



# 12G/6G/3G/HD/SD/ASI ROUTING SWITCHER MFR-1000



Powerful 4K and 8K routing with 4K-UHD conversion and 12G-SDI compatibility across all inputs and outputs.

Configure a matrix of up to 16 x 16. 12G-SDI compatibility across all inputs and outputs. Optional AVDL functionality enables smooth changeover without noise or disruption.

## 12G-SDI Support

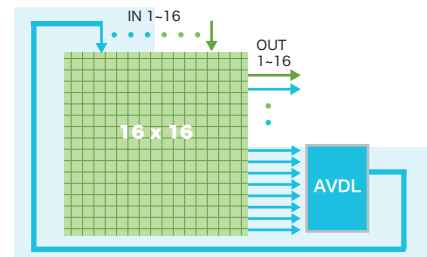
Conventional 3G-SDI routing switchers require 4 crosspoints to input and output 4K video. With 12G-SDI, 4K can be carried over a single crosspoint. The MFR-1000 also determines the type of SDI input automatically—no need to worry about what signals are supplied.



## AVDL Functionality

AVDL functionality\* can be added to 8 outputs, enabling smooth changeover without noise or disruption. Produces clean switched output for video input within the adjustment range.

\*Optional



## Solid Performance

### Multi-format video input and output

Support for 12G/6G/3G/HD/SD-SDI and DVB-ASI input and output. No need to worry about signal formats, thanks to auto signal detection.

### Outstanding redundancy

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

### GUI-based configuration

Built-in webserver enables immediate setup without installing software on external devices. Via this interface, settings can also be configured in an offline environment.

### Versatile crosspoint control

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

■ Salvo ■ Take ■ Link ■ Error-proofing (Inhibit, Lock)

### Remote control units

10 control units are available to suit specific applications.

(for the detailed information, please see the "Lineup" in the back.)

### 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.

### Interface expansion units

Three types of interface expansion units are available to suit specific applications.

- MFR-TALM: Tally Manager
- MFR-RULINK: Remote Control Relay Unit
- MFR-GPI: GPI Unit

### Front control panel

Front panel enables menu display and notification of alarm details.

### Connectivity with other products

Remote-controllable 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.

## Optional Video I/O Cards

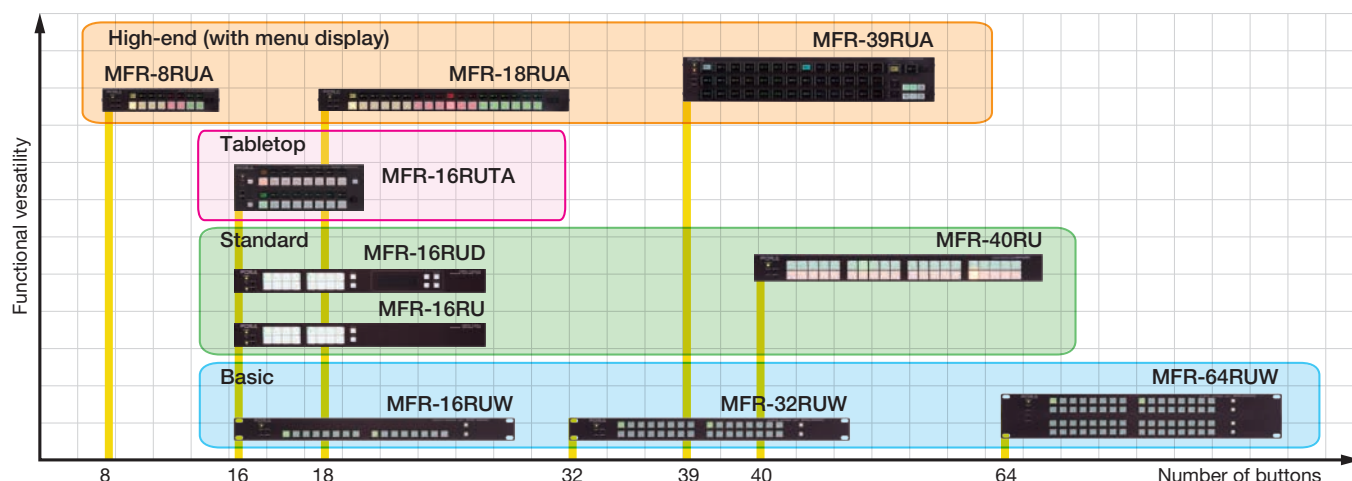
### MFR-8SDI12G Input Card

Supports 8 inputs of 12G/6G/3G/HD/SD-SDI and DVB-ASI.

### MFR-8SDO12G Output Card

Supports 8 outputs of 12G/6G/3G/HD/SD-SDI and DVB-ASI.

## Remote Control Unit Lineup



## Specifications

Video formats	12G-SDI: 2160/59.94p, 2160/50p 6G-SDI: 2160/30p, 2160/29.97p, 2160/25p, 2160/24p, 2160/23.98p 3G-SDI: 1080/60p, 1080/59.94p, 1080/50p HD-SDI: 1080/60i, 1080/59.94i, 1080/50i, 1080/30p, 1080/30PsF, 1080/29.97p, 1080/29.97PsF, 1080/23.98p, 1080/23.98PsF, 1080/25p, 1080/25PsF, 1080/24p, 1080/24PsF, 720/60p, 720/59.94p, 720/50p SD-SDI: 525/60, 625/50
Matrix size	Min. 8 x 8 - Max. 16 x 16, expandable in 8-I/O increments
Video inputs (optional)	Digital video input compliant with the following (75Ω, BNC) MFR-8SDI12G: SMPTE 2082 (12 Gbps), SMPTE 2081 (6 Gbps), SMPTE 424 (3 Gbps), SMPTE 292 (1.5 Gbps), SMPTE 259M (270 Mbps), DVB-ASI
Input cable equalization	12G-SDI: 100m (using L5.5CUHD or equivalent cable: Belden 4794R) 3G/HD-SDI: 100m (using 5C-FB or equivalent cable: Belden 1694A) SD-SDI: 200m (using 5C-2V or equivalent cable: Belden 8281)
Video outputs (optional)	Digital video output compliant with the following (75Ω, BNC, with auto reclocking) MFR-12SDO12G: SMPTE 2082 (12 Gbps), SMPTE 2081 (6 Gbps), SMPTE 424 (3 Gbps), SMPTE 292 (1.5 Gbps), SMPTE 259M (270 Mbps), DVB-ASI
Genlock input	BB: NTSC 0.429 V (p-p)/PAL: 0.45 V (p-p) or Tri-sync: 0.6 V (p-p), 75Ω, BNC x 1, with loop-through (to be terminated with 75Ω terminator, if unused)
Interfaces	MFR-LAN: 10/100/1000BASE-T, RJ-45 (Connected to MFR series products. Up to 128 units can be connected.) PC-LAN: 10/100BASE-TX, RJ-45 (Connected to a computer or external device) GPI IN/TALLY OUT: 25-pin D-sub (female) x 1 (GPI IN: 8-pin, TALLY OUT: 8-pin)
Router linkage	Maximum: 2
Temperature/humidity	0 °C to 40 °C/30 % to 85 % (no condensation)
Power	100 V to 240 V AC ±10 %, 50/60 Hz
Consumption	36 V AC or lower (at AC 100 V to 120 V) 44 V AC or lower (at AC 220 V to 240 V)
Dimensions/weight	430 (W) x 44 (H) x 350 (D) mm, EIA 1 RU/5 kg
Included accessories	Operation manual (CD-ROM), AC cord, AC cord retaining clip, Rack mount bracket
Consumables	Power unit: Replace every 5 years Fans: Replace every 4 years
Options <sup>*1</sup>	MFR-8AVDL12G: AVDL function card MFR-8SDI12G: SDI input card MFR-8SDO12G: SDI output card MFR-10PS: Redundant power supply uni

\*1 See "Options" for details on remote control units and video I/O cards.



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