FXCORE-AV

Ultra-Secure 8x8 Audio/Video Fiber Optic Matrix

Route uncompressed, high definition audio/video signals securely over long distances using fiber optic cables

FEATURES

- Secure high-definition signal routing
- Device-to-matrix routing distance of 1,500 feet in multimode, 3,000 feet from device to device
- Device to matrix routing distance of 15 miles in singlemode, 30 miles from device to device
- Supports uncompressed DVI-D video, stereo audio and RS-232 control
- Fiber optic plug type LC

APPLICATIONS

- Government and Defense Operations
- Security Control Centers
- Medical Campuses
- Airports and Air Traffic Control Centers
- Academic Institutions
- Industrial Work Areas
- Sound Stages and Recording Studios
- Information Kiosks and Displays
- Convention Centers
- Sports Arenas and Public Facilities

MADE IN THE USA

HD ready

Smart-AVI
SMART AUDIO VIDEO INNOVATION

SECURE, LONG-DISTANCE SIGNAL ROUTING OVER FIBER OPTICS

The FXCore-AV from SmartAVI is a reliable, secure and long-distance audio and video matrix that operates over fiber optic cables, allowing for safe and long distance DVI video and stereo audio routing. In critical environments where security and speed are essential, the FXCore-AV delivers uncompressed HD video, audio, and RS-232.

With powerful fiber optic cables in singlemode, users can be connected as far as 15 miles away from the matrix, while communicating with other devices that are also up to 15 miles away from the matrix, which adds up to an amazing 30 miles of connectivity between devices. In multimode, users can be as far as 1,500 feet from the matrix, while communicating with other devices that are also 1,500 feet away from the matrix, which adds up to 3,000 feet of connectivity between devices. Uncompressed high definition video and audio are at users' fingertips with incredible clarity.

The secure functionality of the FXCore-AV is a critical feature. There are countless environments where secure signal transmission is absolutely critical, and fiber optic connections eliminate interference, grounding and atmospheric issues. Furthermore, the device utilizes the latest in security protocols to prevent information breaches and hacking.

The FXCore-AV works in tandem with the FDX-AV at the end points to transmit and receive the signals via fiber optics and convert them back into DVI-D, stereo audio and RS-232 signals. There is no more effective or secure solution for long-distance signal routing than the FXCore-AV and FDX-AV combination.

SINGLEMODE AND MULTIMODE FIBER OPTICS

The FXCore-AV enables users to select either singlemode or multimode fiber optic extension, depending on the requirements of each application.

Singlemode Optical Fiber

By using singlemode optical fiber, the FXCore-AV can transmit high-quality signals to unprecedented distances. By utilizing just a single ray of light, singlemode transmission are fast and far reaching with an incredible bandwidth capability. Singlemode fiber allows for the safest transmission of signals across vast distances.

Multimode Optical Fiber

By using multimode optical fiber, the FXCore-AV can transmit more data via more device types, but across a smaller distance. Multi-mode also provides a more cost-effective way to implement the ultra-secure functionality of fiber, particularly when long-distance signal transmission isn't required in a specific locale or building.
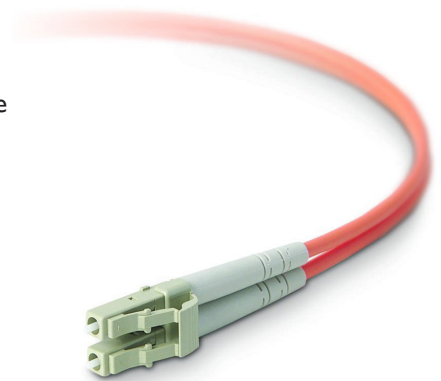
WHY USE FIBER OPTICS?

Faster and more secure with higher fidelity than other cables

Carries more data for longer distances

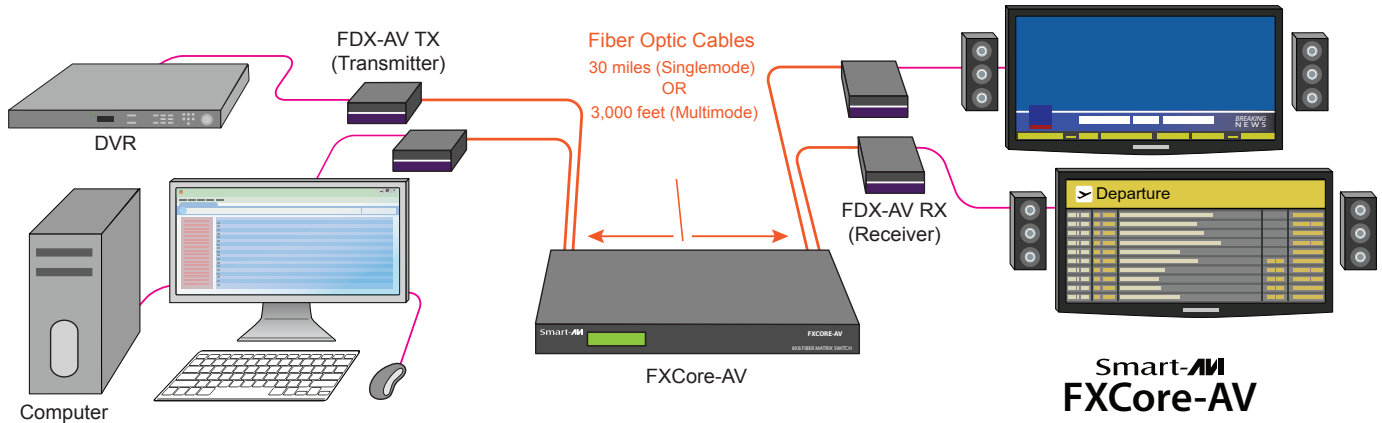*No interference, grounding, or atmospheric constraints*

Lower lifetime costs due to high durability

REAL-WORLD APPLICATIONS

AIRPORT

Audio/Video Distribution via Fiber Optics with the FXCore-AV and the FDX-AV


Airport officials depend on a constant flow of information to operations running smoothly and efficiently. Similarly, fliers and other airport visitors can't do without update information on flights, weather and more no matter where they are in the airport. The FXCore-AV, connected with the FDX-AV, is ideal for updating flight information, routing TV news, and delivering advertising content from a central location to anywhere in the airport. The FDX-AV also sends audio signals for paging fliers, announcing gate changes and more. The importance of these communications is even greater in case of emergencies or weather disruptions.

APPLICATION DIAGRAM

MULTI-DEVICE USEAGE

Utilizing Full 8x8 Functionality with the FXCore-AV and the FDX-AV
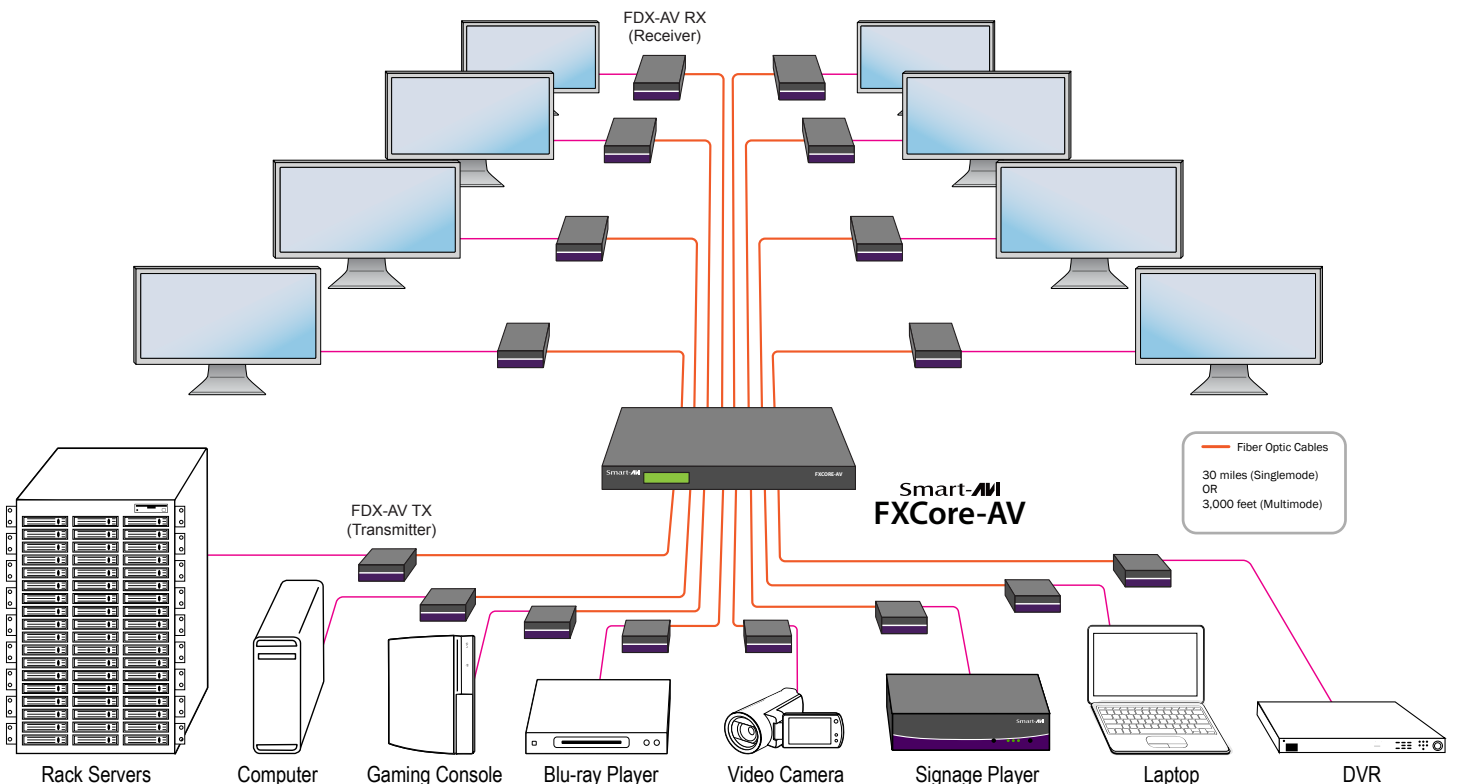
SPECIFICATIONS

FXCore-AV Technical Specifications

OPTICAL	
Input Connector	Full Duplex multimode LC (Connecting to TX and RX units requires LC to LC connectors.)
Type	8 singlemode/multimode full duplex LC fiber optic inputs and outputs
Wavelength	850nm, VCSEL Class 1 AEL Laser
Operating Distance	Up to 3,000 feet in Multimode Up to 15 miles in SInglemode
Connector Compliance	FC-PI 200-M5-SN-I and 200-M6-SN-I 2.125 GBd FC-PI 100-M5-SN-I, FC-PI 100-M6-SN-I, FC-PH2 100-M5-SN and FC-PH2 100-M6-SN-I 1.0625 GBd
Receiver Sensitivity	-21 dB Max
TX Output	Optical Power (Average) -10dBm
RX Input	Optical modulation amplitude (min) -17dBm
Channel Routing	8x8 Non blocking
Control	RS-232 9600bps
Front panel	LCD 2x20
OTHER	
Power	110V/220V internal power supply 40W
Video	Format: DVI-D Single Line Maximum Pixel Clock: 165 MHz Resolution: Up to 1920 x 1200 @60Hz
Audio Compatibility	Signal Type - Stereo Audio Bandwidth - 15MHz, 0dB Impedance - 10K Ohm
RS-232	Speed: Up to 115 Kbps
General	Operating Temp.: 0-55 °C (32-131°F) Storage Temp.: -20-85 °C (-4-185 °F) Humidity: Up to 95%
Dimensions	17" (43 cm) x 10.6" (26.9cm) x 1.75" (4.5cm)

FDX-AV Specifications

VIDEO	
Format	DVI-D Female (Single-Link)
Resolution	1920x1200 at 60Hz
DDC	Internal Table can be Re-programmed
AUDIO	
Format	Stereo Audio, 3.5 mm Female
Bandwidth	15MHz, 0dB
Impedance	10K Ohm
OTHER	
RS-232	Data up to 115,000bps
DB-9	Female for TX, Male for RX
Fiber	1,500 feet in Multimode 15 miles in Singlemode Fiber-Plug type LC
Dimensions	4.5" x 5.5" x 1.70"
Weight	8 lbs.
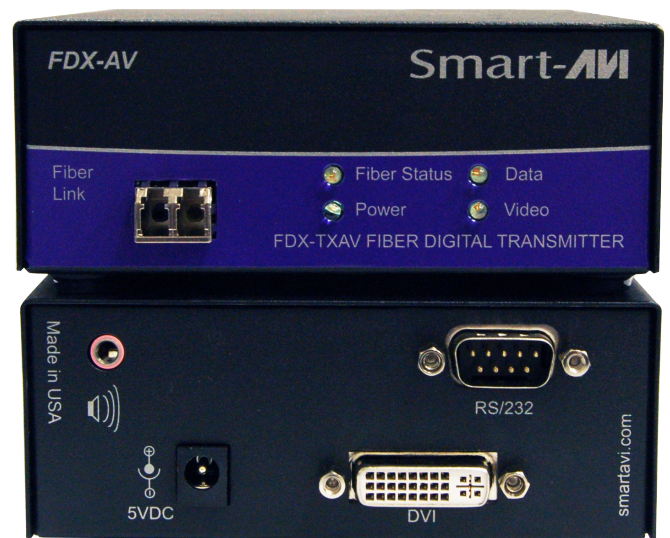
ORDERING INFORMATION

PART NO.	DESCRIPTION (Multimode)
FXCM-MX0404S	Fiber Optic Multimode 4 PCs x 4 Users Matrix Switch. Includes: [FXCM-MX0404, SM-CSW, & CCPWR06]
FXCM-MX0408S	FXCore Fiber Optic Multimode 4 PCs x 8 Users Matrix Switch. Includes: [FXCM-MX0408, SM-CSW, & CCPWR06]
FXCM-MX0412S	FXCore Fiber Optic Multimode 4 PCs x 12 Users Matrix Switch. Includes: [FXCM-MX0412, SM-CSW, & CCPWR06]
FXCM-MX0804S	FXCore Fiber Optic Multimode 8 PCs x 4 Users Matrix Switch. Includes: [FXCM-MX0804, SM-CSW, & CCPWR06]
FXCM-MX0808S	FXCore Fiber Optic Multimode 8 PCs x 8 Users Matrix Switch. Includes: [FXCM-MX0808, SM-CSW, & CCPWR06]
FXCM-MX0812S	FXCore Fiber Optic Multimode 8 PCs x 12 Users Matrix Switch. Includes: [FXCM-MX0812, SM-CSW, & CCPWR06]
FXCM-MX1204S	FXCore Fiber Optic Multimode 12 PCs x 4 Users Matrix Switch. Includes: [FXCM-MX1204, SM-CSW, & CCPWR06]
FXCM-MX1208S	FXCore Fiber Optic Multimode 12 PCs x 8 Users Matrix Switch. Includes: [FXCM-MX1208, SM-CSW, & CCPWR06]
FXCM-MX1212S	FXCore Fiber Optic Multimode 12 PCs x 12 Users Matrix Switch. Includes: [FXCM-MX1212, SM-CSW, & CCPWR06]
FDX-TXAVS	DVI-D, Audio, and RS-232 Fiber Optic Multimode Transmitter. Includes: [FDX-TXAVMX, PS5VD4A-DSKTP, and CCPWR06]
FDX-RXAVS	DVI-D, Audio, and RS-232 Fiber Optic Multimode Receiver. Includes: [FDX-RXAVMX, PS5VD4A-DSKTP, and CCPWR06]
PART NO.	**DESCRIPTION (Singlemode)**
FXCS-MX0404S	Fiber Optic Singlemode 4 PCs x 4 Users Matrix Switch. Includes: [FXCM-MX0404, SM-CSW, & CCPWR06]
FXCS-MX0408S	FXCore Fiber Optic Singlemode 4 PCs x 8 Users Matrix Switch. Includes: [FXCM-MX0408, SM-CSW, & CCPWR06]
FXCS-MX0412S	FXCore Fiber Optic Singlemode 4 PCs x 12 Users Matrix Switch. Includes: [FXCM-MX0412, SM-CSW, & CCPWR06]
FXCS-MX0804S	FXCore Fiber Optic Singlemode 8 PCs x 4 Users Matrix Switch. Includes: [FXCM-MX0804, SM-CSW, & CCPWR06]
FXCS-MX0808S	FXCore Fiber Optic Singlemode 8 PCs x 8 Users Matrix Switch. Includes: [FXCM-MX0808, SM-CSW, & CCPWR06]
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FDX-RXAVS	DVI-D, Audio, and RS-232 Fiber Optic Singlemode Receiver. Includes: [FDX-RXAVMX, PS5VD4A-DSKTP, and CCPWR06]

Designed and Manufactured in the USA