

12G/3G/HD/SD/ASI Routing Switcher

MFR-5000/8000

8K SUPER
HI-VISION
SHV

4K ULTRA
HD

FOR.A[®]

12G/3G/HD/SD/ASI Routing Switcher

MFR-5000/8000

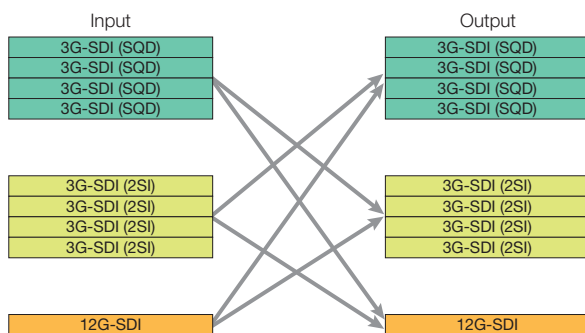


Expand your 4K/8K routing freedom with 12G-SDI I/O* and gearbox support in 2 models offering the most inputs and outputs in the MFR series

Configure an I/O matrix up to 128 x 128 with the MFR-5000 or 256 x 256 with the MFR-8000. Furthermore, they can be used as a large-scale routing system by linking multiple units. These versatile core system components support RS-422 interface routing, tally connections with peripherals (such as video switchers or multi viewers), auto source name tracking, and much more.

* For MFR-5000/8000 matrices, only up to 3G-SDI is supported. An input card compatible with conversion from 12G to 3G for 12G-SDI input (MFR-16SDIGB) and an output card compatible with conversion from 3G to 12G for 12G-SDI output (MFR-16SDOGB) are necessary.

Gearbox Functionality



4K conversion (12G-SDI/Quad Link 3G-SDI, 2SI/SQD)

Add the MFR-16SDIGB and MFR-16SDOGB cards for conversion of video (Quad Link 3G-SDI/12G-SDI) and mapping (2SI/SQD) formats. These options open the door for equipment previously incompatible with 12G-SDI, enabling system building focused on this new specification.

10 Highlights Supporting Large-Scale Systems

Series-leading connectivity

Add up to 8 I/O cards to MFR-5000 or 16 to MFR-8000. With a switcher this expandable, you can build a matrix up to 128 x 128 or 256 x 256. For 8K, up to 8 x 8 / 16 x 16 inputs and outputs are available, or for 4K, 32 x 32 / 64 x 64.

Multi-format video input and output

Support for 12G/3G/HD/SD-SDI and DVB-ASI input and output. No need to worry about signal formats, thanks to auto signal detection.

Compatible with any types of audio I/O

Choose from audio I/O cards with MADI, AES/EBU and analog audio capabilities. In a single enclosure, build a video and audio routing system that can also perform A/D and D/A conversion.

Control signal input/output support

Routes control signals between master units (editing stations, etc.) and slave units (video servers, etc.) with an added I/O card for serial control. Signal directions can be freely changed for each port.

- MFR-16DTIO: 16-port RS-422 I/O card

Versatile crosspoint control

Besides typical crosspoint switching, the unit enables a variety of crosspoint control.

- Salvo ■ Take ■ Link ■ Level operation ■ Chop function
- Monitor out ■ Error-proofing

Outstanding maintainability

Designed for maintainability, all boards and power units can be accessed from the front without removing cables.

Outstanding redundancy

As core system components, FOR-A routing switchers can incorporate redundancy to ensure nonstop operation in case of problems.

- Redundant CPU board (optional MFR-CPU)
- Redundant power supply (optional MFR-PS)
- Router linkage: Parallel operation of two routing switchers ensures matrix redundancy and enables quadruple redundancy of the power supply unit and CPU board.

Matrix partition function

One routing switcher can be virtually partitioned to build any theoretical hierarchy, creating possibilities for use in various operations.

- Fully independent switching ■ V/Key linking switcher ■ 3D switcher
- HD/SD simul-switcher ■ 4K/8K capable routing switcher

SNMP monitoring

Can be integrated into an SNMP monitoring system. Enables monitoring of various operational states, such as power, fan, and CPU status, SDI signal input or output, and crosspoint errors. If system failure and recovery occur, SNMP traps are sent to managers.

Connectivity with other products

Can be remote-controlled through the Ethernet or serial ports. Compatibility with common protocols such as TSL and Harris enables tally linkage or auto source name tracking for crosspoint switching. As well as our exclusive interface to the FOR-A line of HVS production switchers and standalone multi viewers.

Input/Output cards

Video input cards

	MFR-16SDIA/16SDIB	MFR-16SDIGB
Supported formats	3G/HD/SD/ASI	12G/3G
BNC	16	16
Ports supporting 12G-SDI	0	4
Gearbox (12G/3G-SDI interconversion)	0	4

Video output cards

	MFR-16SDO/16SDOA	MFR-16SDOGB
Supported formats	3G/HD/SD/ASI	12G/3G
BNC	16	16
Ports supporting 12G-SDI	0	4
Gearbox (12G/3G-SDI interconversion)	0	4

Audio input cards

	MFR-16ADI	MFR-16AAI	MFR-16AAIEX
Application	Embed AES audio to SDI signals.	Embed analog audio to SDI audio signals.	Convert analog audio into AES audio signals.
Interfaces	BNC x 16	25-pin D-sub (female) Balanced or unbalanced, x 4	25-pin D-sub (female) Balanced or unbalanced, x 4
Channels	16 stereo pairs, 32 channels	16 stereo pairs, 32 channels	16 stereo pairs, 32 channels
Impedance	75Ω	600Ω or Hi-Z	600Ω or Hi-Z
Sampling frequency	32 kHz, 44.1 kHz, 48 kHz, 96 kHz	48 kHz	48 kHz

Audio input cards

	MFR-16AESI	MFR-16SDIB
Application	Pass through AES audio.	Pass through MADI audio.
Interfaces	BNC x 16	BNC x 16 (MADI x 16)
Channels	16 stereo pairs, 32 channels	MADI, 16 channels
Impedance	75Ω	75Ω
Sampling frequency	–	48kHz

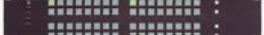
Audio output cards

	MFR-16AAOEX	MFR-16ADAO		
Application	Convert AES audio into analog audio.	Convert SDI embedded audio into AES/EBU audio signals.	SDI embedded audio output	Convert SDI embedded audio into analog audio signals.
Interfaces	25-pin D-sub (female) Balanced or unbalanced, x 4	BNC x 8	BNC x 2 (1 ch distributed in 2 ea.)	25-pin D-sub (female) Balanced or unbalanced, x 4
Channels	16 stereo pairs, 32 channels	8 stereo pairs, 16 channels	8 stereo pairs, 16 channels	4 stereo pairs, 8 channels
Impedance	Less than 100Ω	75Ω	75Ω	Less than 100Ω
Sampling frequency	48 kHz	48 kHz	48 kHz	48 kHz

Audio output cards

	MFR-16AESO	MFR-16MADIPO	MFR-16AESPO
Application	Pass through AES audio.	SDI, MADI, AES 入力を音声リマップして SDI または MADI で出力	SDI, MADI, AES 入力を音声リマップして AES で出力
Interfaces	BNC x 16	BNC x 16	BNC x 16
Channels	16 stereo pairs, 32 channels	MADI/SDI x 16	ステレオ x 16、32 チャンネル
Impedance	75Ω	75Ω	75Ω
Sampling frequency	–	48kHz	48kHz

Remote Control Units

Basic models	MFR-16RUW 	MFR-32RUW 	MFR-64RUW 
Size	1RU	1RU	2RU
Buttons	16 (green)	32 (green)	64 (green)
Features	16 customizable buttons	32 customizable buttons	64 customizable buttons

Standard models	MFR-16RU 	MFR-16RUD 	MFR-40RU 
Size	1RU	1RU	1RU
Buttons	16 (green)	16 (green)	40 (red/green/orange)
Features	16 customizable buttons	16 customizable buttons - Equipped with a status/setting menu display	- All buttons are customizable - Redundant power supply (AC adapter)

Full-featured models with display	MFR-18RUA 	MFR-39RUA 	MFR-16RUTA 
Size	1RU	2RU	2RU half tabletop
Buttons	18 (red/green/orange)	39 (13 x 3 rows)	16 (red/green/orange)
Features	- Buttons feature an OLED display that can show source names or assigned functions (7 colors: W, Ye, Cy, G, Mg, R, B) - All buttons are customizable - Redundant power supply (AC adapter)	- Buttons feature an OLED display that can show source names or assigned functions (7 colors: W, Ye, Cy, G, Mg, R, B) 6 customizable function buttons (3 colors: R, G, Or) separate from main buttons - Equipped with a display showing information on current sources, destinations, and pages - Ideal as a main control unit covering the entire crosspoint setup - Redundant power supply (AC adapter)	16 customizable buttons - Buttons feature an OLED display that can show source names or assigned functions (7 colors: W, Ye, Cy, G, Mg, R, B)

Please see the spec sheet for details.