

SECURE ISOLATORS

PREVENTING DATA LEAKS BETWEEN NETWORKS THROUGH HARDWARE ENFORCED UNIDIRECTIONAL DATA FLOW

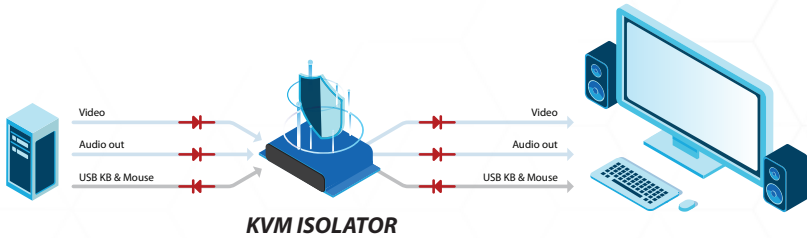


SECURE

KVM ISOLATORS

HSL's Secure NIAP PP4.0 Certified Isolators

ensure that computer video and USB data flow are filtered and flow unidirectionally. This prevents shared peripheral vulnerabilities from compromising network security.



ACCESSORIES

RACK MOUNT KITS AND PDU

The **RK-4U-HKS-10** supports mounting up to 10 HSL Isolators in a 19" 4U rack space.

The **PDU** is a 10/12/24 output power supply that powers 12V/48V DC powered devices such as HSL's Isolators. The PDU is the ideal solution for the limited space and lack of power outlets common to dense installations. No need for multiple 12V/48V DC power adapters.

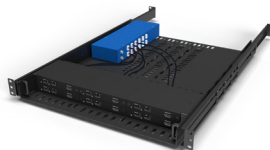
The **1U 6 Isolators kit** (RK-1U6-FV/I11H/PH-M) includes HSL's PDU12, power distribution unit and 6 Isolators installed in a specially designed chassis for mounting in a network cabinet.



PDU10



RK-4U-HKS-10



RK-1U6-FI11H-M

SECURE VIDEO AND KVM ISOLATOR MODELS



F11H-MM

HSL has a broad portfolio of isolation products suitable for multiple deployment scenarios, ranging from meeting rooms and control rooms to operational technology.

MODEL		FV11PH-M	FV11H-M	F111PH-M	F111H-M
CONSOLE	Displays	1 x DP/HDMI	1 x HDMI	1 x DP/HDMI	1 x HDMI
	Max Resolution (Input & Output)	3840x2160 @ 30 Hz	3840x2160 @ 30 Hz	3840x2160 @ 30 Hz	3840x2160 @ 30 Hz
	Mouse and Keyboard	N/A	N/A	USB Type A	USB Type A
COMPUTER	Display Type	1 x DP/HDMI	1 x HDMI 1.4	1 x DP/HDMI	1 x HDMI 1.4
	Mouse and Keyboard	N/A	N/A	USB Type B	USB Type B
PWR	Power Requirements	DC input 12V/1.5A Maximum			
	AC Input	Wall-mounted power supply included. Power input 90 to 240V AC			
	Power Type	External Power Supply			
PHYS	Dimensions	145 x 105 x 28 mm / 5.8 x 4.2 x 1.1 inches			
	Weight	0.3 kg (0.64 lbs)			

SECURE MINI-VIDEO ISOLATOR MODELS



Complete isolation security in a compact and cost-effective form factor.

MODEL		FV11HH-MM	FV11HH-MMF	FV11PH-MM	FV11HP-MM	FV11PP-MM
CONSOLE	Displays	1 x HDMI	1 x HDMI (Female-Female)	1 x HDMI	1 x DP	1 x DP
	Max Resolution (Input & Output)	1920X1080 @ 60Hz / 1920X1200 @ 60Hz / 3840X2160 @ 30Hz / 3440X1440 @ 30Hz (Selected by DIP Switch)				
COMP	Display Type	1 x HDMI	1 x HDMI	1 x DP	1 x HDMI	1 x DP
PWR	Power Requirements	Powered by HDMI or Display Port				
PHYS	Dimensions	22 (W) x 180 (D) x 14 (H) mm / 0.86 (W) x 7.0 (D) x 0.55 (H) inch				
	Weight	250 gr / 0.55 lb				

SECURE GALVANIC ISOLATOR MODELS



F11H-MGH

HSL's Video and KVM isolators use broadband high-pass filters to provide complete galvanic isolation of DC and ground currents between two pieces of equipment, while permitting the full bandwidth of HDMI 1.4 and USB 2.0 signals to pass, thus avoiding problems of signal distortion and operator shocks caused by a voltage difference.

MODEL	FV11H-MG	FV11H-MGH	F11H-MG	F11H-MGH	
CONSOLE	Displays	HDMI	HDMI	HDMI	
	Max Resolution (Input & Output)	3840x2160 @ 30 Hz	3840x2160 @ 30 Hz	3840x2160 @ 30 Hz	
	Mouse and Keyboard	N/A	N/A	USB Type A	
COMPUTER	Display Type	1x HDMI 1.4	1x HDMI 1.4	1x HDMI 1.4	
	Mouse and Keyboard	N/A	N/A	USB Type B	
	Power Requirements	DC input 12V/2.5A Maximum			
PWR	Power Type	External Power Supply	Medical Grade External PS	External Power Supply	
	Galvanic Isolation	3KV	3KV	3KV	
PHYS	Dimensions	145 x 105 x 28 mm / 5.8 x 4.2 x 1.1 inches			
	Weight	0.3 kg (0.64 lbs)			
CERT.	Safety Certification	N/A	IEC60601-1	N/A	
	EMC Certification	N/A	IEC 60601-1-2	N/A	

SECURE CRITICAL OT WITH RS-232 ISOLATORS



The secure RS-232 Isolator enforces one-way data flow from the serial ports of two computer systems.

The RS-232 Isolator ensures secure control of different devices of different classification levels from a central control system. The configurable secure RS-232 Isolator supports the creation of rules to filter the information passed and to limit the type of events and commands that can pass through the isolator.

KVM & VIDEO

ISOLATORS HIGHLIGHTS

- **The ultimate solution** for securing and presenting sources of different classification level on the same display.
- **Supports isolation** of large KVM matrix switches and conference room equipment
- **Display Plug & Play (EDID)**
Leakage prevention through patented emulated technology. Signalling attacks prevented by design.
- **Hardware based HID peripherals protection/isolation on models with KM support:** FI11D-M, FI11PH-M, FI11H-M
- **Tamper Evident Label**
Special holographic tampering evident labels on the product's enclosure provide a clear visual indication if the product has been opened or compromised.
- **New type of connector DP/HDMI combined connector on models FV11PH-M, FI11PH-M:** Connect either type of cable – DisplayPort or HDMI
- **Variety of supported video Input/output interfaces:** DVI, HDMI, and DP/HDMI combined connector
- **All firmware is in ROM (Read Only Memory).**
- **Unidirectional optical data diodes (KVM units only) -** Assuring USB peripherals isolation.
- **Data flows in one direction only.** No reverse data flow possible by design.
- **Compatible with NIAP PP4.0 for PSD.**



MINI-VIDEO

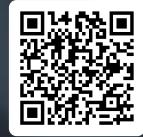
ISOLATORS HIGHLIGHTS

- **Highest security by design**
Designed to support isolation of large KVM matrix and conference room equipment.
- **Hardware-based peripheral protection/isolation**
Absolutely no dependency on firmware or software.
- **Display Plug & Play (EDID) protection**
The fixed EDID module prevents any EDID negotiation. Leakage prevention through patented emulated technology. Signalling attacks prevented by design.
- **All firmware is in ROM (Read Only Memory).**
- **Tamper Evident Label**
Special holographic tampering evident labels on the product's enclosure provide a clear visual indication if the product has been opened or compromised.



HIGH SEC LABS (HSL)

DEVELOPS HIGH-QUALITY,
CYBER-DEFENCE SOLUTIONS
IN THE FIELD OF NETWORK AND
PERIPHERAL ISOLATION FOR
PROTECTING NATIONAL ASSETS
AND INFRASTRUCTURE.



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