

THE HSL SECURE ISOLATORS

Ensuring unidirectional data flow for presentation solutions



The HSL Isolators Family Overview

HSL SECURE ISOLATORS

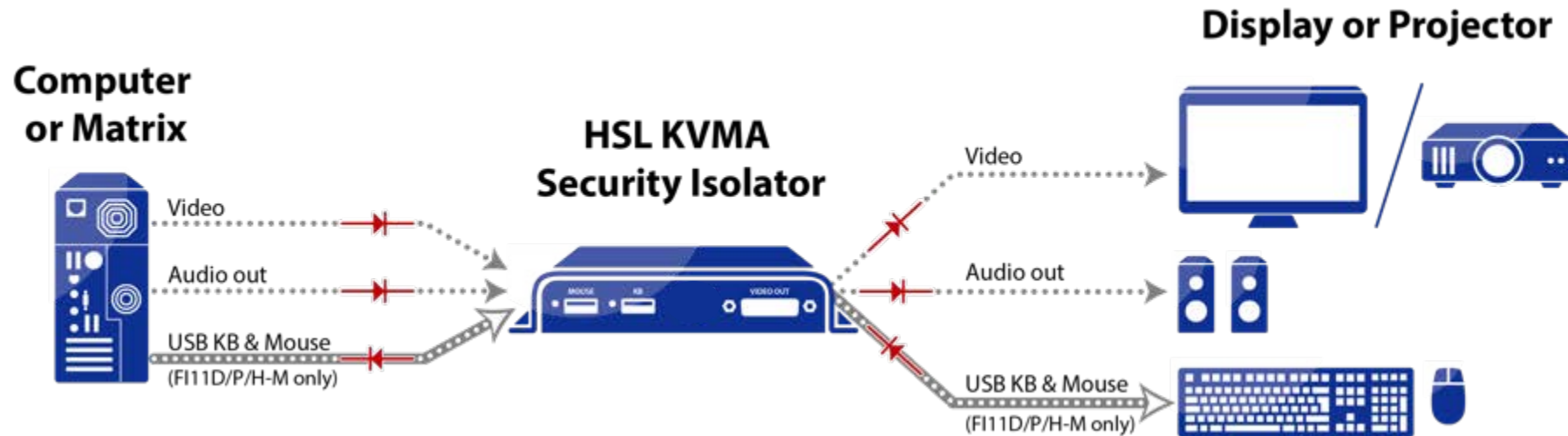
Device Types:

- Secure Isolators

Accessories:

- Rack Mount Kit
- Power Distribution Unit for Isolators and Extenders - PDU



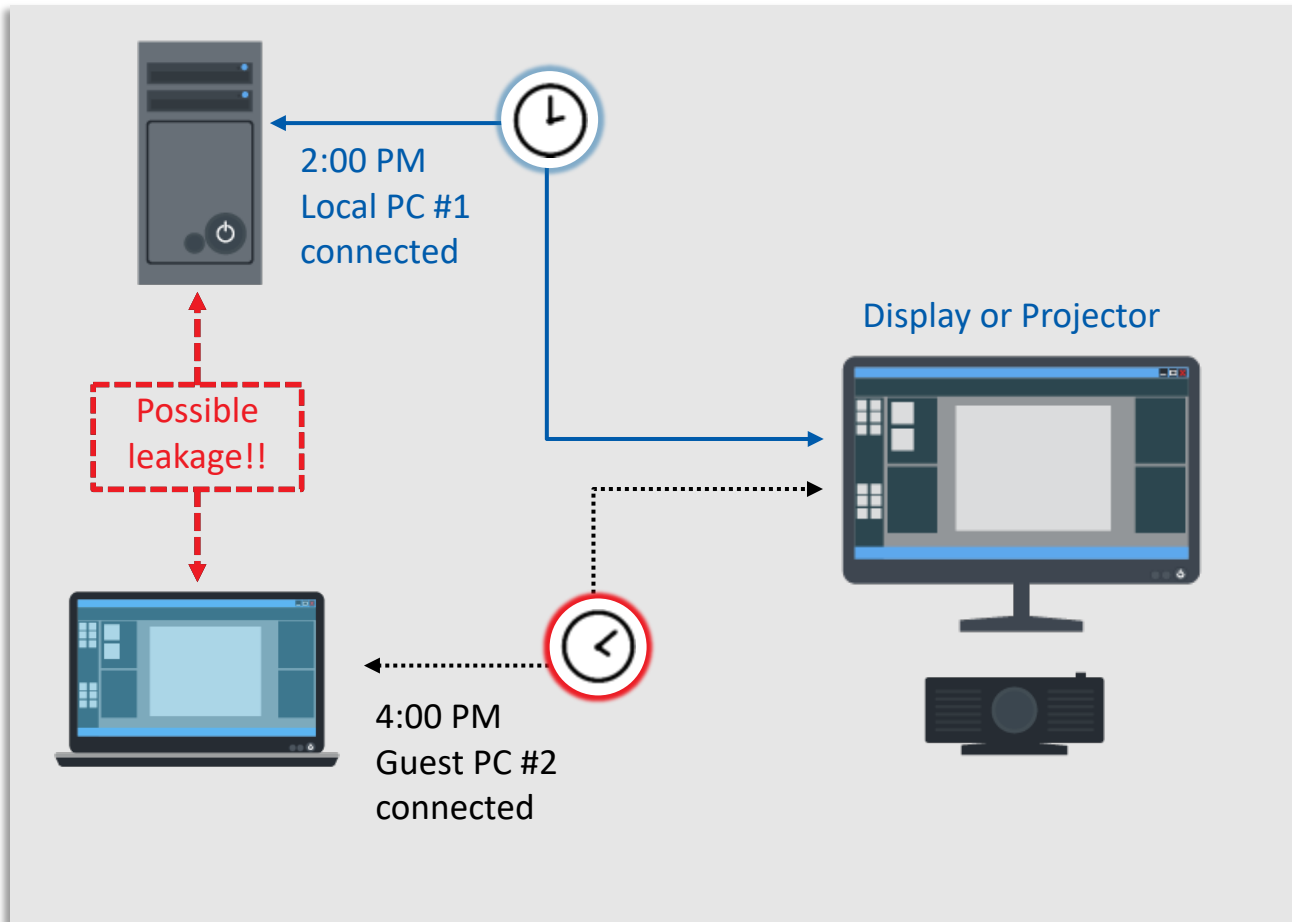


HSL's Secure, NIAP PP4.0 Compatible Isolators ensure that computer video and USB data flow in a unidirectional and filtered manner, thus preventing shared peripheral-threats from compromising network security. The Isolator ensures that only necessary data is transferred from source to destination.

Attack Scenario #1 – Meeting Room

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Delayed Data Leakage



Several data leakage scenarios, in which different computers are connected at different times, can be demonstrated:

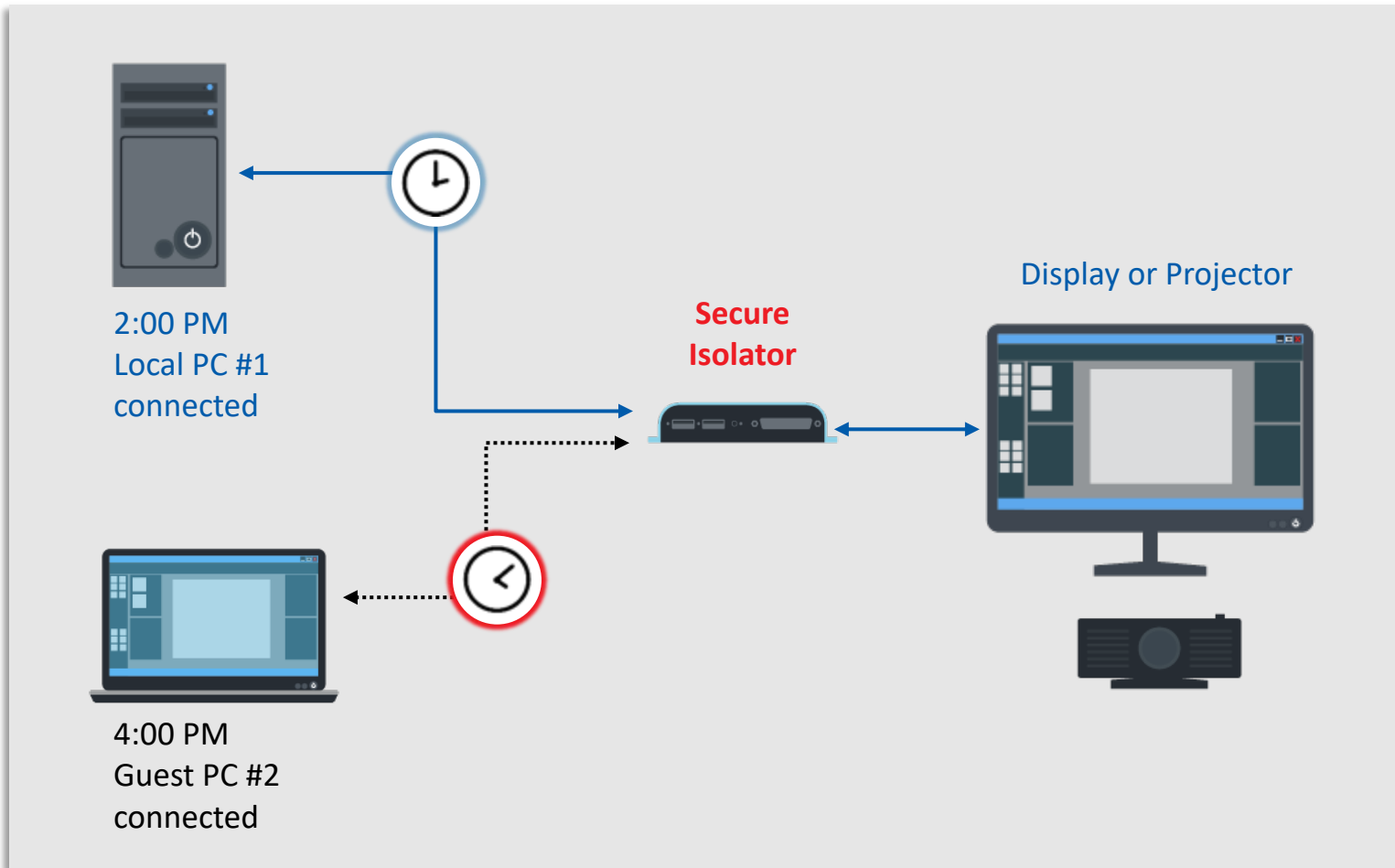
- EDID attacks
- Fake control setting attacks (VESA MCCS)
- Image upgrade attacks
- Asset management attacks

Information can be passed between systems even when they are not connected at the same time.

Attack Scenario #1 – Meeting Room

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Solution

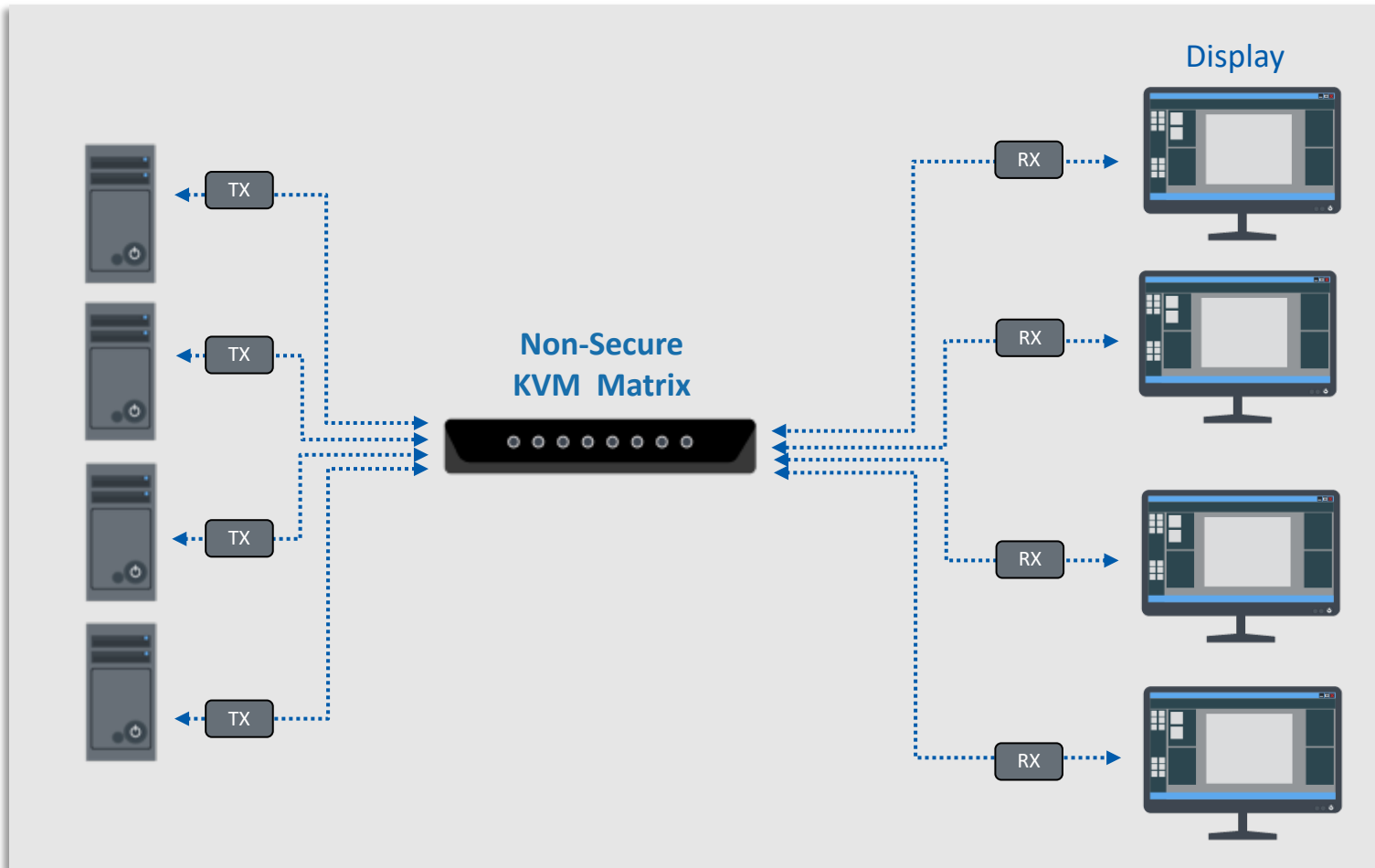


Problem solved by connecting an Isolator on the cable between the computer and the display, preventing data transferring from the display to the guest computer.

Attack Scenario #2 – Command and Control

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KVM Matrix



Several switched data leakage scenarios can be demonstrated:

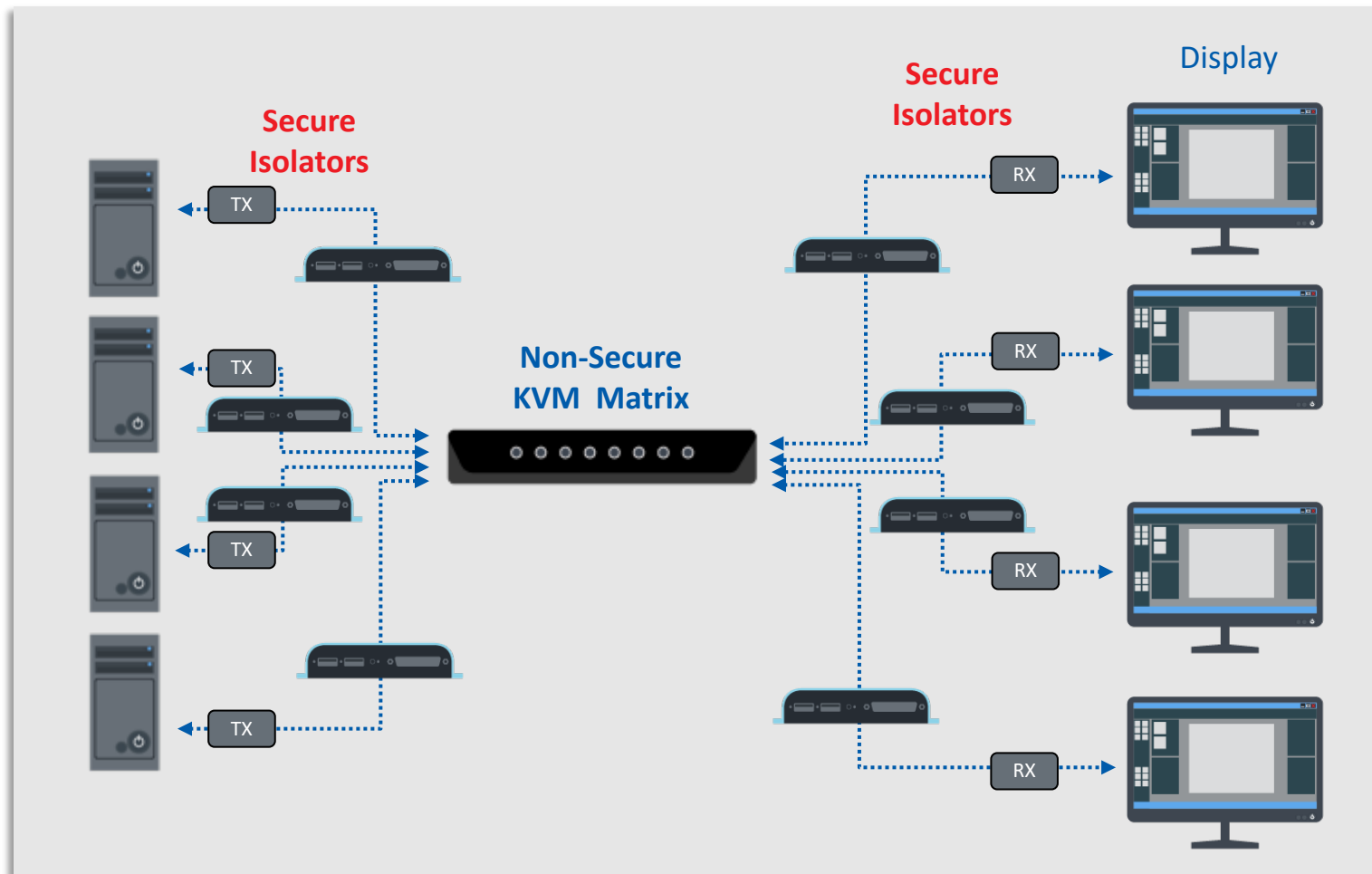
- Plug & Play attacks (VESA EDID)
- Fake control setting attacks (VESA MCCS)
- Signaling attack while switching over (slow leakage)

Information leakage can happen through the non-secure KVM Matrix or connected peripherals.

Attack Scenario #2 - Command and Control

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Solution



Problem solved by connecting Isolators between each computer and the non-secure KVM Matrix.

New Secure Isolator Security Highlights

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- The ultimate solution for securing and projecting different classification level sources on the same display
- Supports isolation of large KVM Matrix and conference room equipment
- Displays plug & play (EDID) protection using a one-time EDID capture push button
- Hardware based HID peripherals protection/isolation on models with KM support: FI11D-M, FI11PH-M, FI11H-M
- Variety of supported video Input/output interfaces: DVI, HDMI, and the new DP/HDMI combined connector
- New type of connector DP/HDMI combined connector on models FV11PH-M, FI11PH-M:
Allows connecting both type of cables – Display Port and HDMI
- Compatible with NIAP PP4.0 for PSD

DP\HDMI Connector



HSL Secure Isolator Models – Video and KM Isolation

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Isolation of:
Video - DVI
USB (Keyboard/Mouse)

FI11D-M



Isolation of:
Video - DP/HDMI
USB (Keyboard/Mouse)

FI11PH-M



Isolation of:
Video - HDMI
USB (Keyboard/Mouse)

FI11H-M

On all models:

- Single PC source , single output display
- Resolutions - Up to 4K-2K Ultra HD resolutions (3840 X 2160 pixels)

HSL Secure Isolator Models – Video only Isolation

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Isolation of:
Video - DVI

FV11D-M



Isolation of:
Video - DP/HDMI

FV11PH-M



Isolation of:
Video - HDMI

FV11H-M

On all models:

- Single PC source , single output display
- Resolutions - Up to 4K-2K Ultra HD resolutions (3840 X 2160 pixels)

HSL Secure Galvanic Isolator

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Isolation of:

Video - HDMI
USB (Keyboard/Mouse)

FI11H-MG

Model	Description
FV11H-MG	HDMI 1 Port Secure Galvanic Isolator 4K30
FV11H-MGH	Medical Grade HDMI 1 Port Galvanic Isolator 4K30
FI11H-MG	KVM 1 Port Secure Galvanic Isolator 4K30
FI11H-MGH	Medical KVM Grade 1 Port Galvanic Isolator 4K30

Mini Video Isolators

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HDMI-HDMI



HDMI-DP



DP-DP



DP-HDMI



Power Distribution Unit for Isolators and Extenders - PDUI

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Connecting multiple Isolators and Extenders to computers in a rack.

Saves space and power outlets on a network cabinet by using an external central redundant Power Distribution Unit for Isolators (PDUI):

- Only one connection to an external power source, eliminating the need for a separate supply outlet for each adaptor
- A 12/24 outlets hub with built-in transformer capability – eliminates the need for a separate power adaptor for each Isolator

Optional models:

- 12/24 outlets, 12V hub
- 12 outlets, 48V hub – specially for PoE copper extenders.
- 1U Size



Accessories - Rack Mount Kit

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Enables mounting up to 10 FV11X/FI11X Isolators in a 19" 4U rack space.



1U



Accessories - Rack Mount Kit

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Enables mounting up to 6 FI11X/FV11X Isolators in a 19" 1U rack space.



1U

HSL Isolators and Extenders Models Summary

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Model	Description
Secure Isolators	
FI11H-M	HDMI Secure KVM Isolator
FI11D-M	DVI secure KVM Isolator
FI11PH-M	DP/HDMI Secure KVM Isolator
FV11H-M	HDMI Secure Video Isolator
FV11D-M	DVI Secure Video Isolator
FV11PH-M	DP/HDMI Secure Video Isolator
Accessories	
PDUI24/12	PDUI24 - 24 Port 12v DC Junction box/PDUI12 - 12 Port 12v DC Junction box
RK-4U-HKS-10	Rack Mount KIT 4U
RK-1U6-FI11X-M	6 Isolators Metal Chassis Tray Packing Kit

