FDX-M4P

(FDX-M4U)

User Manual

MULTIMODE FIBER OPTIC
4 PORT DVI-D EXTENDER

Quad DVI-D, USB Keyboard,
USB Mouse, RS-232 and Audio Extender

Smart-AVI
SMART AUDIO VIDEO INNOVATION

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WHAT'S IN THE BOX?

PART NO.	QTY	DESCRIPTION
FDX-TXM4P	1	Point to Point Quad DVI-D, USB Keyboard & Mouse, Audio and RS-232 Multimode Fiber Extender Transmitter
FDX-RXM4P	1	Point to Point Quad DVI-D, USB Keyboard & Mouse, Audio and RS-232 Multimode Fiber Extender Receiver
EN-SFX4P-EAR-P	4	Mounting Brackets
CCPWR06	2	Power supply cord
	1	Quick Start Guide

Figure 2-1

Figure 2-2

INTRODUCTION

The FDX-M4P consists of a transmitter and receiver that extend four DVI-D outputs, audio, USB keyboard, USB mouse and RS-232. For exceptional quality and security, fiber optic extension is the best solution. The FDX-M4P can go the distance with multi-mode fiber optic cabling that can reach up to 1,400 feet.

FEATURES

- Quad channel DVI-D, audio and USB keyboard and mouse with RS-232 control
- Top Signal Quality over Multimode Fiber (up to 1,400 feet)
- Video Resolutions up to 1920 x 1200 WUXGA at 60Hz
- Customizable/Programmable DDC Table for Mac/PC
- Supports all USB 2.0 and 1.1 Keyboards and Mice
- Fiber Plug Type LC
- Compatible With all Major KVM Switches
- Supports Mac, PC, and Linux DVI
- Uses universal DVI Single Link connectors
- Zero pixel loss with TMDS signal correction
- Rack Mountable Solution
- Plug-and-play

APPLICATIONS

MEDICAL FIELD

In the medical field where sensitive electronic devices are used, isolating workstation computers can be a matter of safety. The FDX-M4P allows the workstation computers to be housed in a central location, away from sensitive devices.

INDUSTRIAL WORK AREAS

In industrial work areas that may be too harsh for a workstation computer, the FDX-M4P can consolidate the computers into a safe location.

SECURE COMPUTING

When it comes to security, the FDX-M4P is an excellent deployment option. With the FDX-M4P, devices can be centralized and secured from public access. This, combined with the intrinsic security of fiber optic cable, make the FDX-M4P one of the most secure KVM solutions available.

INFORMATION KIOSKS/DISPLAYS

As with most information booths and kiosks, there is a risk of damage or theft. The FDX-M4P is the best way to secure computer hardware, by consolidating it to a secure location away from public access.

FILM/MUSIC RECORDING STUDIOS

When recording with sensitive cameras and microphones, computers are often too noisy to be used in the immediate vicinity. The FDX-M4P isolates the computers into another room, maintaining the silence that recording artists require.

Why Fiber Optic?

SmartAVI has created a full line of fiber optic extender products, understanding that this technology is superior to traditional cabling.

Fiber optic cables are:

- Capable of transmitting over very long distances with no signal loss.
- Immune to electromagnetic interference. In situations where there is considerable interference, fiber optic cabling is the only solution.
- Much more secure because they cannot be easily tapped. For this reason, military and law enforcement agencies use fiber optic cables for the transmission of sensitive data.
- Relatively inexpensive and small enough to be routed through small spaces.

What is the difference between Multi-mode and Single-mode Fiber?

Multi-mode:
Uses larger diameters allowing for high bandwidth over medium distances. Because of the multiple light paths or signals there is a higher chance of distortion or overlap of light signals over longer distances. Device-to-Matrix routing distance of 1,400 feet in multi-mode.

Single-mode:
Uses a narrower diameter that virtually eliminates distortion or signal overlap because there is only 1 signal. This provides the least signal attenuation and provides transmission over much longer distances than Multi-mode. Device-to-Matrix routing distance of 15 miles in single-mode, 30 miles from device to device.

This manual documents the FDX-M4P, a Multi-mode device. The FDX-S4P is Smart-AVI's Single-Mode version.

TECHNICAL SPECIFICATIONS

VIDEO	
Resolution	Up to 1920 x 1200 @60Hz
Format	DVI-D Single Link
Input Interface	(4) DVI-D 29-pin female
Output Interface	(4) DVI-D 29-pin female
Maximum Pixel	165 MHz
DDC	Internal
Input Equalization	Automatic
Input Cable Length	Up to 20 ft.
Output Cable	Up to 20 ft.
AUDIO	
Signal Type	Stereo Audio
Input Interface	(1) 3.5 mm Stereo Audio Female
Output Interface	(1) 3.5 mm Stereo Audio Female
USB	
Signaling	USB 2.0 or 1.1 (Keyboard and Mouse ONLY)
Input Interface	(1) USB Type B Female
Output Interface	(2) USB Type A Female
OTHER	
Fiber Extender	• 225m @ Multimode 62,5µ • 450m @ Multimode 50µ Fiber-Plug type LC
Power	Internal 110-240 VAC
Dimensions	17" W x 5.75" D x 1.875" H
Weight FDX-TXM4P	2.6 lbs
Weight FDX-RXM4P	2.75 lbs.
Operating Temp.	32-131°F (0-55 °C)
Storage Temp.	-4-185 °F (-20-85 °C)
Humidity	Up to 95% No Condensation
RS-232	Data up to 115,200 bps, N,8,1, No Flow Control

HARDWARE INSTALLATION

1. Turn off the computer, displays, speakers and any peripheral devices.
2. Connect the USB cable, RS-232 cable and audio cable from the computer and to the FDX-TXM4P.
3. **Do not connect the DVI inputs from the computer to the FDX-TXM4P.**
4. Connect the DVI displays to the DVI connectors on the FDX-RXM4P. (DVI monitors recommended.)
5. Connect USB mouse and keyboard to the USB connectors on the FDX-RXM4P.
6. Connect speakers to the audio connector on the FDX-RXM4P.
7. Connect an RS-232 device to the FDX-RXM4P.
8. Connect the FDX-TXM4P to the FDX-RXM4P with multimode fiber-optic cables.
9. Power on the computer, displays, speakers and any peripheral devices.
10. Connect the power cords and power on the FDX-TXM4P and the FDX-RXM4P. The status LEDs will flash. It will take up to 30 seconds for the FDX-M4P to learn the EDID settings from the connected DVI displays. Once the EDID settings are learned the LEDs will stop flashing.
11. Connect the computer's DVI inputs to the FDX-TXM4P.

WARNING: Be careful not to cross the Video Link Fiber Optic cables. Video Link 1 on the FDX-TXM4P must be connected to Video Link 1 on the FDX-RXM4P. TX Video Link 2 must connect to RX Video Link 2 , 3 to 3, etc.

Note: HDMI monitors with DVI to HDMI adapters may work with DVI EDID settings loaded.

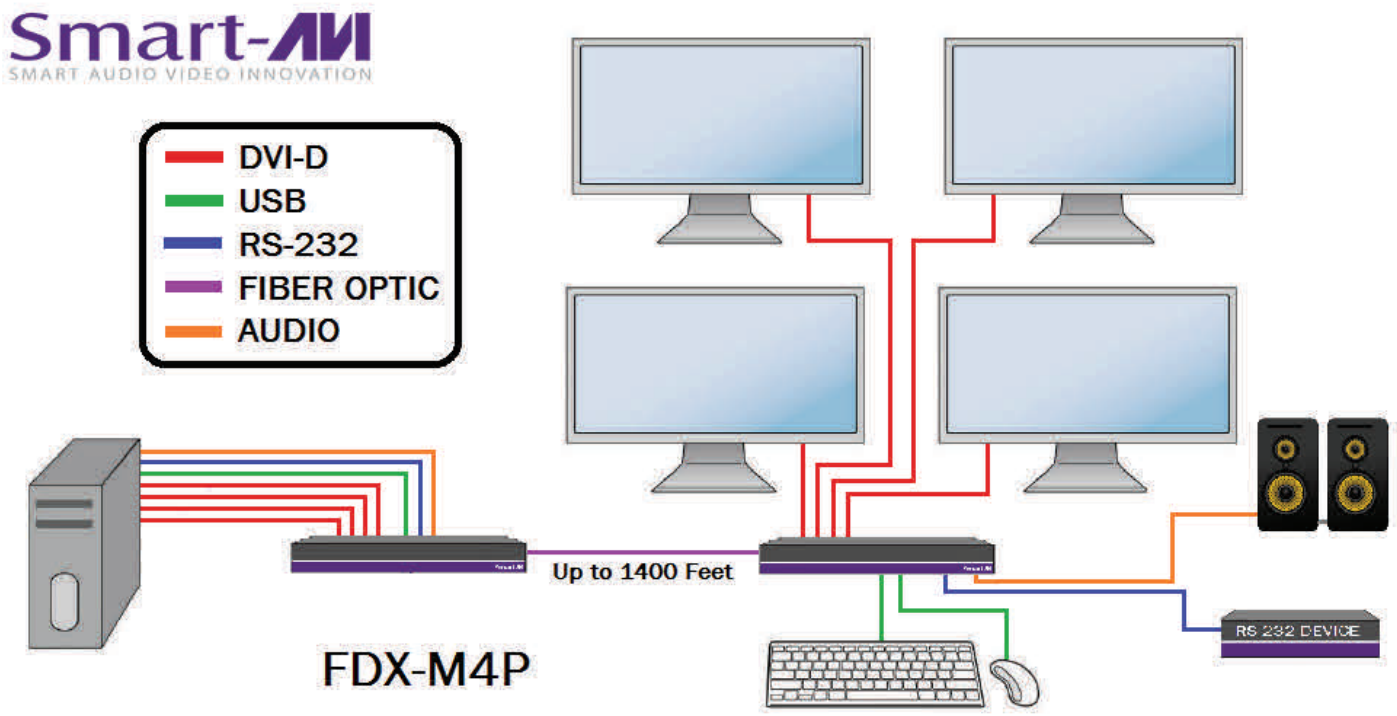

Figure 6-1

LIMITED WARRANTY STATEMENT

A. Extent of limited warranty

Smart-AVI Technologies, Inc. warrants to the end-user customers that the Smart-AVI product specified above will be free from defects in materials and workmanship for the duration of 1 year, which duration begins on the date of purchase by the customer. Customer is responsible for maintaining proof of date of purchase.

Smart-AVI limited warranty covers only those defects which arise as a result of normal use of the product, and do not apply to any:

a. Improper or inadequate maintenance or modifications
b. Operations outside product specifications
c. Mechanical abuse and exposure to severe conditions

If Smart-AVI receives, during applicable warranty period, a notice of defect, Smart-AVI will at its discretion replace or repair defective product. If Smart-AVI is unable to replace or repair defective product covered by the Smart-AVI warranty within reasonable period of time, Smart-AVI shall refund the cost of the product.

Smart-AVI shall have no obligation to repair, replace or refund unit until customer returns defective product to Smart-AVI.

Any replacement product could be new or like new, provided that it has functionality at least equal to that of the product being replaced.

Smart-AVI limited warranty is valid in any country where the covered product is distributed by Smart-AVI.

B. Limitations of warranty

To the extant allowed by local law, neither Smart-AVI nor its third party suppliers make any other warranty or condition of any kind whether expressed or implied with respect to the Smart-AVI product, and specifically disclaim implied warranties or conditions of merchantability, satisfactory quality, and fitness for a particular purpose.

C. Limitations of liability

To the extent allowed by local law the remedies provided in this warranty statement are the customers sole and exclusive remedies.

To the extant allowed by local law, except for the obligations specifically set forth in this warranty statement, in no event will Smart-AVI or its third party suppliers be liable for direct, indirect, special, incidental, or consequential damages whether based on contract, tort or any other legal theory and whether advised of the possibility of such damages.

D. Local law

To the extent that this warranty statement is inconsistent with local law, this warranty statement shall be considered modified to be consistent with such law.

NOTICE

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