

## MULTI VIEWER MV-3240



1 RU-sized multi viewer which supports 12G\*/6G\*/3G/HD/SD-SDI and HDMI. Up to 32 inputs and 5 outputs. Freely layout up to 25 windows for one 4K or up to 40 windows for four 2K. M-JPEG stream output for LiveViewer and/or alarm recording function are installed as a standard. Thanks to its front air intake and rear exhaust, the MV-3240 can be installed in many environments.

\* 12G/6G-SDI inputs are optional.

### Inputs/Outputs

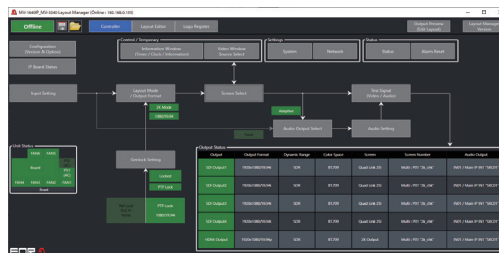
- Inputs: Up to 32 inputs for 3G/HD/SD-SDI (including up to 16 inputs for 12G/6G-SDI\*1.)
- Outputs: 4 outputs for 3G/HD-SDI or 1 output for 12G-SDI and 1 HDMI output\*2.
- Expandable number of inputs with low latency thanks to a cascaded connection scenario.
- Freely layout up to 25 windows for one 4K or up to 40 windows for four 2K.

\*1 Optional, 2 MV-1640SDI-12G are required to support 16 12G/6G-SDI inputs.

\*2 HDMI outputs same video of SDI output.

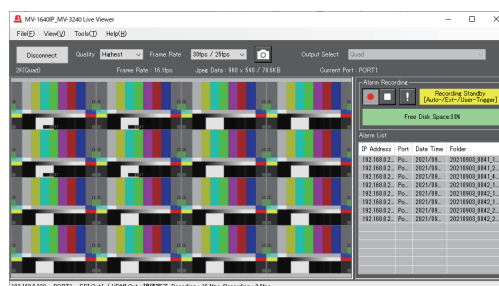
### Layout Manager and On-screen Monitoring

- Customizes layouts, using the software in Windows® to adjust image size, position, title display, and other settings.
- Stores layouts on the viewer.
- Recalls saved layouts directly from the front panel control.
- Logo display in title areas: Stores and displays 4 logo images.
- Tally, Title, and Timecode Display.
- Time of day, Timer, and Information Display.
- Can display time based on a 30-hour clock.
- Registers up to 24 schedule timers per day for 1 week.
- Supports data import even when offline.



### M-JPEG Stream Output and Cropping

- An integrated M-JPEG streaming video output serves as a simple way to monitor signals outside of the control room, with users accessing the signal from any web-enabled device.
- Dedicated APP for Windows®:
  - Monitor the M-JPEG streaming output on an app for Windows®.
  - Pre-alarm recording allows footage to be stored on PC HDD and reviewed when error occurs.
- Cropping:
  - Specifies areas to crop in pixels or by percent.
  - Background image is shown outside cropped areas.
  - Aspect ratio also maintained after partial cropping (of one side, for example).



## Up/Down-resizing

- Resize from HD to 4K and from 4K to 2K.



## Audio

- Audio Level Display.
- Audio Monitoring Output.

## Controls and Error Detection

- Supports external interfaces and control protocols (including monitoring), SNMP function.
- Detects frozen frames (Y/C and Y only).
- View error logs or user text in the Information Display.
- Flashing borders or error icons/messages to identify screens with errors.
- Pre-alarm recording allows footage to be stored on PC HDD and reviewed.

## Options

### ■ MV-1640IF: Interface option

MV-1640IF allows the MV-1640IP to control screen outputs, tally inputs, time correction, and alarm resets using up to 45 contact closure inputs to the GPI-IO connector on the rear of the unit.

### ■ MV-1640SDI-12G: Software for supporting 12G/6G-SDI input

Enables 12G/6G support for 8 of 32 3G/HD/SD-SDI inputs. Up to 2 MV-1640SDI-12G can be installed, and up to 16 12G/6G inputs can be supported.

### ■ MV-1640PS: Redundant power supply

### ■ HVS-AUX16A/16B/16C/16D/32A/64A<sup>\*1</sup>: Auxiliary unit



HVS-AUX16A  
(16-buttons)



HVS-AUX16B  
(16-buttons, table-top model)



HVS-AUX16C  
(16-buttons with OLED displays)



HVS-AUX16D  
(16-buttons with OLED display,  
table-top model)



HVS-AUX32A  
(32-buttons)



HVS-AUX64A  
(64-buttons)

<sup>\*1</sup> Connectable max. 4 units.

## MV-3240 Datasheet

### 1. Specifications

#### Basic specifications

Temperature	0°C to 40°C
Humidity	30% to 90% (no condensation)
Power	100 V AC to 240 V AC $\pm$ 10%, 50/60 Hz
Consumption	205 VA (197 W) at 100V AC to 120V AC 233 VA (189 W) at 200V AC to 240V AC
Dimensions	430 (W) x 44 (H) x 500 (D) mm EIA 1RU 480 (W) (Including rack mount brackets)
Weight	8.90 kg
Consumables (at 24-hour operation)	Cooling fan: Replace every 5 years Power Supply: Replace every 5 years

#### Technical specifications

Video format			
SDI signal	4K	12G-SDI (*8)	2160p / 60, 59.94, 50
		6G-SDI (*8)	2160p / 30, 29.97, 25, 24, 23.98
		3G-SDI	1080p / 60, 59.94, 50 (Level-A/B) Quad Link (Level-A/B) 1080p / 60, 59.94, 50 Dual Link (Level-A, Level-B DS, Level-B DL) 1080p / 30, 29.97, 25, 24, 23.98
	2K	HD-SDI	1080i / 60, 59.94, 50 1080p / 29.97, 25, 24, 23.98 1080PsF / 30, 29.97, 25, 24, 23.98 720p / 60, 59.94, 50, 24, 23.98 1035i / 60, 59.94
	SD	SD-SDI	525/59.94i, 625/50i
Video input	Supports SDI 32 inputs (Asynchronous inputs are possible)		
SDI input (MV-1640SDI-12G option)	HD-BNC x 32 (3G/HD/SD-SDI x 32 or 3G/HD/SD-SDI x 16, 12G/6G-SDI x 16 (*8)) 12G-SDI: 12.0 Gbps (Up to L-4.5CHD 50m) (*8) 6G-SDI: 6.0 Gbps (Up to L-4.5CHD 50m) (*8) 3G-SDI: 3.0 Gbps (Up to 5C-FB 70 m) HD-SDI: 1.5 Gbps (Up to 5C-FB 100 m) SD-SDI: 270 Mbps (Up to 5C-2V 200 m) 10-bit YCbCr 4:2:2		
Audio input			
SDI embedded	48 kHz / 16-bit to 24-bit (Video synchronous) Max. 16 channels for each SDI input (group x 4) (*1)		
LTC input (MV-1640IF option)	BNC x1 SMPTE-compliant timecode: 1.0 Vp-p within $\pm$ 6 dB		

Video output	
HDMI	HDMI (Type-A): 1 output (4K in HDMI2.0 Level B mode) Frame rate: 59.94fps, 50fps 10-bit YCbCr 4:4:4, 8-bit YCbCr 4:2:0 or 8-bit RGB 4:4:4 Limited range
12G/3G/HD-SDI	Up to 3840 x 2160 (12G-SDI or 3G/HD-SDI) BNC x 1 1080p, 1080i, 1035i or 720p (3G/HD-SDI) HD-BNC x 3 10-bit YCbCr 4: 2: 2
Audio output	
Embedded (SDI)	Max 16 channels for each video (group x 4) 48kHz / 24-bit
Embedded (HDMI)	Max 16 channels for each video (stereo pair x 4) 48kHz / 24-bit
Genlock input	-REF IN (MV-1640IF option) BB: 0.429 Vp-p (NTSC), 0.45 Vp-p (PAL) or Tri-level sync.: 0.6 Vp-p 75Ω BNC -INPUT LOCK (SDI IN1 only) 1080/59.94p, 1080/50p(Level-A/B), 1080/59.94i, 1080/50i, 720/59.94p, 720/50p, 525/60, 625/50
Video input/output delay (*2)	HDMI/SDI output <SDI1-4/HDMI Out> 0.5 frame (Field mode) Minimum value 1 frame (Frame mode) Minimum value
Video Window display	4K mode: 25 windows Breakdown: 2K widow x 9, 1K window x 12 Video/Clock shared 2K window x 2 Video/Clock shared 1K window x 2 2K mode: 40 windows Breakdown: 2K window x 8, 1K window x 23, 1K mirror window x 5 Video/Clock shared 2K window x 2 Video/Clock shared 1K window x 2
Clock Count up timer Count down timer (*3) Schedule timer	Can be displayed in information window. (Internal clock or LTC is selectable for schedule timer.) Max. number: 4
Background display	Store and display background images - [3840 x 2160] x 1 (4K layout mode) - [1920 x 1080] x 4 (2K layout mode)
Logo display	Store and display logo images - Max. size: 1024 x 512 (Max. 8 logos can be registered. Max. 4 logos can be displayed.)
Screen layout	User customized layout - Layouts for each output can be saved on the viewer up to 16 layouts.
Title display	-Title length: Max. 16 characters x 2 lines for each input channel -Supported characters: Letters, numbers, symbols and Japanese kana/kanji (JIS 1 and 2)
Tally display	Indicated as a frame (red/green/amber) or marker (red/green/amber) on each input window.
Audio level display (*7)	Up to 16 audio channels of audio level metering per input

Time code display	- Display for 12G/6G(*8)/3G/HD/SD-SDI ancillary timecode (ATC) (*4) - Reader mode (*5)
Video monitoring	Detects video loss, frozen frames, incorrect luminance/black level, and CRC error.
Audio monitoring	Detects audio loss, silence, and excessive audio levels.
Control Interface	LAN1: 100BASE-TX/1000BASE-T, RJ-45 x 1
GPI-IO (MV-1640IF option)	50 pin D-sub (female) x1 up to 45-pin for input/ 23-pin for output (selectable, and can be used for input and output)
Layout Manager	Software for customizing window sizes and positions, switching windows , and registering backgrounds and logos (Windows® software)
Live Viewer	Software for video streaming and pre-alarm recording to a PC. (Windows® software)
Data backup	Stores settings internally to the memory (rewrite capacity: approx. 100,000 times) (*6) Time information is held by a super capacitor.
Daytime accuracy	Monthly difference within $\pm 15$ seconds Accuracy duration when power is off: 60 hours

(\*1) For 3G-SDI Level-B, only Link-A audio is supported, not Link-B.

(\*2) Using interlaced input

(\*3) Count up/down timer uses an internal crystal oscillator:  $\pm 50$  ppm within operating temperature. (0°C to 40°C)

(\*4) Ancillary time code (ATC) is not passed through.

(\*5) Time code from LTC input is not displayed.

(\*6) Frequent setting changes may impair data retention.

(\*7) When input audio frequency is under 60Hz, audio level may not be displayed correctly.

(\*8) MV-1640-12G option required

#### Options

MV-1640PS	Redundant power supply (Includes an AC adaptor and AC cord)
MV-1640IF	Interface option
MV-1640SDI-12G	Software for supporting 12G/6G-SDI input

#### Other Option

HVS-AUX16A/16B/16C/16D/32A/64A (*)	Auxiliary unit (Ethernet LAN Connection)
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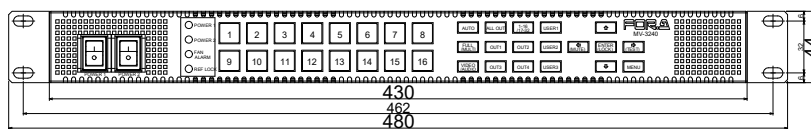
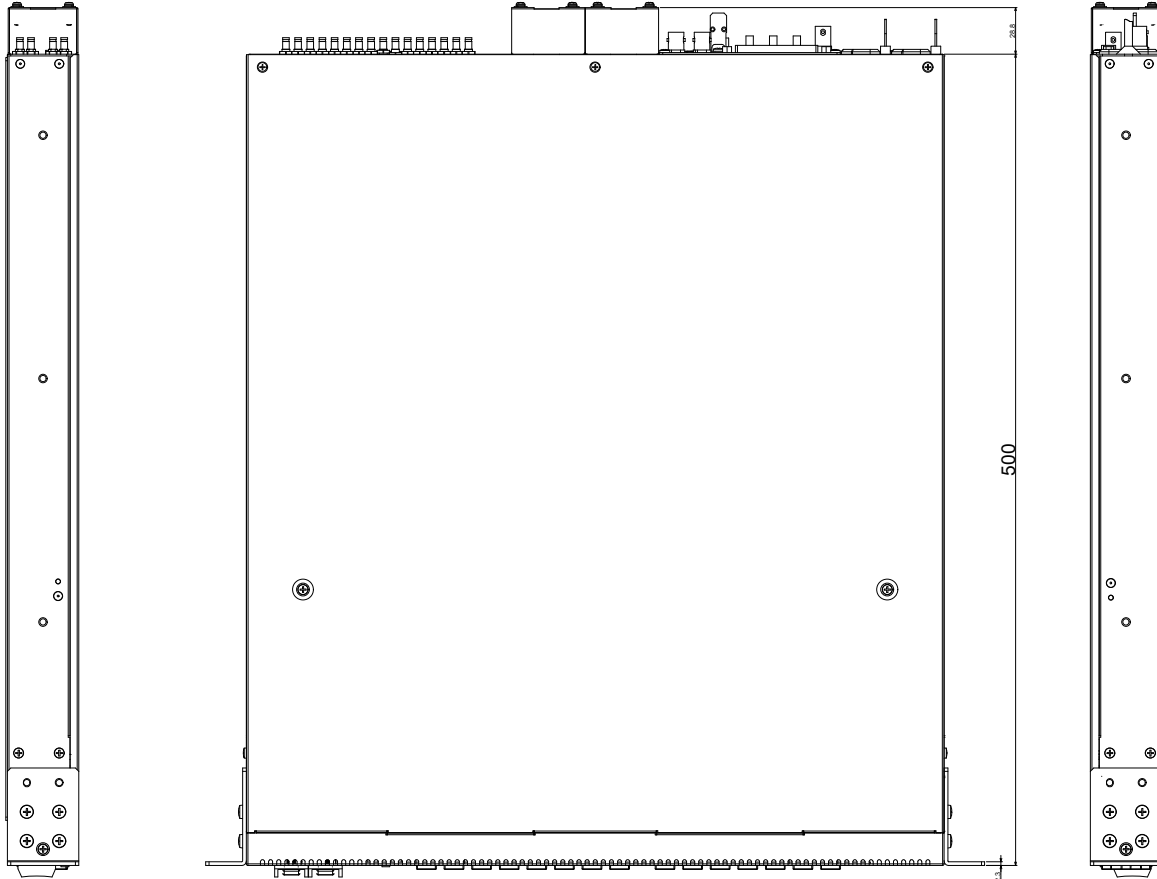
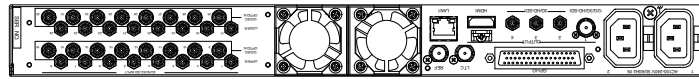
(\*) Connectable max. 4 units

#### Accessories

AC Cord, EIA Rack Mount Brackets, Rubber Feet, HDMI cable lacing bracket, and CD-ROM

**2. External Dimensions**

(All dimensions in mm.)





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