

# Secure/Commercial **ULTRA MINI-MATRIX** **KVM SWITCHES**



Streamline operations across multiple networks with the functionality of a KVM switch, scaler, and multiviewer in a single powerful solution.

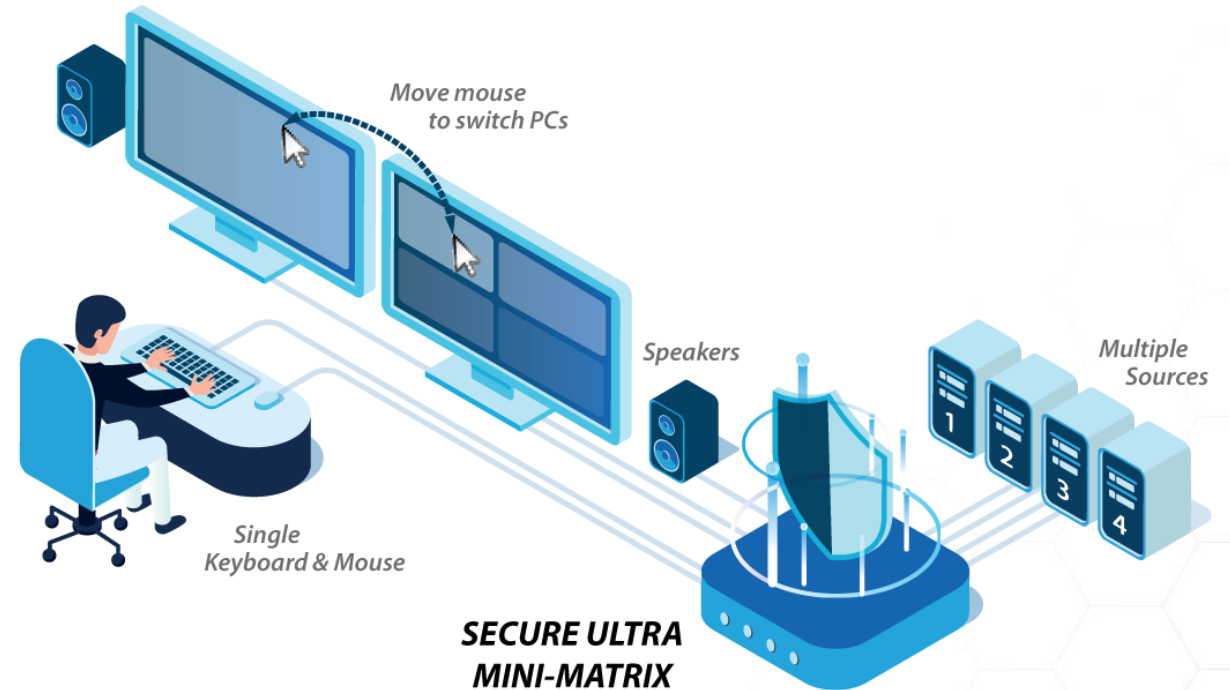
HLT37160 Rev 1.3



# INTRODUCING THE ULTRA MINI-MATRIX

The **Ultra Mini-Matrix** empowers you with multi-viewing and scaling functionalities, consolidating and arranging multiple sources onto a single or dual screen display while maintaining absolute data separation, preventing any information from crossing over.

It's the ultimate solution for executive offices, meeting rooms, and operation centers, empowering users with seamless and secure access to critical information, displaying information from multiple sources simultaneously on one or two display screens .



# ULTRA MINI-MATRIX KEY FEATURES

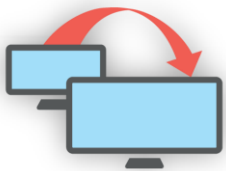


- The Ultra Mini-Matrix is a **NIAP PP4.0 compliant**<sup>1</sup> KVM switch with Multiview functionality.

\*NIAP PP4.0 certification for PSD coming soon



- Securely<sup>1</sup> view all computer sources on up to **two 4K displays** in various layout presets.



- An **Autoscaler** adjusts the incoming display resolution to match the selected Multiview layout preset.



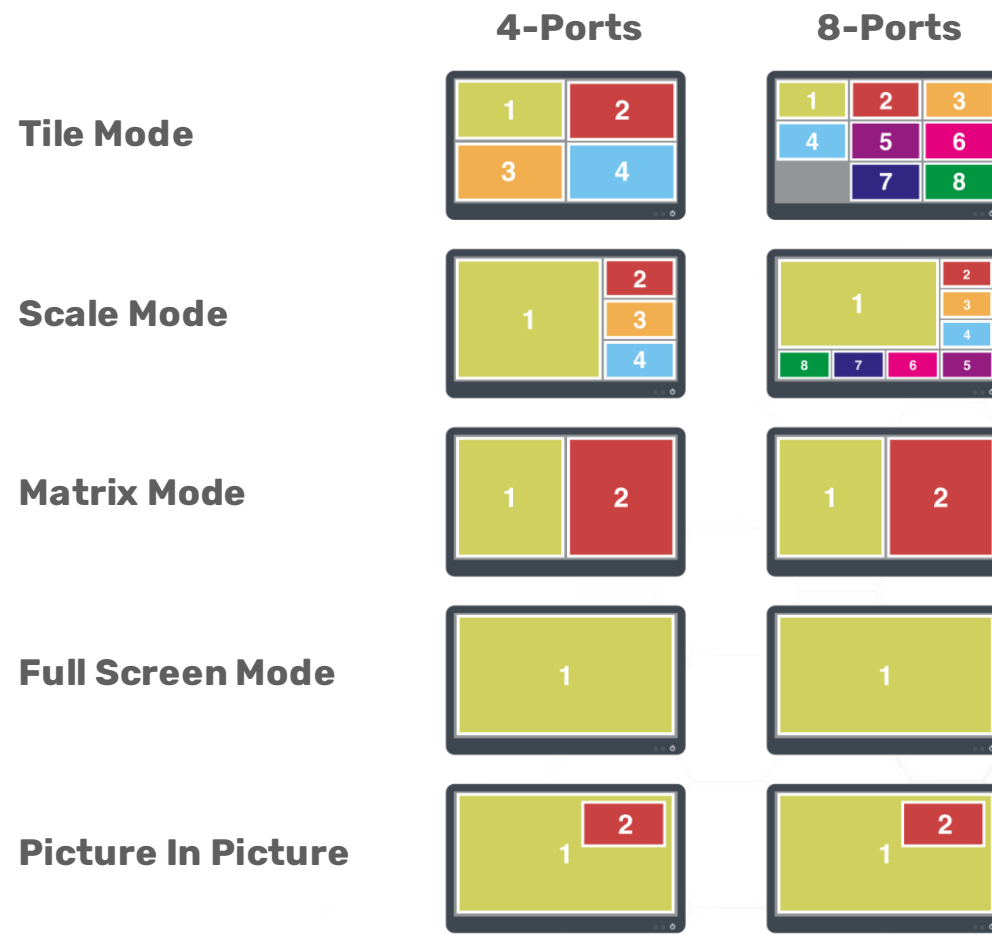
- Easily **switch controls between devices** by dragging the cursor across the border.

<sup>1</sup> Applies to secure models only.

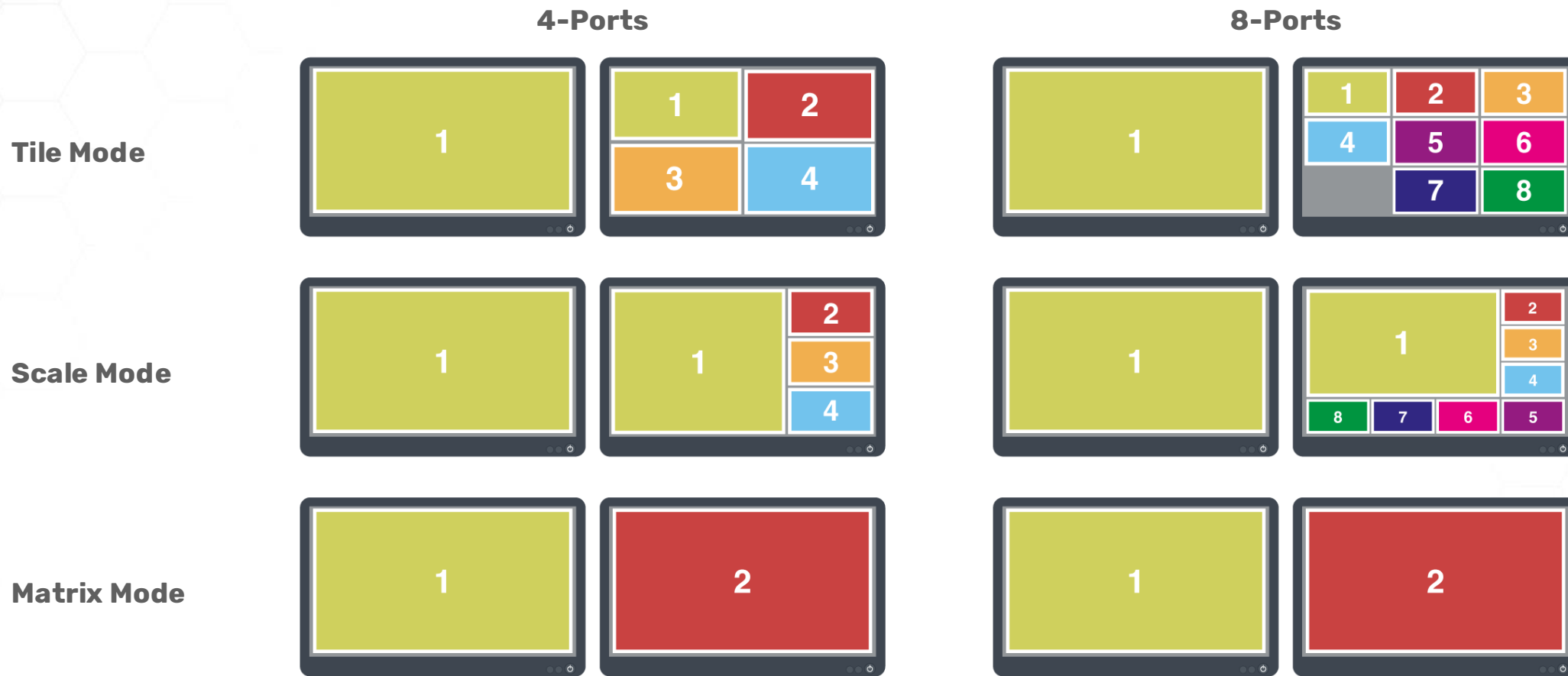
# MULTIVIEW SINGLE DISPLAY LAYOUT PRESETS

The Ultra Mini-Matrix is equipped with a range of built-in Multiview presets, designed to maximize the operator's situational awareness.

Presets are selected using either keyboard hotkeys or via an external remote control.



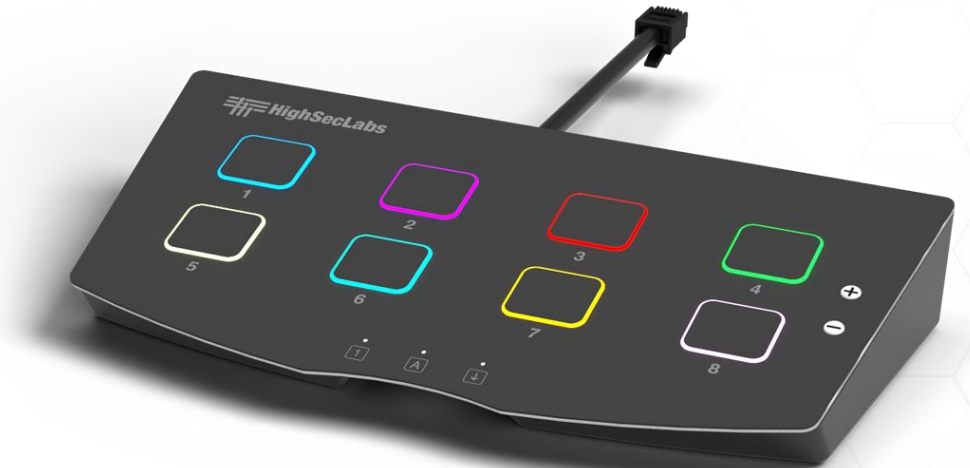
# MULTIVIEW DUAL DISPLAY LAYOUT PRESETS



# REMOTE CONTROL

The Ultra Mini-Matrix uses a dedicated HSL remote control unit (RCU), enabling quick and intuitive transitions between input sources, and Multiview layout presets.

- The RCU communicates through RS-232 with the Ultra Mini-Matrix, sending commands and receiving status indications:
  - ✓ Switch input sources
  - ✓ Select Multiview layout presets
  - ✓ Active Channel Indication  
(blinking button illumination on whichever source the mouse and keyboard control)
- One RCU can cascade into another, enabling full control of up to 8 input sources on dual displays.



# LAYOUT CUSTOMIZATION ON-SCREEN DISPLAY

- The Ultra Mini-Matrix features an On-Screen Display (OSD) interface for easy customization of the following settings:
  - Video options
  - Channel display
  - Mouse controls
  - Audio mixing and volume
- The OSD uses intuitive menus to help create an optimal setup.
- The OSD can be accessed at any time via keyboard hotkeys.



# SECURITY FEATURES (SECURE MODEL)

## Filtered USB Security

- Whitelist or blacklist any USB device by its VID/PID to block unauthorized access, while pre-authorizing authentication devices (CAC) by default.

## Video Security

- Prevents video signal leakage and display manipulation by using complete electrical isolation between inputs and dedicated, read-only EDID emulators that block any potential data path from the display back to the computer.

## Audio Security

- Enforced unidirectional audio flow prevents repurposing speakers as microphones.

## Keyboard & Mouse Security

- Enforces a secure, one-way data flow from peripherals to each computer using optical data diodes and dedicated USB emulation, blocking all reverse communication and non-HID data.

## Anti-Tampering Assurances

- Security seals on the device and packaging reveal attempts to compromise the device.

## Built for Trust

- The Ultra Mini-Matrix is **TAA/BAA compliant** and is produced using a secure supply chain.

# COMMERCIAL FEATURES

## Cross-Device Copy & Paste

- Copy & Paste text and files across devices as if they were the same device.

## Mic Input (4-Port model)

- Share a single mic input with all 4 connected computers.

## USB Connectivity

- Connect USB (3.0 Type A) devices to the user console.
  - 4-Port: Up to 4 connections
  - 8-Port: 1 connection

# ULTRA MINI-MATRIX SPECS AND FEATURES

	Commercial		Secure - NIAP PP4.0 PSD Compliant	
Model Number	SX42PHU-NX	SX82PHU-NX	SX42PHU-4X	SX82PHU-4X
<b>Input Ports</b>				
Sources	4 Input Sources	8 Input Sources	4 Input Sources	8 Input Sources
Visual Input Format	Combo DP/HDMI	Combo DP/HDMI	Combo DP/HDMI	Combo DP/HDMI
Keyboard and Mouse	USB Type B	2x USB Type B	2x USB Type B	2x USB Type B
Audio Output (Speakers)	3.5mm audio port	3.5mm audio port	3.5mm audio port	3.5mm audio port
Audio Input (Mic)	3.5mm audio port	N/A	N/A	N/A
USB	USB 3.0 Type B	USB 2.0 Type B	N/A	N/A
<b>Console</b>				
Display Output Format	2 x HDMI	2 x HDMI	2 x Combo DP/HDMI	2 x Combo DP/HDMI
Max Display Resolution	Single 4K UHD monitor @30Hz / Dual 4K UHD monitors @ 30Hz	Single 4K UHD monitor @30Hz / Dual 4K UHD monitors @ 30Hz	Single 4K UHD monitor @30Hz / Dual 4K UHD monitors @ 30Hz	Single 4K UHD monitor @30Hz / Dual 4K UHD monitors @ 30Hz
Keyboard and Mouse	2 x USB Type A	2 x USB Type A	2 x USB Type A	2 x USB Type A
Audio Diode	None	None	Unidirectional audio diode	Unidirectional audio diode
Audio Output (Speakers)	3.5mm audio port	3.5mm audio port	3.5mm audio port	3.5mm audio port
Audio Input (Mic)	3.5mm audio port	N/A	N/A	N/A
USB	4 x USB 3.0 Type A	1 x USB 2.0 Type A	fUSB for CAC	fUSB for CAC
Multiview Remote Control	RCU Port	RCU Port	RCU Port	RCU Port
<b>Peripheral Sharing</b>				
KVM Switching	Mouse-controlled Switching	Mouse-controlled Switching	Mouse-controlled Switching	Mouse-controlled Switching
Multiview Preset Switching	Hotkeys / Remote Control Unit	Hotkeys / Remote Control Unit	Hotkeys / Remote Control Unit	Hotkeys / Remote Control Unit
Cross-device Copy/Paste	Text + Files	Text + Files	N/A	N/A

# ORDERING INFORMATION

Product Description	Model Number
<b>INPUT PORTS</b>	
Secure 4-Port DP/HDMI Ultra Mini-Matrix, PP4.0 Compliant	SX42PHU-4X
Secure 8-Port DP/HDMI Ultra Mini-Matrix, PP4.0 Compliant	SX82PHU-4X
Commercial 4-Port DP/HDMI Ultra Mini-Matrix	SX42PHU-NX
Commercial 8-Port DP/HDMI Ultra Mini-Matrix	SX82PHU-NX
8-Port Ultra Mini-Matrix Remote Control Unit	WR80-4X
4-Port Ultra Mini-Matrix Remote Control Unit	WR40-4X



# Thank You

For more info:



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