



COPPER KVM AND USB EXTENDERS

Extend keyboard, video, mouse, and USB signals over copper cable.

HSL's copper KVM Extenders use paired Transmitters and Receivers to extend computer video, audio, keyboard/mouse, and IR remote signals without latency over distances up to 100 meters. Similarly, the copper USB Extenders extend and power USB devices such as webcams. This is ideal for users connecting to centralized computer networks from physically distant workstations and peripherals.



PRODUCT HIGHLIGHTS

KVM Extenders (FKCE11PHEC-N, FKCE11PH60-N)

- **Long Distance Extension:** Extend KVM signals through CAT6 cable over distances up to 100m.
- **Zero Latency:** Send signals between the paired Transmitters and Receivers without latency.
- **Ultra-HD Video Quality:** Transmit and receive video signals at UHD 4K resolutions up to 3840x2160 at 60Hz (the FKCE11PHEC-N extends video signals at 30Hz)
- **Combo Connector:** Connect both DisplayPort and HDMI video displays to the Extender pairs via the unique combo connector video port. (Note: The receiver side of the FKCE11PHEC-N supports HDMI video only.)
- **Audio Extension (FKCE11PH60-N):** Transmit and receive audio signals without any loss of sound quality.
- **Dedicated HID Ports:** Extend keyboard and mouse signals with dedicated HID ports on both the Transmitter and Receiver.

- **Serial Control:** Control a wide range of devices by transmitting and receiving RS232 Serial Commands.
- **IR Remote Control Extension:** Extend IR remote control signals from one side of the Extender pair to the other.
- **Power over Ethernet or over Copper:** Send power from the Transmitter to the Receiver, removing the need for multiple power sources.

USB Extenders (UMCE10N-N, UMCE10C-N)

- **USB 2.0 Extension (UMCE10N-N):** Extend and power any connected USB 2.0 device.
- **USB 3.2 Extension (UMCE10C-N):** Extend and power up to 4 connected USB 3.2 devices.

COPPER KVM EXTENDERS



FKCE11PHEC-N

Commercial Copper KVM Extender, DP/HDMI Video, UHD 4K 30Hz



FKCE11PHU60-N

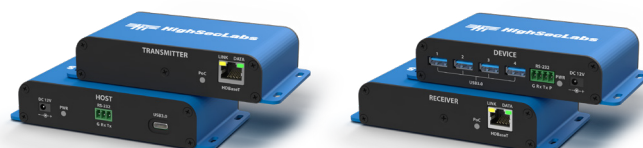
Commercial Copper KVM Extender, DP/HDMI Video, 4K UHD 60Hz

COPPER USB EXTENDERS



UMCE10N-N

Commercial Copper USB 2.0 Extender



UMCE10C-N

Commercial Copper USB 3.2 Extender



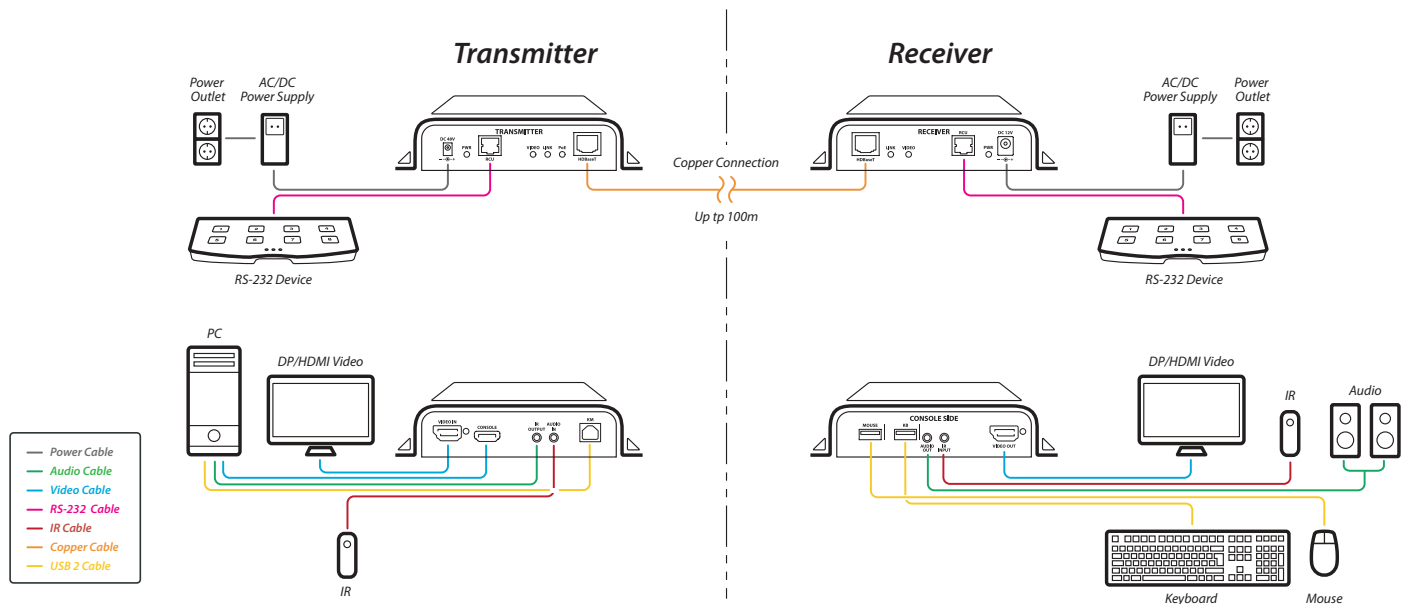
PHYSICAL SPECIFICATION

MODEL	FKCE11PH-N*	FKCE11PHEC-N	FKCE11PH60-N	UMCE10N-N	UMCE10C-N
No. of Sources	1				
Extension Type	Copper				
Link Port	RJ45				
Extension Distance	100m				
TRANSMITTER UNIT					
TRANSMITTER MODEL	FKCE11PHT-N	FKCE11PHECT-N	FKCE11PH60T-N	UMCE10N-NRX	UMCE10C-NTX
Video Ports	1xDP/HDMI	1xDP/HDMI	Output: 1xDP/HDMI Console: 1xHDMI	n/a	
Max Resolution	UHD 4k up to 3840x2160 30Hz		UHD 4k up to 3840x2160 60Hz	n/a	
Mouse and Keyboard	USB 2.0 Type B			USB 2.0 Type B	1x USB 3.2 Type C
Audio Jack	3.5mm jack	n/a	3.5mm jack	n/a	
IR Remote Port	Mini PL (OUT)			n/a	
RS-232 Port	RJ14 (IN)	3-Pin Serial Block	RJ14 (IN)	n/a	3-Pin Serial Block
RECEIVER UNIT					
Receiver Model	FKCE11PHR-N	FKCE11PHECR-N	FKCE11PH60R-N	UMCE10N-NRX	UMCE10C-NRX
Video Port	1xDP/HDMI	1xHDMI	1xDP/HDMI	n/a	
Max Resolution	UHD 4k up to 3840x2160 30Hz		UHD 4k up to 3840x2160 60Hz	n/a	
Mouse and Keyboard	2xUSB 2.0 Type A			1x USB 2.0 Type A	4x USB 3.2 Type A
Audio Jack	3.5mm jack	n/a	3.5mm jack	n/a	
IR Remote Port	Mini PL (IN)			n/a	
RS-232 Port	RJ14 (OUT)			n/a	4-Pin Serial Block
POWER					
Power over Ethernet (PoE) or Copper (PoC)	PoE	PoC	PoE	No	PoC
Power Requirements	Transmitter: 48V DC, Receiver: 12V DC (Optional)			5V DC via Micro USB B	12VDC
AC Input	100 to 240 AC			n/a	100 to 240 AC
Power Supply Type	External				
PHYSICAL					
Dimensions	145x105x28mm / 5.8x4.2x1.1in (Transmitter/Receiver)			28x60x17mm / 1.1x2.4x0.7in	140x74x28mm / 5.5x2.9x1.1in
Weight	0.64kg / 1.4lbs (Transmitter/Receiver)			0.2kg / 0.5lb	0.1kg / 0.3lb
ENVIRONMENTAL					
Operating Temperature	0°C to 40°C / 32°F to 104°F				
Storage Temperature	-20°C to 60°C / -4°F to 140°F				
Humidity	0%-80% RH, non-condensing				
SOFTWARE					
Supported OS	Windows, Linux, Mac				
GENERAL INFO					
Manufactured	BAA & TAA Compliant				
Product Lifecycle	10 Years				
Warranty	2 Years				

* Note: The FKCE11PH-N is an end-of-life product that has been replaced by the FKCE11PHEC-N. Its specifications are included for reference.

ORDERING INFORMATION

MODEL	P/N	ITEM	QTY
FKCE11PHEC-N	CPN31351	Commercial 100m Copper Extended KVM Transmitter, 4K 30Hz	1
		Commercial 100m Copper Extended KVM Receiver, 4K 30Hz	1
		Wall-Mounted 12V Power Supply	2
FKCE11PH60-N	CPN27837	Commercial 100m Copper Extended KVM Transmitter, 4k 60Hz	1
		Commercial 100m Copper Extended KVM Receiver, 4k 60Hz	1
		Wall-Mounted 12V Power Supply	2
UMCE10N-N	CPN28644	Commercial 100m Copper Extended USB 2.0 Transmitter	1
		Commercial 100m Copper Extended USB 2.0 Receiver	1
		1m Cable, Micro USB A to Micro USB B	1
UMCE10C-N	CPN32993	Commercial 100m Copper Extended USB 3.2 Transmitter	1
		Commercial 100m Copper Extended USB 3.2 Receiver	1
		0.9m/3ft USB C Cable	1
		Wall-Mounted 12V Power Supply	1



FKCE11PHU60-N 4K UHD 60Hz Extender Network Diagram