Datasheet

FMX-160MS | UltraScale Fiber Matrix Switcher 40SLT



Key features

- Seamless HD Switching: Smooth transitions with zero black frames or jitter.
- Non-Compressed 1080P@60Hz: High-definition video without loss of quality.
- Flexible Input & Output: Per-module scaling and independent output resolution.
- Fiber-Optic Design: Robust interference immunity and long-distance transmission.
- Deep Color Support: 24/30/36/48-bit YUV 4:2:2 and 4:4:4 for vibrant visuals.
- Wide Signal Compatibility: Supports CVBS, YPbPr, VGA, HDMI, 3G-SDI, DVI, and audio.
- Extended Transmission Range: Fiber links up to 80 km for enterprise-scale AV networks.

Product Overview

The FMX-160MS Ultra Scale Fiber Matrix Switcher 40SLT from the FMX series is a high-performance 160×160 optical fiber matrix switcher engineered for mission-critical AV and signal distribution applications. Designed for environments requiring maximum system stability, security, and reliability, it seamlessly integrates advanced signal conversion technology with all-fiber optical transmission.

This matrix switcher supports a wide array of signal formats, including CVBS, YPbPr, VGA, HDMI, 3G-SDI, DVI, and audio, offering flexible system integration across complex AV environments. Utilizing non-compressed image processing technology, it delivers pristine, jitter-free video output over long distances—up to 80 km via fiber optics—without any degradation in quality or black frames.

Each input module allows scaling configuration per input, while each output module supports customizable resolutions, ensuring maximum flexibility for professional AV setups. The robust fiber-optic design provides strong immunity to electromagnetic interference, making it ideal for large control rooms, broadcast centers, convention halls, and enterprise-grade AV infrastructures.

Designed in the 160×160 configuration, the FMX-160MS is built to meet the demands of very large-scale AV systems, delivering high reliability, seamless switching, and professional-grade performance for complex, high-density signal distribution applications.

Technical Specification

Feature	Details
Description	160×160 Fiber Matrix Switcher
Input/Output Card Slot	20 / 20
Input Modules	FMX-IN8-1500, FMX-IN8-10K
Output Modules	FMX-OUT8-1500, FMX-OUT8-10K
Supported Signal Types	CVBS, YPbPr, VGA, HDMI, 3G-SDI, DVI, Audio
Transmission Medium	Single-mode / Multi-mode Fiber
Transmission Distance	1.5 km, 10 km (Upgradeable to 80 km)
Video Resolution	1080P@60Hz, Non-compressed
Deep Color Support	24/30/36/48-bit YUV 4:2:2 / 4:4:4
Bandwidth	10.2 Gbps
Scaling / Resolution Control	Each input supports scaling; each output supports independent resolution customization
Switching Technology	Seamless Switching, zero black frames, no jitter
Serial Control Protocol	RS-232 (Baud rate: 115200, Data bits: 8, Stop bit: 1, Non-parity)
Serial Port Connector	9-pin D-sub (DE9F) Jack: 3=TX, 2=RX, 5=GND
Network Control Protocol	TCP/IP
Network Connector	RJ45, 10/100Base-T Ethernet
Power Specification	AC 100–240V, 50/60Hz
Operating Temperature	–20°C ~ 60°C
Storage Temperature	0°C ~ 40°C
Dimensions (W×D×H)	440 × 620 × 374 mm (14U)
Certifications	CE, RoHS compliance

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