FOX DA8 Plus

CONFIGURABLE EIGHT OUTPUT FIBER OPTIC DISTRIBUTION AMPLIFIER

▸ **Distributes and extends fiber optic AV and RS-232 control signals long distances over fiber optic cabling**

▸ **Configurable distribution amplifier operates in the following modes:**
  - Single 1x8 DA
  - Two 1x4 DAs
  - Four 1x2 DAs

▸ **Compatible with Extron FOX Series extenders, switchers, and matrix switchers**

▸ **Eight active and individually isolated outputs**

▸ **Selectable output reclocking**

▸ **Output muting control**

▸ **Available as 850 nm multimode and 1310 nm singlemode models**

▸ **Front panel USB configuration port**

▸ **RS-232 control**

▸ **Industry standard LC connectors provide connectivity and precise fiber core alignment**

▸ **Real-time status LED indicators for troubleshooting and monitoring**

▸ **Rack-mountable, 1U, half rack width metal enclosure**

The Extron FOX DA8 Plus is a configurable, eight-output fiber optic distribution amplifier for long haul transmission of AV and RS-232 control signals over fiber optic cabling. Engineered for reliability and exceptional performance, it supports high speed digital signals for standard definition video, high resolution computer-video, HDMI, DVI-D, and multi-rate SDI. The FOX DA8 Plus also includes a host of features for enhancing AV system integration.

Extron® Electronics
INTERFACING, SWITCHING AND CONTROL

DESCRIPTION

The Extron **FOX DA8 Plus** is a configurable, eight-output fiber optic distribution amplifier for long haul transmission of AV and RS-232 control signals over fiber optic cabling. It supports high-speed, all digital signal transmission of pixel-perfect HDMI, DVI, RGB, YUV, S-video, composite video, multi-rate SDI, audio, and control signals. For maximum flexibility, the FOX DA8 Plus can be configured as a single 8-output, dual 4-output, or four 2-output distribution amplifiers. To ensure signal integrlty, it provides output reclocking and active signal splitting, transmitting output signals at the original power levels. Designed specifically for AV systems, the FOX DA8 Plus is compatible with Extron FOX Series products and includes a host of integrator-friendly features such as RS-232 control, rack-mount capability, and the ability to mute one or more outputs.

The FOX DA8 Plus is ideal for a wide range of applications requiring long distance transmission of video, HDTV, and high resolution RGB content with the highest quality. Because transmission of content is inherently secure and immune to outside interference, fiber applications are favored in government, military, and medical environments. The FOX DA8 Plus provides industry standard LC-type connectivity.

The FOX DA8 Plus MM supports multimode fiber at 850 nm, which is typically used within buildings or facilities with moderate-range transmission distances. The FOX DA8 Plus SM supports singlemode fiber at 1310 nm, offering long-range transmission capability over extreme distances of several kilometers or miles. It is used in very large facilities such as airports and stadiums, and for connecting over very long distances between facilities such as university campuses. The FOX DA8 supports distribution of composite video, S-video, RGB, HDTV, multi-rate SDI, HDMI, and DVI-D signals, as well as stereo audio and RS-232 control. All receivers must be compatible in fiber optic wavelength and video format with the transmitter connected to the input of the FOX DA8 Plus.

The FOX DA8 Plus is ideal for many installations that require long haul distribution of fiber optic AV and RS-232 control signals to multiple locations. In digital signage applications, for example, the FOX DA8 Plus can be used to deliver video, audio, and unidirectional control of multiple, remotely located displays in hotels, airports, shopping malls, and casinos. A multi-level building is another ideal installation for a FOX DA8 Plus, as it can distribute signals to displays located on multiple floors.

FEATURES

▸ **Configurable as a single 1x8-output distribution amplifier, or as two 1x4-output or four 1x2-output distribution amplifiers**

▸ **Distributes and extends fiber optic AV and control signals long distances over fiber optic cabling**

▸ **Compatible with Extron FOX Series fiber optic extenders, switchers, and matrix switchers** – The FOX DA8 Plus offers high-speed digital distribution capability for audio, control, and video signals at high resolution rates and multiple formats with pixel-for-pixel throughput. This level of performance ensures compatibility with high resolution signals, including HDMI, DVI, RGB computer-video, and multi-rate SDI.

▸ **Eight active and individually isolated outputs** – The FOX DA8 Plus utilizes active signal splitting to maintain equal transmitter power to all outputs, maximizing distance capabilities by ensuring full availability of optical loss budget for each output.

▸ **Selectable output reclocking** – Reshapes and restores timing of the digital signal on the buffered output at the selected rate.

▸ **Output muting control** – Provides the capability to mute one or more outputs via RS-232 serial control.

▸ **Available as an 850 nm multimode model for moderate-range transmissions, and a 1310 nm singlemode model for extreme distances of up to 30 km (18.75 miles)** – A FOX DA8 Plus, 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 transmitter to receiver via the FOX DA8 Plus.

▸ **Front panel USB configuration port** – Front panel USB port provides easy access for setup and configuration.

▸ **RS-232 control** – The FOX DA8 Plus features a rear panel RS-232 serial port for control and configuration.

▸ **Industry standard LC connectors provide reliable physical connectivity and precise fiber core alignment**

▸ **Real-time status LED indicators for troubleshooting and monitoring** – LEDs on the rear panel verify the presence of active input and output fiber links.

▸ **Rack-mountable 1U, half rack width metal enclosure**

▸ **Internal universal power supply** – The 100-240 VAC, 50/60 Hz, international power supply provides worldwide power compatibility.
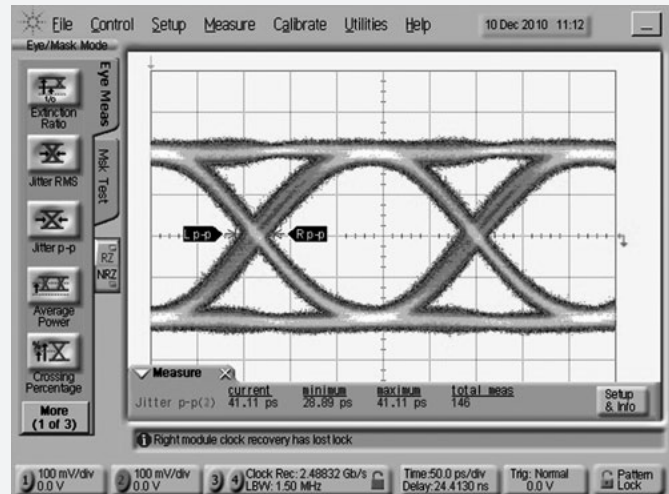
SPECIFICATIONS

OPTICAL SPECIFICATIONS

NOTE: These amplifiers are class 1 laser products. They meet the safety regulations of IEC-60825, FDA 21 CFR 1040.10, and FDA 21 CFR 1040.11.

Routing	(1) 1 x 8, (2) 1 x 4, or (4) 1 x 2, selectable
Number/type	
Input	1, 2, or 4 singlemode or multimode fiber optic
Output	8, 4, or 2 singlemode or multimode fiber optic
Connectors	8 LC connectors
Operating distance	
Singlemode	30 km (18.75 miles) with singlemode (SM) cables with an Extron singlemode Tx/Rx unit
Multimode	300 m (985') with 62.5 µm multimode (MM) cables with an Extron multimode Tx/Rx unit
	1 km (3280') with 50 µm multimode (MM) cables with an Extron multimode Tx/Rx unit
	2 km (6561') with 50 µm 2000 MHz bandwidth laser multimode cable with an Extron multimode Tx/Rx unit

NOTE: Operating distance is approximate. These are typical distances. The maximum distance may be greater than these typical numbers 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 model, 1310 nm for SM model
Data rate	4.25 Gbps
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

CONTROL/REMOTE

Serial control port	1 RS-232, 3.5 mm captive screw connector, 3 pole (rear panel)
Baud rate and protocol	9600 baud, 8 data bits, 1 stop bit, no parity
Serial control pin configurations	1 = Tx, 2 = Rx, 3 = GND

USB control port	1 front panel female mini USB B
USB standards	USB 2.0, low speed
Program control	Extron control/configuration program for Windows® Extron Simple Instruction Set (SIS™)

GENERAL

Power	100 VAC to 240 VAC, 50-60 Hz, 20 watts, internal
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 sides
Mounting	
Rack mount	Yes, with optional 1U rack shelf
Furniture mount	Yes, with optional under-desk mounting kit or through-desk mounting kit
Enclosure type	Metal
Enclosure dimensions	1.7" H x 8.7" W x 9.5" D (1U high, half rack wide) (4.3 cm H x 22.1 cm W x 24.1 cm D) (Depth excludes connectors.)
Product weight	2.3 lbs (1 kg)
Shipping weight	4 lbs (2 kg)
Vibration	ISTA 1A in carton (International Safe Transit Association)
Regulatory compliance	
Safety	CE, c-UL, UL
EMI/EMC	CE, C-tick, FCC Class A, FDA Class 1, 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 DA8 Plus MM	Multimode	60-1171-01
FOX DA8 Plus SM	Singlemode	60-1171-02

For complete specifications, please go to www.extron.com
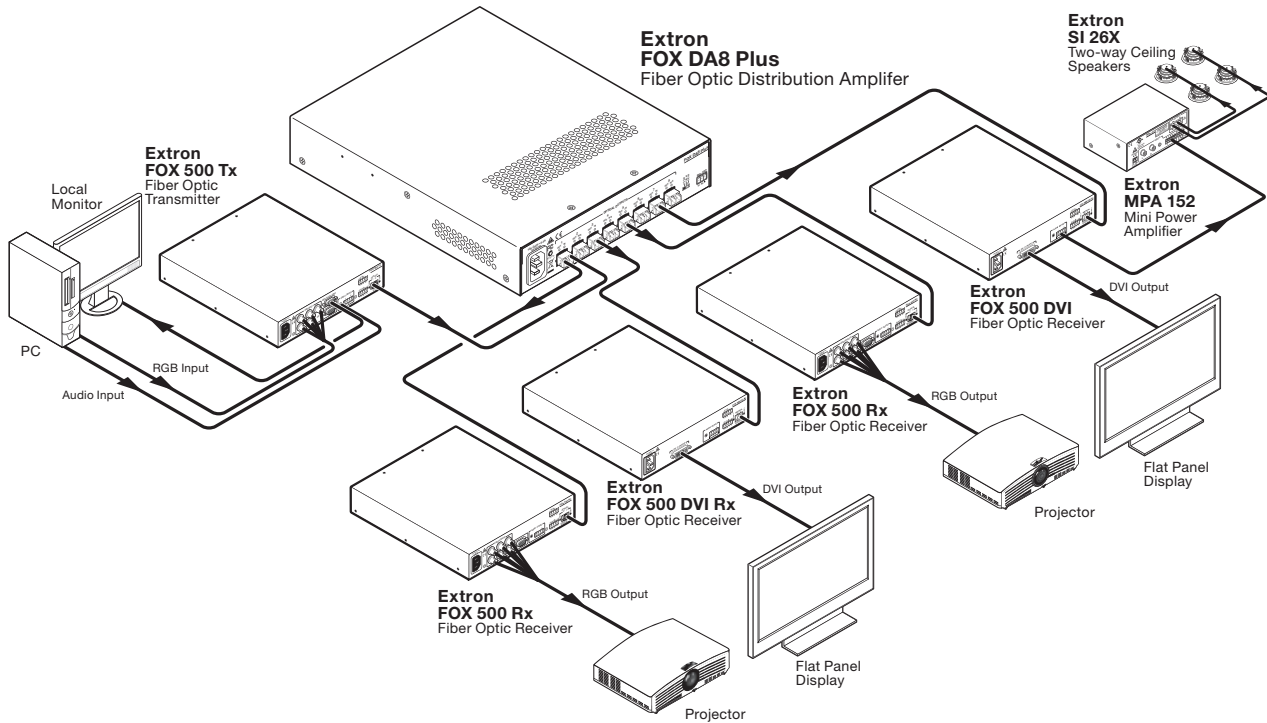Specifications are subject to change without notice.

ACTIVE SIGNAL SPLITTING AND RECLOCKING

Active signal splitting and reclocking provide the best of both worlds in maintaining optimal signal integrity to ensure pixel-perfect performance. Active signal splitting converts the fiber optic AV signal to an electrical signal, buffering the output from the input. The electrical signal is delivered to each output and converted back into a fiber optic signal, restoring it to the original optical power level. Signal reclocking reshapes and restores the digital signal to reduce jitter and adjust signal rise and fall times. The result is a high-quality digital transmission that matches the original signal from the fiber optic transmitter.
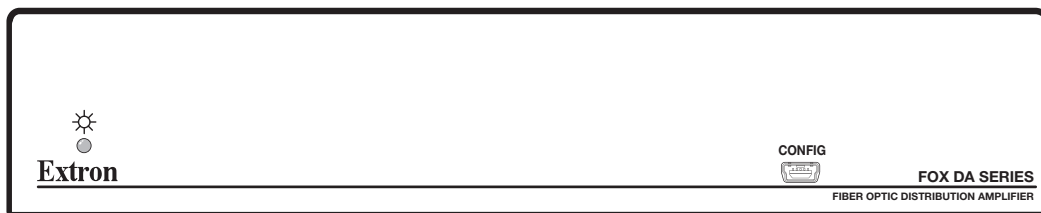

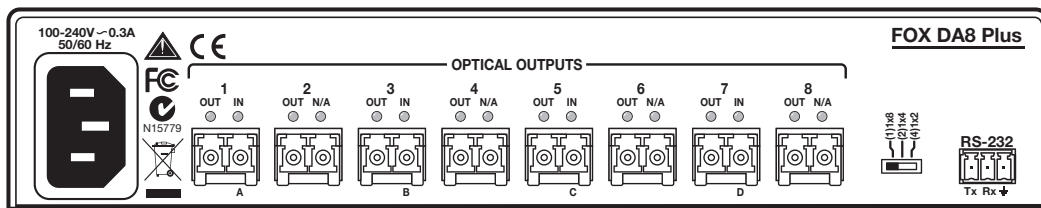**Reclocking Restores and Reshapes the Digital Signal**

APPLICATION DIAGRAM

Extron
FOX DA8 Plus
Fiber Optic Distribution Amplifer

Extron
SI 26X
Two-way Ceiling
Speakers

Extron
FOX 500 Tx
Fiber Optic
Transmitter

Local
Monitor

PC

RGB Input

Audio Input

Extron
MPA 152
Mini Power
Amplifier

DVI Output

Extron
FOX 500 DVI
Fiber Optic Receiver

RGB Output

Extron
FOX 500 Rx
Fiber Optic Receiver

Flat Panel
Display

Projector

DVI Output

Extron
FOX 500 DVI Rx
Fiber Optic Receiver

RGB Output

Extron
FOX 500 Rx
Fiber Optic Receiver

Flat Panel
Display

Projector

PANEL DRAWING

CONFIG

Extron

FOX DA SERIES
FIBER OPTIC DISTRIBUTION AMPLIFIER

Front

100-240V~0.3A
50/60 Hz

FOX DA8 Plus

OPTICAL OUTPUTS

1 OUT IN 2 OUT N/A 3 OUT IN 4 OUT N/A 5 OUT IN 6 OUT N/A 7 OUT IN 8 OUT N/A

A   B   C   D

(1)x8
(2)x4
(4)x2

RS-232

Tx Rx

N15779

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