
21	Temporarily switch to relative mouse mode	L Ctrl + Shift [press and hold]
22	Enable / disable shortcut forwarding	L Ctrl | R Ctrl | End
23	Send string #OSDon to RS232	R Shift | R Shift
24	Send string #BEG 0 .. 9 END# to RS232	L Alt | L Alt | 0 .. 9 | Enter

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