Specifications

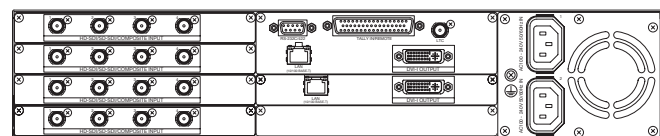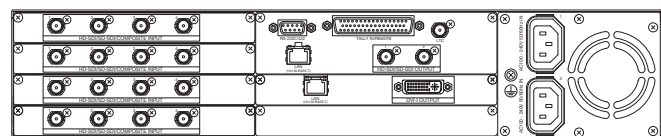|	
● Standards	HD: 1080/60i, 1080/59.94i, 1080/50i, 1080/23.98PsF, 1080/24PsF, 1080/25PsF, 1080/29.97PsF, 1080/30PsF, 720/60p, 720/59.94p, 720/50p
	SD: 525/60 (NTSC), 625/50 (PAL)
● Video Input	Selectable as below, refer to configuration chart of previous page (mixed input and asynchronous input are possible)
	HD-SDI: 1.485Gbps or 1.485/1.001Gbps, 75Ω, BNC
	SD-SDI: 270Mbps, 75Ω, BNC
	Analog composite: 1.0Vp-p, 75Ω, BNC
	DVI: DVI-I connector (Digital or Analog):
	Resolution (Digital): 1920 x 1200, 1600 x 1200, 1280 x 1024, 1360 x 768, 1024 x 768, 640 x 480; Refresh Rate: 60Hz
	Resolution (Analog): 1280 x 1024, 1360 x 768, 1024 x 768, 640 x 480; Refresh Rate: 60Hz
● LTC Input (for Time display)	1 input
	SMPTE time code, Approx. 1.0Vp-p within ±6dB
● Video Output (MV-1610HS Series)	DVI: DVI-I connector, 1 output (Outputs Digital and Analog outputs at the same time)
	Resolution: 1920 x 1200, 1600 x 1200, 1280 x 1024, 1360 x 768, 1440 x 900, 1680 x 1050, 1920 x 1080, 1280 x 720
	Refresh Rate: 60Hz, 59.94Hz, 50Hz
	*No input/output frame rate converter. Frame rate difference between input and output results the repeat frame or drop frame.
● Video Output (MV-1611HS Series)	HD-SDI: 1.485Gbps or 1.485/1.001Gbps, SD-SDI: 270Mbps, 75Ω, 2 output, BNC
● I/O Delay	1 - 1.5 frames (Interlaced scan), 2 - 3 frames (Progressive scan)
● Split-screen Patterns	Full screen, user-created screen layout
● Display	Display characters: Maximum of 16 characters x 1 line per input channel
	Character types: Alphanumeric, symbols
● Tally Display	Frame or indicator display (red, green) selectable for each input
● Time Code Display	Ancillary time code (ATC) embedded on HD/SD-SDI *Display for HD/SD-SDI inputs. *ATC are not passed through. *LTC input is not displayed.
● Logo Display	Bitmap logos stored using dedicated Logo Registration Software *Either Time or Logo is displayable at a time.
● Audio Level Metering	Up to 8 audio channels from GROUP1 to 4 of HD/SD-SDI embedded audios
● Time Display	Enables display of the current time (selectable internal clock or LTC)
	*Accuracy within ±10 seconds per month (at 25ºC)
● Interfaces	RS-232C/RS-422/RS-485: 1 port, 9-pin D-sub (male)
	Transmission rate: 9600/19200/38400 bps, data length: 8 bits, stop bit: 1 bit, Parity: NONE/ODD/EVEN
	TALLY IN: 1 port, 50-pin D-sub (female) (selectable TALLY IN or REMOTE IN)
	16 inputs x 2 colors (red or green color frame display), TTL negative logic level signal or make-contact input
	REMOTE IN: 1 port, 50-pin D-sub (female) (Selectable TALLY IN or REMOTE IN)
	Switching between full screen and split-screen display, TTL negative logic level signal or make-contact input
	LAN: 10Base-T/100Base-TX, 1 port, RJ-45 (CAT5 support)
	Video transfer: Transfer DVI/analog RGB or HD/SD-SDI output with size reduction, Using-JPEG compression
● Layout Editor	Setting of the split-screen video size and split-screen video position
● Temperature / Humidity	0ºC - 40ºC / 30% - 90% (no condensation)
● Power / Consumption	100VAC - 240VAC ±10%, 50/60Hz / Max. 198VA (MV-1610HS Series, full option), Max. 198VA (MV-1611HS Series, full option)
● Dimensions / Weight	430 (W) x 88 (H) x 450 (D) mm EIA 2RU / Approx. 13.6kg (MV-1610HS Series), Approx. 13.6kg (MV-1611HS Series)
● Accessories	Operation manual, AC cord, Rack mount brackets, CD-ROM (Layout editor, Live viewer, Logo registration software)
● Options	- DVI dual output: Independent screen layout enabled separately from standard output screen (option for MV-1610HS series only)*
	- DVI mirroring output: Output enabled in same screen layout as standard output (option for MV-1611HS series only)
	- Redundant power supply - SNMP Support (option for MV-1610HS series only)

* If showing the same channel on two screens, the display position and size will be the same on both.
* DVI output 1 and DVI output 2 will be displayed with the same resolution and frequency.
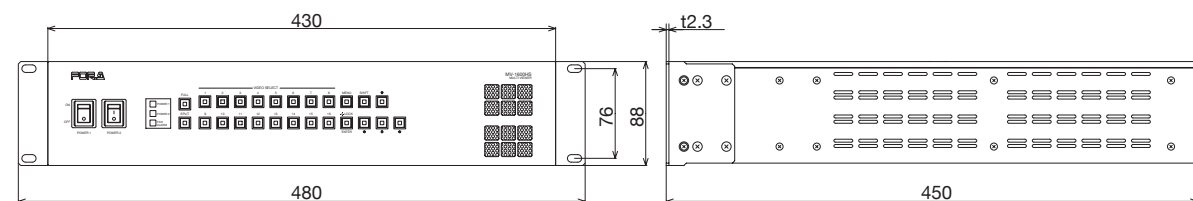* Full screen display will be the same for both standard and optional outputs.

MV-1610HS Series Rear Panel (MV-1610HS40, full option)

MV-1611HS Series Rear Panel (MV-1611HS40, full option)

External Dimensions

430 t2.3
76 88
480 450

HD/SD/Analog/PC Mixed High Resolution Multi Viewer
(Max. 16-Split, 2 Outputs)

MV-1600HS Series

PREVIEW   ON AIR
CAMERA 1   CAMERA 2   CAMERA 3   CAMERA 4   SD VTR
VTR 1   VTR 2   VTR 3   VTR 4
VTR 5   HDV 1   HDV 2   HDV 3   WEATHER

FOR.A
MV-1600HS
MULTI VIEWER
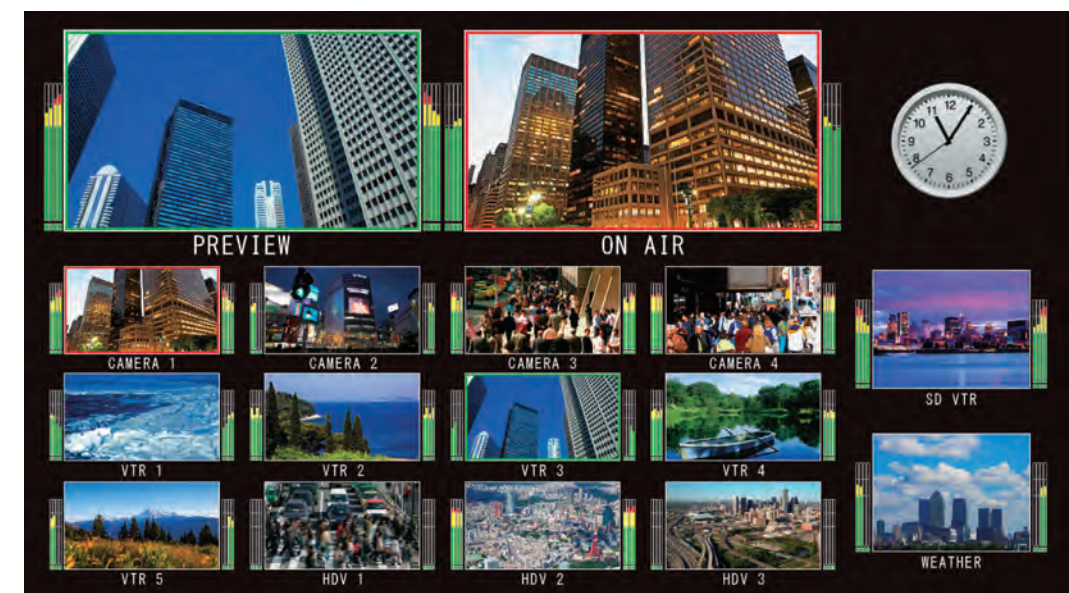
Cost Effective and Affordable Multi Display Processor

The MV-1600HS Series is a multi viewer which supports mixed input of HD-SDI, SD-SDI, analog composite and DVI (digital and analog RGB). It offers high-resolution output with a DVI terminal or HD/SD-SDI video output. A number of models are available in the lineup with different I/O signal types and numbers. Standard functions include the ability to create user patterns with a layout editor and video transmission over a LAN.

Mixed Input of HD-SDI, SD-SDI, Analog Composite and DVI (digital and analog RGB)

Various models available in lineup with different I/O signal types and numbers (see below). Users may select optimal unit for their system scale and input signal types. Enables asynchronous input and automatically recognizes each type of signal. Also supports mixed input of different frame rates, such as NTSC and PAL or 1080/59.94i and 1080/50i, and is ideal for uses like circuit monitoring.

DVI or HD/SD-SDI Output Model Lineup

Two series available for different output terminal needs;
- **MV-1610HS series**: Comes with DVI-I output, supports maximum output resolution of WUXGA (1920 x 1200 pixels). Easy to use with wide screens, PC monitors, etc.
- **MV-1611HS series**: Comes with HD/SD-SDI output and high compatibility with broadcasters' baseband systems.

MV-1610HS Series Lineup

	Signal	MV-1610HS03	MV-1610HS04	MV-1610HS13	MV-1610HS20	MV-1610HS21	MV-1610HS22	MV-1610HS30	MV-1610HS31	MV-1610HS40
Input	HD-SDI	None	None	4	8	8	8	12	12	16
	SD-SDI									
	Analog Composite									
	DVI-I (Digital/Analog)	6	8	6	None	2	4	None	2	None
Output	DVI-I (Digital/Analog)	1	1	1	1	1	1	1	1	1
Output 2	DVI-I (Digital/Analog)	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional

MV-1611HS Series Lineup

	Signal	MV-1611HS03	MV-1611HS04	MV-1611HS13	MV-1611HS20	MV-1611HS21	MV-1611HS22	MV-1611HS30	MV-1611HS31	MV-1611HS40
Input	HD-SDI	None	None	4	8	8	8	12	12	16
	SD-SDI									
	Analog Composite									
	DVI-I (Digital/Analog)	6	8	6	None	2	4	None	2	None
Output	HD/SD-SDI	2*	2*	2*	2*	2*	2*	2*	2*	2*
Output 2	DVI-I (Digital/Analog)	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional

* 2 outputs of same screen image

Layout Editor

A layout editor, which runs on a PC, comes standard. Settings including partition pattern and title display can be changed freely on a PC. Settings are stored in the device's memory so once settings are made it can be used independently without a PC.

Network Video Transfer

In addition to layout editor, the MV-1600HS Series comes with network video transfer function to check output picture by PC. With forwarding of output picture over a network by Ethernet, it can be used as a sub-monitor and for remote usage.

Audio Level Display

Up to 8 audio channels from GROUP1 to 4 of HD/SD-SDI embedded audios. Display position, display channel count and Display group can be changed freely for each input channel via the layout editor.

Tally Display / Title Display / Time Code Display / Logo Display

- **Tally Display**: Comes with external tally input, tally display in red/green enabled.
- **Title Display**: Title can be displayed for each input channel. Supports alphanumeric characters and symbols (up to 16 characters). Character size, color, edge (color, transparency) and matte can be changed for each input channel.
- **Time Code Display**: Time Code Display: Ancillary time code (ATC) embedded on HD/SD-SDI
- **Logo Display**: Bitmap logos stored using dedicated Logo Registration Software

Clock Display / Video Freeze Detection

- **Clock Display**: Comes with clock display function that can connect to external LTC signal. Either analog or digital display may be selected.
- **Video Freeze Detection**: Detects video freeze and displays the "FREEZE" in the screen.

Other functions can be added (option)

- **DVI dual output**: Independent screen layout enabled separately from standard output screen (option for MV-1610HS series only)*
- **DVI mirroring output**: Output of same screen image with standard output is enabled (option for MV-1611HS series only)
- **SNMP Support**: Status of signal inputs and fun alarms can be remotely monitored (option for MV-1610HS series only)
- **Redundant power supply**

* If showing the same channel on two screens, the display position and size will be the same on both.
* DVI output 1 and DVI output 2 will be displayed with the same resolution and frequency.
* Full screen display will be the same for both standard and optional outputs.

FOR-A Multi Viewers Lineup

MV-410HS

- Supports mixed 4 inputs of HD-SDI, SD-SDI, and analog composite signals
- Supports mixed input of different frame rate signals
- High-resolution output
- Includes layout editor
- Network video transfer function
- Audio level display
- Tally display, Title display, and Time display functions
- Video loss detection function
- Enables installation of redundant power supply (option)

MV-410RGB

- Supports mixed input of RGB signals and analog composite signals
- Provides a total of four channels of input
- RGB output with DVI-I connector is provided
- High-resolution output
- Layout editor comes standard
- Title can be displayed for each channel
- Analog clock can be displayed

Other Multi Viewers

- SD model: **MV-100** (SD-SDI quad-split)
- SD/Analog model: **MV-16S** (16-split, Free Layout, DVI/UXGA output option)
- SXGA output model: **MV-1600** (16-split), **MV-400** (Quad-split), **MV-400N** (Network multiviewer)
- Analog model: **MV-162F** (16-split), **MV-94F** (9-split), **MV-40F** (Quad-split)