

# SECURE KVM AND VIDEO EXTENDERS

Extend signals using copper or fiber connections without risk of a peripheral security breach.

HighSecLabs' Secure KVM Extenders enable filtered, unidirectional, long-distance, and high-speed extension of computer video and keyboard/mouse signals, while preventing vulnerable peripherals from compromising network security.



## PRODUCT HIGHLIGHTS

- **Secure Architecture:** HSL's Secure Extenders are designed using the same architecture as HSL's NIAP Protection Profile 4.0 for Peripheral Sharing Devices (PSD) certified products.
- **Extra Long Range:** Transmit and receive signals over distances up to 10km with fiber extenders, and up to 100m with copper extenders.
- **Zero Latency:** High-performance HDBaseT technology provides zero-latency connections between transmitter and receiver units.
- **Ultra-HD Video Quality:** Extend video signals at UHD 4K resolutions up to 3840x2160 at 30Hz.
- **DP/HDMI Combo Connectors:** HSL's unique combination connectors allow video signals to be sent over both DisplayPort and HDMI cables.

## SECURITY HIGHLIGHTS

### Video Security

- Computer video input interfaces are isolated by using different electronic components, power, and ground domains.
- A dedicated, read-only, EDID emulation for each computer isolates the display.
- Access to the monitor's Extended Display Identification Data (EDID) is blocked.
- Access to the Monitor Control Command Set (MCCS commands) is blocked.

### Keyboard & Mouse Security

- The keyboard and mouse are isolated by a dedicated USB device emulation for each computer.
- Communication from computer to keyboard/mouse is blocked, enforcing unidirectional data flow from peripherals to the computer.
- Non-HID (Human Interface Device) data transactions are blocked.
- Special holographic tampering evident labels on the product's enclosure provide a clear visual indication if the product has been opened or compromised.

**TEMPEST certifiable versions available**

## SECURE KVM EXTENDERS



**FICE11PH-M**

Secure 100m Copper KVM Extender  
w/Power Over Ethernet



**FIFE11PH-M**

Secure 10km Fiber KVM Extender



**FIFE11PH-MT**

Secure 10km Fiber KVM Extender,  
TEMPEST Certifiable

## SECURE VIDEO EXTENDERS



**FVCE11PH-M**

Secure 100m Copper Video Extender  
w/Power Over Ethernet



**FVFE11PH-M**

Secure 10km Fiber Video Extender



**FVFE11PH-MT**

Secure 10km Fiber Video Extender,  
TEMPEST Certifiable

## SPECIFICATION

MODEL	FICE11PH-M	FIFE11PH-M	FIFE11PH-MT	FVCE11PH-M	FVFE11PH-M	FVFE11PH-MT
<b>No. of Sources</b>	1	1	1	1	1	1
<b>Extension Type</b>	Copper	LC Single-Mode Fiber		Copper	LC Single-Mode Fiber	
<b>Link Port</b>	RJ45	10 Gbps		RJ45	10 Gbps	
<b>Extension Length</b>	100m	10km		100m	10km	
<b>TRANSMITTER UNITS</b>						
<b>Transmitter Model</b>	FICE11PHT-M	FIFE11PHT-M	FIFE11PHT-MT	FVCE11PHT-M	FVFE11PHT-M	FVFE11PHT-MT
<b>Video Port</b>	DP/HDMI					
<b>Max Resolution</b>	UHD 4K up to 3840x2160 30Hz					
<b>Mouse and Keyboard</b>	USB Type B			n/a		
<b>RECEIVER UNITS</b>						
<b>Receiver Model</b>	FICE11PHR-M	FIFE11PHR-M	FIFE11PHR-MT	FVCE11PHR-M	FVFE11PHR-M	FVFE11PHR-MT
<b>Video Port</b>	DP/HDMI					
<b>Max Resolution</b>	UHD 4K up to 3840x2160 30Hz					
<b>Mouse and Keyboard</b>	2xUSB Type A			n/a		
<b>PHYSICAL</b>						
<b>Dimensions</b>	145x105x28mm / 5.8x4.2x1.1in (Transmitter/Receiver)					
<b>Weight</b>	0.64kg / 1.4lbs (Transmitter/Receiver)					
<b>POWER</b>						
<b>Power Over Ethernet</b>	Yes	No		Yes	No	
<b>Power Requirements</b>	Transmitter: 48V Receiver: 12V DC (Optional)	12V DC		Transmitter: 48V Receiver: 12V DC (Optional)	12V DC	
<b>AC Input</b>	100 to 240V AC					
<b>Power Supply Type</b>	External					
<b>ENVIRONMENTAL</b>						
<b>Operating Temperature</b>	0°C to 40°C / 32°F to 104°F					
<b>Storage Temperature</b>	-20°C to 60°C / -4°F to 140°F					
<b>Humidity</b>	0%-80% RH, non-condensing					
<b>SOFTWARE</b>						
<b>Supported OS</b>	Windows, MacOS, Linux					
<b>SECURITY</b>						
<b>Certification</b>	NIAP PP4.0 Compliant	NIAP PP4.0 Compliant TEMPEST Certifiable		NIAP PP4.0 Compliant	NIAP PP 4.0 Compliant TEMPEST Certifiable	
<b>GENERAL INFO</b>						
<b>Manufactured</b>	TAA/BAA Compliant					
<b>Product Lifecycle</b>	10 Years					
<b>Product Warranty</b>	2 Years					

## ORDERING INFORMATION

MODEL NUMBER	PRODUCT NUMBER	ITEM	QTY
<b>FICE11PH-M</b>	CPN16092	Secure 100m Copper Extended KVM Transmitter w/ Power over Ethernet	1
		Secure 100m Copper Extended KVM Receiver w/ Power over Ethernet	1
		Wall-Mounted 12V Power Supply	1
<b>FIFE11PH-M</b>	CPN16096	Secure 10km Fiber Extended KVM Transmitter	1
		Secure 10km Fiber Extended KVM Receiver	1
		Wall-Mounted 12V Power Supply	2
<b>FIFE11PH-MT</b>	CPN28132	Secure 10km Fiber Extended KVM Transmitter, TEMPEST Certifiable	1
		Secure 10km Fiber Extended KVM Receiver, TEMPEST Certifiable	1
		Wall-Mounted 12V Power Supply	2
<b>FVCE11PH-M</b>	CPN16094	Secure 100m Copper Extended Video Transmitter w/Power over Ethernet	1
		Secure 100m Copper Extended Video Receiver w/Power over Ethernet	1
		Wall-Mounted 12V Power Supply	1
<b>FVFE11PH-M</b>	CPN16098	Secure 100m Fiber Extended Video Transmitter	1
		Secure 100m Fiber Extended Video Receiver	1
		Wall-Mounted 12V Power Supply	2
<b>FVFE11PH-MT</b>	CPN28133	Secure 100m Fiber Extended Video Transmitter, TEMPEST Certifiable	1
		Secure 100m Fiber Extended Video Receiver, TEMPEST Certifiable	1
		Wall-Mounted 12V Power Supply	2

## SYSTEM DIAGRAM

