

# PowerCage FOX AV

FIBER OPTIC EXTENDER FOR VIDEO,  
AUDIO, AND RS-232

- ▶ Extends standard definition video, stereo audio, and RS-232 control signals very long distances over a single fiber
- ▶ Accepts component video, S-video, and composite video signals
- ▶ All digital technology provides pixel-for-pixel performance
- ▶ Modular, hot-swappable boards designed for the PowerCage 1600 enclosure
- ▶ Auto Input Format Detection
- ▶ Picture and audio adjustments
- ▶ Industry standard LC connectors provide reliable physical connectivity and precise fiber core alignment
- ▶ Internal transcoding with selectable output format
- ▶ Daisy-chain capability
- ▶ RS-232 control
- ▶ Compatible with Extron FOX Matrix Switchers for signal distribution systems up to 1000x1000 and larger
- ▶ Available as multimode and singlemode models



The PowerCage® FOX AV Fiber Optic Extender is a modular transmitter and receiver set for the PowerCage 1600 enclosure that provides long haul transmission of standard definition video, audio, and RS-232 control signals over a single fiber. The transmission capabilities and extensive feature set of the PowerCage FOX AV make it ideal for a wide range of applications requiring long distance delivery of content with the highest quality.



**Extron Electronics**  
INTERFACING, SWITCHING AND CONTROL

## DESCRIPTION

The Extron **PowerCage® FOX AV** Fiber Optic Extender is a modular transmitter and receiver set for the PowerCage 1600 enclosure that provides long haul transmission of standard definition video, audio, and RS-232 control signals over a single fiber. Engineered for reliability and exceptional video performance, it uses Extron all-digital technology to deliver perfect pixel-for-pixel transmission of video signals including component video, S-video, and composite video. Designed specifically for AV systems, the PowerCage FOX AV includes many integrator-friendly features such as picture and audio adjustments, daisy-chain capability, auto input format detection, and real-time system monitoring.

As part of the extensive FOX Series of fiber optic products from Extron, the PowerCage FOX AV is compatible with FOX Series AV extenders. It can be used for simple point-to-point applications or in combination with FOX Series distribution amplifiers, switchers, and matrix switchers to handle the most challenging AV system designs.

## FEATURES

- ▶ Extends standard definition video, stereo audio, and RS-232 control signals very long distances over a single fiber
- ▶ Accepts component video, S-video, and composite video signals
- ▶ All digital technology provides pixel-for-pixel performance
- ▶ Auto Input Format Detection
- ▶ Industry standard LC connectors provide reliable physical connectivity and precise fiber core alignment
- ▶ Picture and audio adjustments
- ▶ Internal transcoding with selectable output format
- ▶ Daisy-chain capability
- ▶ Available as an 850 nm multimode model for moderate-range transmissions, and a 1310 nm singlemode model for extreme distances up to 30 km (18.75 miles)
- ▶ Second fiber link enables bidirectional RS-232 pass-through, control from either location, and real-time system monitoring
- ▶ Audio gain and attenuation adjustment capability
- ▶ Audio muting capability
- ▶ RS-232 control
- ▶ Compatible with Extron FOX Matrix Switchers for signal distribution systems up to 1000x1000 and larger
- ▶ Compatible with Extron FOX Series distribution amplifiers and switchers
- ▶ Compatible with Extron FOX Series AV transmitters and receivers

## SPECIFICATIONS

**NOTE:** The optional PowerCage FOX boards are class 1 laser products. They meet the safety regulations of IEC-60825, FDA 21 CFR 1040.10, and FDA 21 CFR 1040.11.

### OPTICAL FIBER INTERCONNECTION BETWEEN TRANSMITTER AND RECEIVER

<b>Number/type</b>	1 singlemode or 1 multimode fiber optic input and output per board
<b>Operating distance</b>	
Singlemode	30 km (18.75 miles) with singlemode (SM) cables with a SM board
Multimode	300 m (985') with 62.5 µm OM1 multimode (MM) cable and a MM board 1 km (3280') with 50 µm OM2 multimode (MM) cable and a MM board 2 km (6561') with 50 µm OM3/OM4 2000 MHz bandwidth laser optimized MM cable and a MM board
<b>Optical loss budget</b>	
Singlemode	13 dB, maximum
Multimode	7 dB, maximum
<b>Maximum channel data rate</b>	2.125 Gbps

### VIDEO

<b>Standards</b>	
Input	NTSC 3.58, NTSC 4.43, PAL, SECAM, autodetected
Output	NTSC 3.58, PAL (follows vertical rate)

### VIDEO INPUT — POWERCAGE FOX TX AV

<b>Number/signal type</b>	1 component (Y, R-Y, B-Y), S-video, composite video
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### VIDEO OUTPUT — POWERCAGE FOX RX AV

<b>Number/signal type</b>	1 component (Y, R-Y, B-Y) video, S-video, composite video
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### AUDIO INPUT — POWERCAGE FOX TX AV

<b>Nominal level</b>	+4 dBu (1.23 Vrms), -10 dBV (316 mVrms)
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### AUDIO OUTPUT — POWERCAGE FOX RX AV

<b>Nominal level</b>	+4 dBu (1.23 Vrms), -10 dBV (316 mVrms)
<b>Audio delay</b>	1.5 frames

### GENERAL

<b>Power supply</b>	Power supplied by the PowerCage enclosure	
<b>Power consumption</b>	FOX Tx AV: 6.89 watts FOX Rx AV: 5.57 watts	
<b>Thermal dissipation</b>	27.6 BTU/hr	
<b>Regulatory compliance</b>		
Safety	CE, c-UL, FDA Class 1, UL	
EMV/EMC	CE, C-tick, FCC Class A, ICES, VCCI	
Environmental	Complies with the appropriate requirements of RoHS, WEEE.	
<b>Warranty</b>	3 years parts and labor	
<b>Model</b>	<b>Version Description</b>	<b>Part number</b>
PowerCage FOX Tx AV MM	Multimode - Transmitter	70-702-11
PowerCage FOX Rx AV MM	Multimode - Receiver	70-702-21
PowerCage FOX Tx AV SM	Singlemode - Transmitter	70-702-12
PowerCage FOX Rx AV SM	Singlemode - Receiver	70-702-22

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

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