

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 (L-4.5CHD: Up to 50m) (*8) 6G-SDI: 6.0 Gbps (L-4.5CHD: Up to 50m) (*8) 3G-SDI: 3.0 Gbps (5C-FB: Up to 70 m) HD-SDI: 1.5 Gbps (5C-FB: Up to 100 m) SD-SDI: 270 Mbps (5C-2V: Up to 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 ±6 dB		

Video output	
HDMI	HDMI (Type-A): 1 output (4K in HDMI2.0 LevelB 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 Recommended cable length: 5m or less
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 4 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 ± 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: ± 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
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.)

