

FOX AEX 108

EIGHT-PORT AUDIO EXTRACTOR

- ▶ Provides local audio outputs for up to eight FOX Series fiber optic signals, extracting analog stereo audio for independent processing and routing
- ▶ Simultaneous audio extraction ports
- ▶ Buffered input loop-throughs
- ▶ Balanced or unbalanced analog audio output
- ▶ Output reclocking
- ▶ Available as 850 nm multimode and 1310 nm singlemode models
- ▶ Real-time status LED indicators for troubleshooting and monitoring
- ▶ Compatible with Extron FOX Series 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 HDMI, DVI Plus, DVI, VGA, VGA/YUV, and AV transmitters and receivers



The FOX AEX 108 is an eight-port, fiber optic audio extractor for independent processing and routing of audio signals in a fiber optic AV distribution system. Each port accepts signals from a FOX Series transmitter to extract the two-channel audio signal, re-transmitting the original signal to a FOX Series receiver. Available in multimode and singlemode models, the FOX AEX 108 is ideal for use in FOX Matrix system applications that require extraction of audio signals for local processing and independent distribution.



Extron® Electronics
INTERFACING, SWITCHING AND CONTROL

DESCRIPTION

The Extron **FOX AEX 108** is an eight-port, fiber optic audio extractor for independent processing and routing of audio signals in a fiber optic AV distribution system. Each port accepts signals from a FOX Series transmitter, extracts the two-channel audio signal to provide a balanced or unbalanced analog stereo output, and re-transmits the original signal to a FOX Series receiver. Output reclocking on the buffered pass-through maintains signal integrity, transmitting the fiber optic signal at original power levels. Featuring high-speed, all digital signal transmission of pixel-perfect video, audio, and control signals over fiber optic cabling, the FOX AEX 108 is compatible with FOX Series HDMI, DVI Plus, DVI, VGA, VGA/YUV, and AV transmitters and receivers.

As part of the expansive FOX Series of fiber optic products from Extron, the FOX AEX 108 is also compatible with a wide range of FOXBOX and other FOX Series products. It can be used in combination with select FOXBOX and PowerCage FOX extenders and FOX Series distribution amplifiers, switchers, and matrix switchers for support of enterprise-wide installations.

This fiber optic audio extractor is available in multimode and singlemode models. The FOX AEX 108 MM supports multimode fiber at 850 nm, which is typically used within buildings or facilities with moderate-range transmission distances. The FOX AEX 108 SM supports singlemode and multimode fiber at 1310 nm.

Singlemode fiber offers long range transmission capability over extreme distances of up to 30 km (18.75 miles). It is used in very large facilities such as airports, shopping centers, and stadiums, as well as for providing connection between facilities, such as university campuses. Because transmission of content over fiber is inherently secure and immune to outside interference, fiber applications are also preferred in government, military, and medical environments.

The FOX AEX 108 is ideal for use in FOX Matrix system applications that require extraction of audio signals for local independent distribution and processing within an equipment room. It can be used to extract audio signals from remote AV sources for independent routing before sending the fiber optic signal through a FOX Matrix switcher. In this configuration, the FOX AEX 108 receives signals from an AV source via a FOX Series transmitter, extracts the audio, and transmits the original fiber optic signal to an input on the matrix switcher. The line-level balanced or unbalanced analog stereo audio is made available to the audio processing and distribution system.

When used on the output side of a FOX Matrix switcher, the FOX AEX 108 extracts program audio for independent processing through a mixer, DSP, or audio amplifier before transmitting the fiber optic signals to remote displays. In this configuration, the FOX AEX 108 receives output signals from the matrix switcher, extracts the audio, and transmits the original fiber optic signal to a remote display. A FOX Series receiver at the display converts the optical signal to video, audio, and control.

FEATURES

- ▶ **Provides local audio outputs for up to eight FOX Series fiber optic signals, extracting analog stereo audio for independent processing and routing**
- ▶ **Simultaneous audio extraction ports** – Each port accepts signals from a FOX Series fiber optic product to provide local analog stereo audio output, and retransmits the fiber optic signal at the original power level.
- ▶ **Buffered input loop-throughs** – Full transmitter power on each output maximizes distance capabilities by ensuring full availability of optical loss budget.
- ▶ **Balanced or unbalanced analog audio output** – Provides balanced/unbalanced stereo audio on captive screw output connectors to simplify integration with audio processing and distribution equipment.
- ▶ **Output reclocking** – Reshapes and restores timing of the digital signal.
- ▶ **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)** – A FOX AEX 108, connected between a FOX Series transmitter and receiver, effectively doubles the overall transmission distance capability. For singlemode applications, signals can thus be sent up to 60 km (37.5 miles) from a transmitter to receiver via the FOX AEX 108.
- ▶ **Industry standard LC connectors provide reliable physical connectivity and precise fiber core alignment**
- ▶ **Real-time status LED indicators for troubleshooting and monitoring** – Front and rear panel LEDs verify signal presence, link status, and power.
- ▶ **Compatible with Extron FOX Series matrix switchers for signal distribution systems up to 1000x1000 and larger** – Provides a convenient location for audio extraction in a matrix switching environment. Each port includes an input with a loop-through, enabling in-line installation without using valuable dedicated switching resources or a matrix switcher slot.
- ▶ **Compatible with Extron FOX Series distribution amplifiers and switchers** – Supports virtually any fiber optic switching and distribution environment for maximum design flexibility.
- ▶ **Compatible with Extron FOX Series HDMI, DVI Plus, DVI, VGA, VGA/YUV, and AV transmitters and receivers** – Provides audio extraction for a wide variety of sources and displays.
- ▶ **Rack-mountable 1U, half rack width metal enclosure** – Compact half-rack enclosure enables up to 16 extraction ports in a 1U rack space.
- ▶ **Internal universal power supply** – The 100-240 VAC, 50/60 Hz, international power supply provides worldwide power compatibility.

SPECIFICATIONS

NOTE: These units 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 OR FIBER MATRIX SWITCHER AND RECEIVER

Number/type	8 fiber optic with 2 fibers per extraction point
Connectors	16 LC connectors
Operating distance	
Singlemode	30 km (18.75 miles) with singlemode (SM) cables with a SM unit
Multimode	300 m (985') with 62.5 μm OM1 multimode (MM) cables with a MM unit 1 km (3280') with 50 μm OM2 multimode (MM) cables with a MM unit 2 km (6561') with 50 μm OM3/OM4 2000 MHz bandwidth laser optimized multimode cable with a MM unit
NOTE:	Operating distance is approximate. These are typical maximum distances that may vary depending on factors such as fiber type, fiber bandwidth, connector splicing, losses, modal or chromatic dispersion, environmental factors, and kinks.
Nominal peak wavelength	850 nm for MM units, 1310 nm for SM units
Data rate	4.25 Gbps or 2.125 Gbps, selectable
Transmission power	
Singlemode	-5 dBm, typical
Multimode	-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

AUDIO

Gain	
Range	Adjustable, -18 dB to +10 dB
Default	Unbalanced output: 0 dB
Frequency response	20 Hz to 20 kHz, ±0.5 dB
THD + Noise	0.10% @ 1 kHz at nominal level
S/N	>80 dB at maximum output (unweighted)
CMRR	65 dB @ 20 Hz to 20 kHz
Audio bits per sample	18 bits per channel, 2 channels (L, R)
Sampling rate	48 kHz

AUDIO INPUT — SEE THE TRANSMITTER SPECIFICATIONS

AUDIO OUTPUT

Number/signal type	8 balanced/unbalanced stereo or 16 balanced/unbalanced mono
Connectors	(8) 3.5 mm captive screw connectors, 5 pole
Impedance	50 ohms unbalanced, 100 ohms balanced
Nominal level	+4 dBu (1.23 Vrms), -10 dBV (316 mVrms)
Maximum level	+9.8 dBu, unbalanced at 1% THD+N
NOTE:	0 dBu = 0.775 Vrms, 0 dBV = 1 Vrms, 0 dBV ≈ 2 dBu

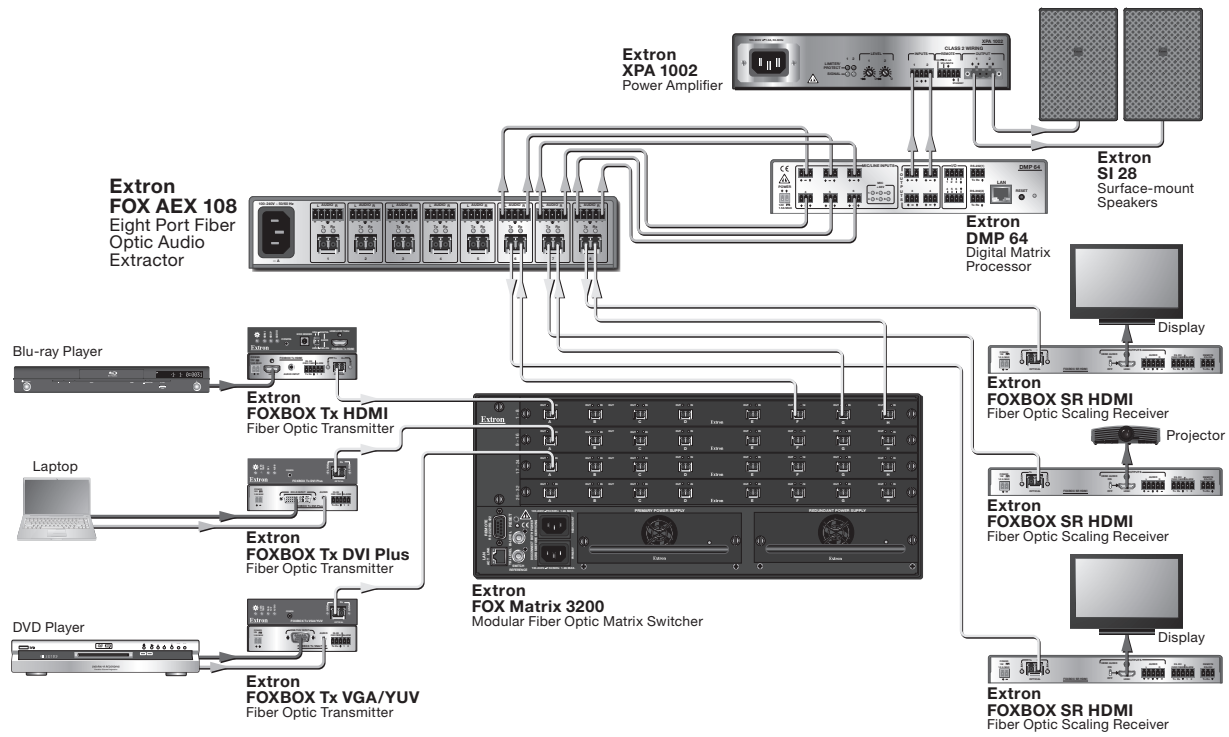
GENERAL

Power supply	Internal Input: 100-240 VAC, 50-60 Hz
Temperature/humidity	Storage: -40 to +158 °F (-40 to +70 °C) / 10% to 90%, noncondensing Operating: +32 to +122 °F (0 to +50 °C) / 10% to 90%, noncondensing
Cooling	Convection, vents on top and side panels
Mounting	
Rack mount	Yes, with optional rack shelf
Furniture mount	Yes, with optional under desk mounting kit
Enclosure type	Metal
Enclosure dimensions	1.7" H x 8.7" W x 6.0" D (1U high, half rack wide) (4.3 cm H x 22.1 cm W x 15.2 cm D) (Depth excludes connectors.)
Product weight	2.3 lbs (1.0 kg)
Shipping weight	4 lbs (2 kg)
Vibration	ISTA 1A in carton (International Safe Transit Association)
Regulatory compliance	
Safety	CE, c-UL, FDA Class 1, UL
EMI/EMC	CE, C-tick, FCC Class A, ICES, VCCI
MTBF	30,000 hours
Warranty	3 years parts and labor

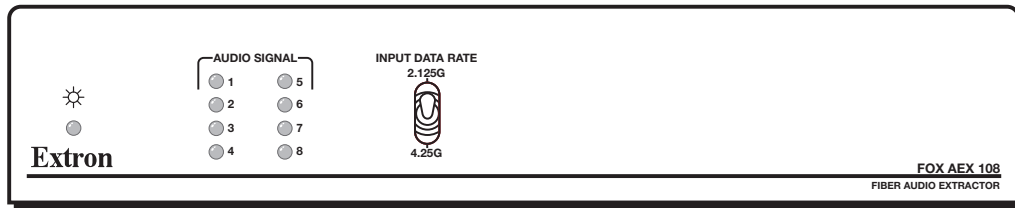
NOTE: All nominal levels are at ±10%.

Model	Version Description	Part number
FOX AEX 108 MM	Multimode	60-1227-01
FOX AEX 108 SM	Singlemode	60-1227-02

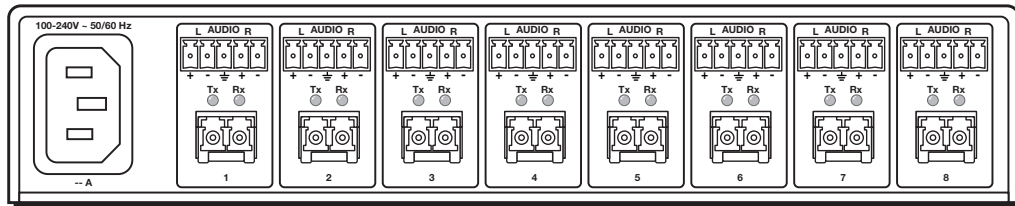
APPLICATION DIAGRAM



PANEL DRAWINGS



Front



Back

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