12G/6G/3G/HD/SD/ASI Routing Switcher

MFR-1000

12G-SDI

8K SHV SUPER Hi-Vision

4K HD ULTRA

FOR.A®

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.
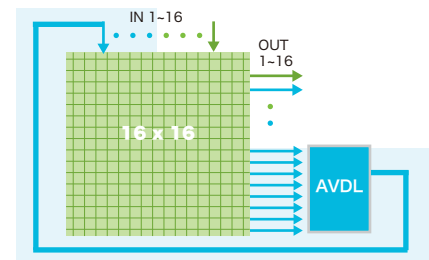
12G-SDI Support

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.

12G-SDI

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

IN 1~16
OUT 1~16
16 x 16
AVDL

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, CPU status and crosspoint errors. If system failure and recovery occur, SNMP traps are sent to managers.

Interface expansion units
Interface expansion units are available to suit specific applications.
■ MFR-TALM: Tally Manager
■ MFR-GPI: GPI Unit

Front control panel
Front panel enables menu display and notification of alarm details.
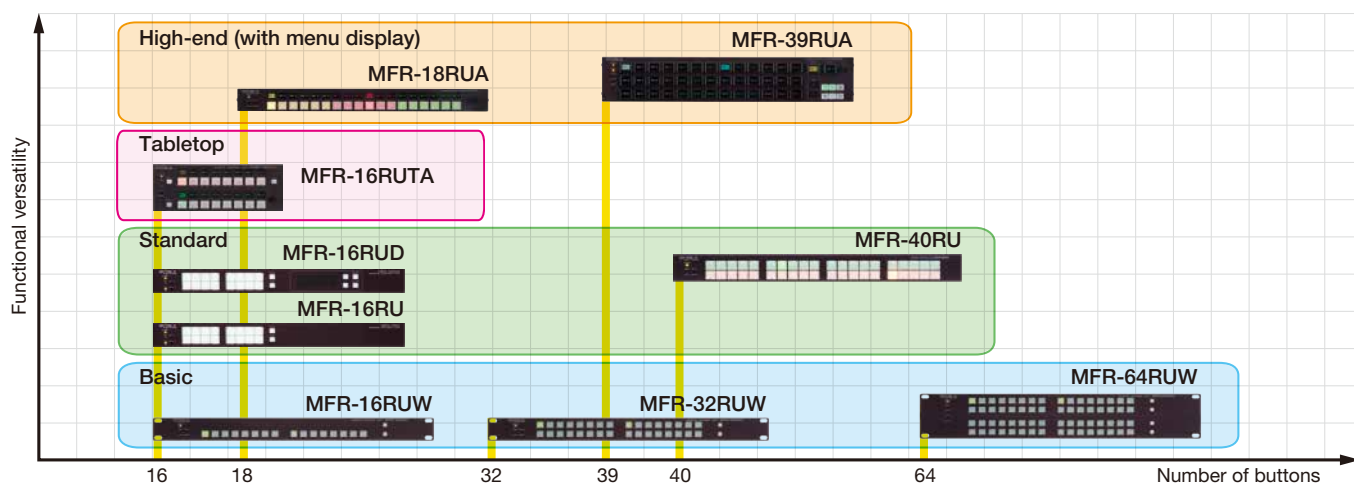
Connectivity with other products
Remote-controllable through the Ethernet or serial ports. Compatibility with common protocols such as TSL and Harris enables tally linkage or auto source name tracking for crosspoint switching. As well as our exclusive interface to the FOR-A line of HVS production switchers and standalone multi viewers.

Optional Video Cards

MFR-8SDI12G Input Card
Supports 8 inputs of 12G/6G/3G/HD/SD-SDI and DVB-ASI.

MFR-8AVDL12G AVDL Function Card
AVDL functionality can be added to 8 outputs

MFR-8SDO12G Output Card
Supports 8 outputs of 12G/6G/3G/HD/SD-SDI and DVB-ASI.

MFR-10PS Redundant Power Supply Unit

Remote Control Unit Lineup

Functional versatility →

High-end (with menu display)

MFR-18RUA

MFR-39RUA

Tabletop

MFR-16RUTA

Standard

MFR-16RUD

MFR-16RU

MFR-40RU

Basic

MFR-16RUW

MFR-32RUW

MFR-64RUW

16   18   32   39   40   64   Number of buttons →

MFR-1000 Datasheet

1. Specifications

Basic specifications

Temperature	0ºC to 40ºC
Humidity	30% to 90% (no condensation)
Power	100V AC to 240V AC ±10%, 50/60Hz
Consumption	100V AC to 120V AC: 90 VA (88 W) 220V AC to 240V AC: 107 VA (86 W)
Dimensions	430 (W) x 44 (H) x 325 (D)mm EIA 1RU 480 (W) (Including rack mount brackets)
Weight	6 kg
Consumables (at 24-hour operation)	Fan 1 (P-1630): Replace every 4 years. Fan 2 (P-1631): Replace every 4 years. Fan 3 (P-1632): Replace every 4 years. Fan 4 (P-1633): Replace every 4 years. Power supply unit: Replace every 5 years.

Technical specifications

Video Formats	
UHD 4K (12G-SDI)	2160/60p, 59.94p, 50p (SMPTE ST 2082-10)
HD (3G-SDI)	1080p/ 60, 59.94, 50 (SMPTE424M)
HD (HD-SDI)	1080i/ 60, 59.94, 50, 1080p/ 30, 29.97, 25, 24, 23.98 1080PsF/ 30, 29.97, 25, 24, 23.98 720p/ 60, 59.94, 50 (SMPTE292M)
SD (SD-SDI)	525/59.94i, 625/50i (SMPTE259M)
DVB-ASI	Compliant to EN 50083-9
Input/Output Matrix	Standard: 8 × 8, Max.:16 × 16
Video Input	
MFR-8SDI12G (Option)	12G/3G/HD/SD-SDI Input Card - 75Ω BNC x 8 Cable Equalization - 12G-SDI: 70m (L-5.5CUHD cable) - 3G/HD-SDI: 100m (5C-FB cable) - SD-SDI: 200m (5C-2V cable)
Video Output	
MFR-8SDO12G (Option)	12G/3G/HD/SD-SDI Output Card - 75Ω BNC x 8 (Auto reclocking)

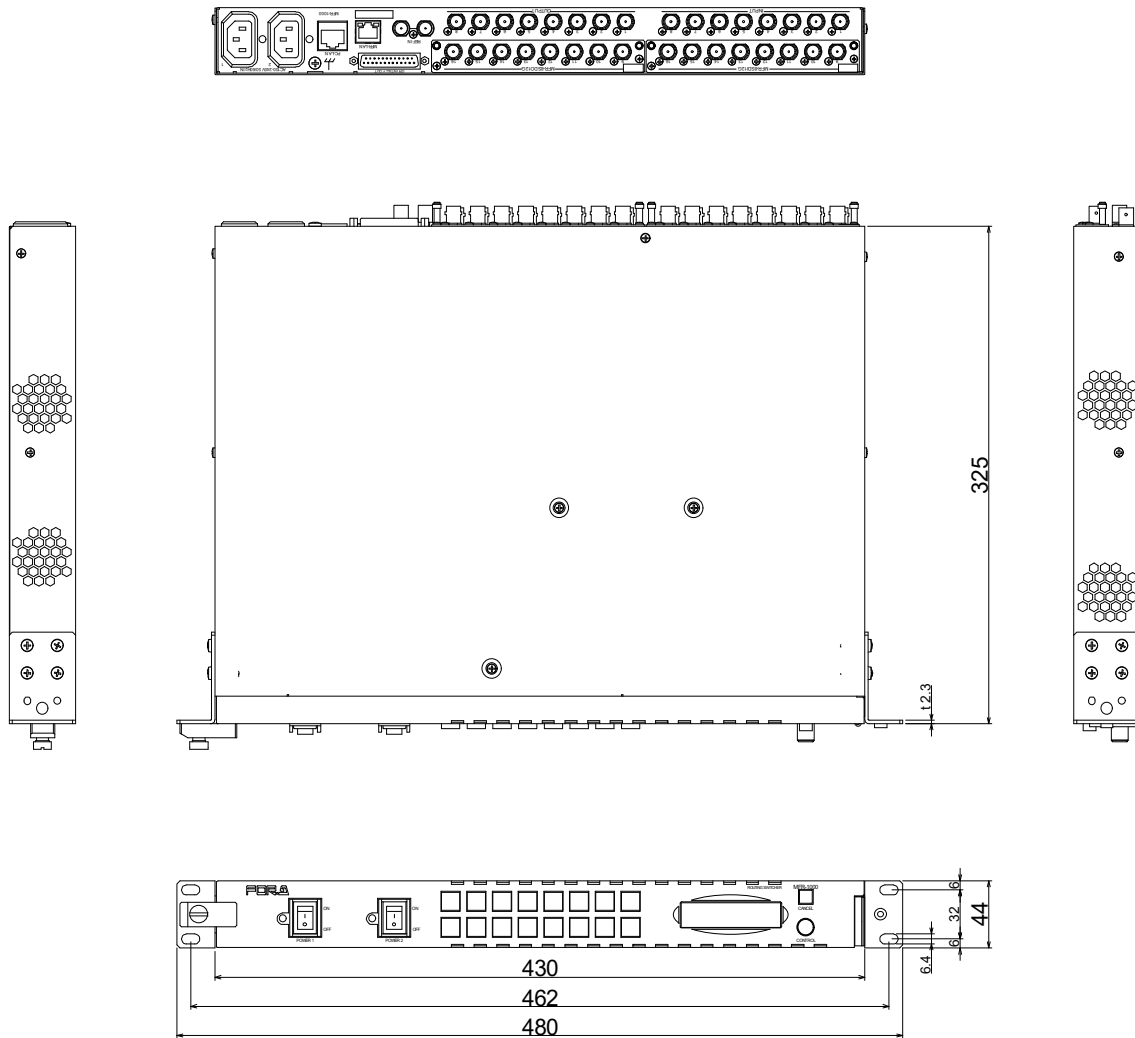| AVDL Function	
MFR-8AVDL12G (Option)	AVDL function card Output alignment -+1H〜5H against the reference input signal. Adjustment range -Variable depending on output adjustment range 　+1H Output: -4.1H to +0.9H 　+2H Output: -3.1H to +1.9H 　+3H Output: -2.1H to +2.9H 　+4H Output: -1.1H to +3.9H 　+5H Output: -0.1H to +4.9H
Ancillary Data Packet	-Quiet Switch: OFF All ancillary data in input signal is passed through. (No compensation on signal switching noise.) -Quiet Switch: ON – Ancillary data as listed below are embedded by reproduction. 　-SMPTE ST352 (Video payload ID) 　-SMPTE ST299-1 (Embedded audio) 　　16 channels (Group1 to 4) 　　PCM, 48kHz 24bit synchronous only 　　(For 12G-SDI, Group1-4 in Stream 1 passed through)
Reference Input	BB: NTSC: 0.429Vp-p / PAL: 0.45Vp-p or Tri-level Sync: 0.6 Vp-p 75Ω BNC x 1, loop-through (Terminate with a 75Ω terminator if unused.)
Interfaces	
MFR-LAN	10/100BASE-TX RJ-45 x 1 (For connecting up to 128 RU/GPI units.)
PC-LAN	10/100BASE-TX, RJ-45 x 1 (for PC operation/ External connection)
GPI IN/TALLY OUT	25 pin D-sub (female) x 1

Options

MFR-8SDI12G	8 SDI-input card
MFR-8SDO12G	8 SDI-output card
MFR-8AVDL12G	AVDL function card
MFR-10PS	Redundant power supply unit (with AC cord and AC cord clamp.)
MFR-8RUA/18RUA/39RUA/40RU MFR-16RU/16RUD/16RUTA MFR-16RUW/32RUW/64RUW	Remote Control Unit
MFR-GPI	Interface Expansion Unit
MFR-TALM	Tally Manager Unit

Accessories
AC cord, Rubber feet, and Quick setup guide

2. External Dimensions

(All dimensions in mm.)

FOR-A COMPANY LIMITED

Date: 2022/09/20
All specifications and contents are subject to change without prior notice.

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