

# FOX USB Extender

## FIBER OPTIC EXTENDER FOR USB PERIPHERALS

- ▶ Extends USB peripherals very long distances over fiber optic cabling
- ▶ Supports USB 2.0, 1.1, and 1.0 standards with data transfer rates up to 480 Mbps
- ▶ Receiver features an integrated four-port hub with 5 Volts, 500 mA available on each port
- ▶ Peripheral Emulation
- ▶ Real-time status LED indicators for troubleshooting and monitoring
- ▶ Compatible with FOX Series matrix switchers



FOX USB Extender Tx

FOX USB Extender Rx

The Extron FOX USB Extender is a fiber optic transmitter and receiver set for long haul transmission of USB signals over fiber optic cabling. The transmitter features peripheral emulation to support uninterrupted communication between the host and a USB device. For simplified integration, the receiver features a built-in, active four-port hub that supplies 5 Volts, 500 mA per port to power attached devices. These and other features make the FOX USB Extender ideal for extending USB signals very long distances over fiber optic cabling.



**Extron® Electronics**  
INTERFACING, SWITCHING AND CONTROL

## DESCRIPTION

The Extron **FOX USB Extender** is a fiber optic transmitter and receiver set for long haul transmission of USB signals over fiber optic cabling. For simplified integration, the transmitter provides peripheral emulation to support uninterrupted communication between the host and a USB device, and the receiver features a built-in, active four-port hub that supplies 5 Volts, 500 mA per port to power attached devices. Peripheral devices may be powered or charged from a USB port. Also, port LED indicators provide visual confirmation of system activity. The FOX USB Extender is ideal for extending USB signals long distances over fiber optic cabling.

As part of the larger, comprehensive FOX Series of fiber optic products from Extron, the FOX USB Extender can be used for simple point-to-point applications or in combination with FOX Series matrix switchers for support of wider installations. Used in conjunction with an Extron FOX Series HDMI, DVI, or VGA extender, the FOX USB Extender is capable of transmitting KVM - Keyboard/Video/Mouse signals very long distances over a fiber optic infrastructure.

The FOX USB Extender is ideal for AV applications requiring long haul transmission of USB 2.0, 1.1, and 1.0 compliant signals.

## FEATURES

- ▶ **Extends USB peripherals long distances over fiber optic cabling** – Supports long-distance KVM - Keyboard/Video/Mouse extension when used with Extron FOX Series HDMI, DVI, and VGA products.
- ▶ **Supports USB 2.0, 1.1, and 1.0 standards with data transfer rates up to 480 Mbps** – Allows high speed data transfer between the host and a mass storage device such as a USB flash drive.
- ▶ **Receiver features an integrated four-port hub with 5 Volts, 500 mA available on each port** – Allows simultaneous connection to multiple peripheral devices such as mass storage devices, keyboards, mice, and other HID peripherals.
- ▶ **Peripheral Emulation** – Offers increased system reliability by emulating a continuous connection between the host and an HID-compliant keyboard and mouse.
- ▶ **Real-time status LED indicators for troubleshooting and monitoring** – Provides visual confirmation of port activity between an active host and each connected peripheral device.
- ▶ **Compatible with FOX Series matrix switchers** – Enables transmission of KVM signals very long distances over an enterprise fiber optic infrastructure.
- ▶ **Multimode and singlemode models available**
- ▶ **1" (2.5 cm) high, mountable metal enclosures**
- ▶ **Energy-efficient external universal power supply included**

## SPECIFICATIONS

USB		
USB standards	USB 2.0, USB 1.1, USB 1.0 compatible	
USB data rates	Low speed (1.5 Mbps), full speed (12 Mbps), high speed (480 Mbps)	
Signal transmission distance	30 km (18.64 miles) with singlemode (SM) cables 300 m (985') with 62.5 µm OM1 multimode (MM) cables 1 km (3280') with 50 µm OM2 multimode (MM) cables 2 km (6561') with 50 µm OM3/OM4 2000 MHz bandwidth laser optimized multimode cables	
USB HOST – FOX USB EXTENDER TX		
Number/signal type	1 USB (supports USB 2.0, 1.1, 1.0 speeds)	
INTERCONNECTION BETWEEN TRANSMITTER AND RECEIVER		
Connectors	2 LC connectors	
Nominal peak wavelength	850 nm for MM, 1310 nm for SM	
Data rate	600 Mbps	
Transmission power	-5 dBm, typical	
Maximum receiver sensitivity		
Singlemode	-18 dBm, typical	
Multimode	-12 dBm, typical	
Optical loss budget		
Singlemode	13 dB, maximum	
Multimode	7 dB, maximum	
USB HUB – FOX USB EXTENDER RX		
Number/signal type	(1) 4-port USB hub	
GENERAL		
Power supply	External Input: 100-240 VAC, 50-60 Hz Output: 12 VDC, 1 A, 12 watts	
Cooling	Convection, vents on top and sides	
Thermal dissipation		
Device		
FOX USB Extender Tx	8.8 BTU/hr	
FOX USB Extender Rx	10.1 BTU/hr	
Device and power supply		
FOX USB Extender Tx	11.4 BTU/hr	
FOX USB Extender Rx	18.3 BTU/hr	
Vibration	ISTA 1A in carton (International Safe Transit Association)	
Regulatory compliance		
Safety	CE, c-UL, UL	
EMI/EMC	CE, C-tick, FCC Class A, ICES, VCCI Class A	
Environmental	Complies with the appropriate requirements of RoHS, WEEE	
MTBF	30,000 hours	
Warranty	3 years parts and labor	
<b>NOTE:</b> All nominal levels are at ±10%.		
<b>Model</b>	<b>Version Description</b>	<b>Part number</b>
FOX USB Extender Tx MM	Multimode - Transmitter	60-1234-11
FOX USB Extender Rx MM	Multimode - Receiver	60-1234-21
FOX USB Extender Tx SM	Singlemode - Transmitter	60-1234-12
FOX USB Extender Rx SM	Singlemode - Receiver	60-1234-22

For complete specifications, please go to [www.extron.com](http://www.extron.com)  
Specifications are subject to change without notice.

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#### UNITED STATES

+800.633.9876  
Inside USA/Canada  
+1.714.491.1500

#### EUROPE

+800.3987.6673  
Inside Europe  
+31.33.453.4040

#### ASIA

+800.7339.8766  
Inside Asia  
+65.6383.4400

#### MIDDLE EAST

+971.4.2991800