

MV-1620HSA

Prominent Error Display

Errors can be indicated by full-screen display, a flashing border, error icon, or error message. This identifies the relevant frame prominently.

Error Display

- Video: Video loss, frozen frames, incorrect luminance/black levels, and CRC errors
- Audio: Audio loss, silence, and excessive audio levels
- Loss of closed captioning

Tally/Title/Timecode/Safety Area

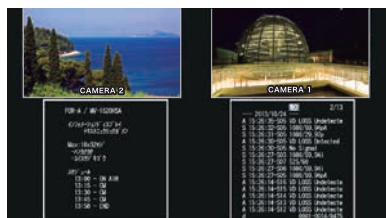
- Tally: Choose frame tally or marker tally for display
- Titles: Identify each source channel with a title. Supports display of alphanumeric characters, symbols, and Korean characters (up to 16 letters), which can be displayed within or outside the picture
- Timecode: Ancillary Timecode in the 3G/HD/SD-SDI signals can be displayed
- Safety Area: Safety Area can be displayed for each channel

Time, Timer, and Information Display

Correct clock time is ensured by SNTP server sync. Four clocks can be displayed, in analog or digital format. Date display is also available. If not used as a clock display, this feature can be used as a count up/down timer, remaining time counter, or information display.

Information Display Function

Choose from 13 types of information—error logs from each window and multi-viewer information—for display in a single, separate window. Error logs can be downloaded using a web browser.



Example of error log/information display

AFD-Compatible Cropping

Active Format Description (AFD) in source signals is detected, and window sizes are automatically cropped to the requested aspect ratio.

Detection of Closed Captioning

Closed captioning can be detected for each channel.

Additional Features

- MV-1620DO option: Reference input, analog audio/AES input, HD-SDI, HDMI, analog audio monitoring output, and background input/output
- MV-1620IF option: Enables a variety of control interfaces using RS-232C/422/485 or GPIO
- Rotated image output (90/180/270°)
- SNMP-based monitoring: Remote monitoring of source signals or fan alarm status
- Redundant power supply

Specifications

Video Formats	3G: 1080/60p, 1080/59.94p, 1080/50p (Level A/B) Level-B: At 1920 x 1080 only HD: 1080/60i, 1080/59.94i, 1080/50i, 720/60p, 720/59.94p, 720/50p, 1080/30p, 1080/29.97p, 1080/25p, 1080/24p, 1080/23.98p, 720/24p, 720/23.98p, 1080/30PsF, 1080/29.97PsF, 1080/25PsF, 1080/24PsF, 1080/23.98PsF, 1035/60i, 1035/59.94i SD: 525/60 (NTSC), 625/50 (PAL)
Video Inputs	Accepts the following signals. (Mix input, asynchronous acceptable) 75Ω BNC x 16 SDI/analog composite switching
3G/HD/SD-SDI	3G-SDI (Level A/B): 3 Gbps HD-SDI: 1.5 Gbps SD-SDI: 270 Mbps
Analog composite	Analog composite: 1.0 Vp-p Quantization: Y: 8-bit, C: 8-bit
Background (MV-1620DO)	3G-SDI (Level A): 3 Gbps 1080/59.94p, 1080/50p HD-SDI: 1.5 Gbps 720/59.94p 720/50p *Only used for MV-1620HS/HSA background output
Audio Input	
Embedded	Sampling frequency: 48 kHz (sync to input video signals) Quantization: 16 to 24-bit 16 channels per 3G/HD/SD-SDI input signal (4 groups, 8 stereo pairs)
Analog (MV-1620DO)	Analog audio: Balanced or unbalanced D-sub 37-pin (female), inch screw *For unbalanced input, short Cold-Shield externally Input impedance: 600Ω/Hi-Z Input level: -10 dBV/-3 dBu/0 dBu/+4 dBu, Maximum input level (with +4 dBu input level): +24 dBu (balanced), +18 dBu (unbalanced) Rated input power (with 600Ω termination): +24 dBm Sampling frequency: 48 kHz Quantization: 24-bit; 8 channels (4 stereo pairs)
AES (MV-1620DO)	AES audio: Unbalanced, 75Ω, D-sub 37-pin (female), inch screw *Short Cold-Shield externally Sampling frequency: 32/44.1/48 kHz Quantization: 16 to 24-bit; 8 channels (4 stereo pairs)
LTC input (MV-1620IF)	1 input, SMPTE time code 1.0 Vp-p within ±6 dB
Video Outputs	
HDMI (digital output)	HDMI: 1 (with MV-1620DO: 2 (2 pairs)) Quantization: R: 8-bit, G: 8-bit, B: 8-bit Resolution: 1920 x 1080/p, 1280 x 720p Frequency: 59.94 Hz, 50 Hz *Interlaced output also available at 1920x1080/p *No input/output frame rate conversion. Unmatched frame rates may cause repeated or dropped frames.
SDI	75Ω BNC: 1 (2 with MV-1620DO) SDI 1 and 2 output matches the screen for HDMI 1 and 2 output. 3G-SDI (Level A): 3 Gbps HD-SDI: 1.5 Gbps
Background (MV-1620IO)	3G-SDI (Level A): 3 Gbps 1080/59.94p, 1080/50p HD-SDI: 1.5 Gbps 720/59.94p 720/50p *Only used for MV-1620HS/HSA background input
Audio Output	
Analog	Ports: 1 (with MV-1620DO: 2 (2 pairs)) RCA pin jacks: 2 (1 stereo pair), unbalanced Output impedance: 100 Ω or less Output level: -10 dBV Maximum input level: +5 dBV Sampling frequency: 48 kHz Quantization: 24-bit
Embedded (SDI)	4 groups (8 stereo pairs) Sampling frequency: 48 kHz Quantization: 24-bit
Embedded (HDMI)	4 stereo pairs Sampling frequency: 48 kHz Quantization: 24-bit
Genlock Input (MV-1620DO)	BB: NTSC 0.429 Vp-p/PAL 0.45 Vp-p, Tri-level sync: 0.6 Vp-p

I/O Delay	1 frame or less for asynchronous input 0.5 frame or less for synchronous input
Video Windows	Up to 20 (*with output option: up to 20 windows in all on 2 screens)
Clock Windows	Up to 4 (*with output option, up to 4 windows in all on 2 screens.) Internal clock or LTC time code selectable. Time correction via GPI or SNTP. Internal clock accuracy: within ±15 sec/month (at 25°C)
Count up/down Timer, Remaining Time Counter	Can be displayed in clock window. (Internal clock or LTC is selectable for remaining time counter.) *Stopwatch/timer uses an internal crystal oscillator: ±50 ppm within operating temperature (0°C to 40°C)
Information Display	Clock window can be used for information display. Displays error logs, multi-viewer information, or entered text.
Background Display	Memory: 4 / Display: 1 per output Max. size: 1920 x 1080
Logo Display	Memory: 8 / Display: Max. 2 per output Max. size: 1024 x 512
Screen Layout	User customized layout Up to 16 layout patterns can be saved.
Title Display	Character limit: Max. 16 characters x 2 lines for each input channel Supported characters: Letters, numbers, symbols, Korean characters and Japanese kana/kanji (JIS 1 and 2)
Tally Display	Indicated as a frame (red/green/orange) or marker (red/green) on each input window. Colors are adjustable.
Audio Level Display	Up to 16 audio channels of audio level metering per input
Time Code Display	Display for 3G/HD/SD-SDI Ancillary Timecode (ATC) Reader mode: *Ancillary Timecode (ATC) is not passed through. *Timecode input in LTC connector is not displayed.
Video Monitoring	Detects video loss, frozen frames, incorrect luminance/black level, and CRC error. *Detected by calculating the active picture CRC for input signals to check whether this value remains the same for each frame.
Safety Area Marker	Displays safety areas on each window.
Audio Monitoring	Detects audio loss, silence, and excessive audio levels.
Closed Captioning Monitoring	Detects loss of closed captioning.
Interfaces	Interfaces other than Ethernet require installation of the MV-1620IF option. RS-232C/RS-422/RS-485: D-sub 9-pin (male) x 1 Baud rate: 9,600/19,200/38,400/57,600/115,200 bps Data length: 8-bit, stop bit 1-bit Parity: none/odd/even GPIO: D-sub 50-pin (female) x 1; 18-pin used for both input and output Max. 48 inputs/18 outputs *I/O selectable LAN: 100BASE-TX/1000BASE-T RJ-45 x 1 (CAT 5e-compliant)
Layout Manager (Windows Software)	Window size and position settings (Layout Editor screen) Switching output video and audio (Remote Controller screen) Editing and registering logos and backgrounds (Logo Registry screen)
Live Viewer	Software for video streaming (Windows software)
Data Backup	Stores settings internally to the memory (rewrite capacity: approx. 100,000). *Frequent setting changes may impair data retention.
Temperature/Humidity	0°C to 40°C / 30% to 90% (no condensation)
Backup Battery	Internal lithium battery (to maintain time)
Power	100 V AC to 240 V AC ±10% 50Hz/60Hz
Power Consumption	88 VA (86 W) (at 100 V AC to 120 V AC) 107 VA (85 W) (at 200 V AC to 240 V AC)
Dimensions/Weight	EIA 1 RU 430 (W) x 44 (H) x 475 (D) mm / 6.9 kg
Accessories	Quick Setup Guide, AC cord, Rack mount brackets, USB Flash Drive (Installation files and User manuals)
Options	MV-1620PS Redundant power supply MV-1620IF Interfaces (GPIO/RS-232C/422/485/LTC) Dual Output MV-1620DO Output: SDI/HDMI/Audio/Background Input: Analog/AES Audio/Genlock/Background MV-1620RT 90/180/270° rotation display MV-1620SNMP SNMP support PC3323-1 D-sub 37-pin breakout cable (XLR x 8, BNC x 4)

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MV-1620HSA



3G/HD/SD/ANALOG MIXED HIGH RESOLUTION MULTI VIEWER

MV-1620HSA



Lines shown for reference only



Logo/Background

Register up to eight logos and four background images. Add two logos and one background per output, as required.



Logo/Background Registry screen

4K-input Support, 16 Channels of Input, Dual-Screen Output High Performance With Better Energy Efficiency

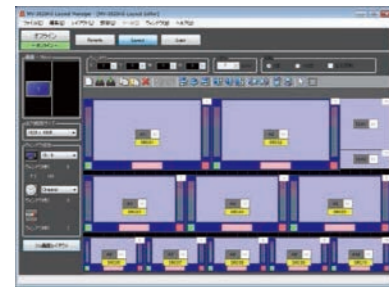
The MV-1620HSA is a compact (1U) multi-viewer that accepts up to 16 channels of mixed 3G/HD/SD-SDI or analog composite signals for monitoring on one or two screens. It can be cascaded with other units to display up to 64 sources at once. Full-featured, the unit offers a customizable window layout. View audio levels and use AFD-compatible cropping or information display as needed.

Versatile Mixed-Source Environment

Supports mixed signals as required, from 3G-SDI (Level A/B), HD-SDI, SD-SDI, or analog composite sources. Asynchronous input is also supported. The viewer accepts an array of formats and frame rates including NTSC, PAL, 1080/59.94i and 1080/50i. (No frame rate conversion.)

Layout Manager

Includes a Windows application for managing the layout. Customize the layout on a computer by registering or changing layout patterns, adjusting title display, and configuring other settings as needed. Store up to 16 layout patterns on the viewer. Saved layouts can be applied directly from the front panel control.



Layout Manager

Video Streaming

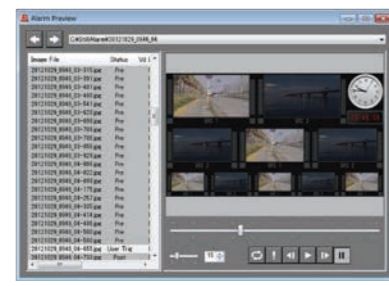
In addition to computer-based layout management, you can also stream video from the viewer over Ethernet. The streaming video can be used for additional local computer display or for remote monitoring.



Video streaming (Live Viewer)

Record Streamed Video

Take streaming a step further by capturing the video. Frames before and after errors or your specified triggers are captured and can be saved on a Windows computer. (Video is saved as a sequence of still-image files.)



Recording streams (Alarm Preview)

Applicable errors: video loss, frozen frames, incorrect luminance/black levels, CRC errors, audio loss, silence, excessive audio levels, and loss of closed captioning

HD Output of Source Signals

Sources can be displayed on one or two (option) screens, with HDMI and SDI interfaces available for both screens to support HD monitoring.

Audio Level

Monitor audio levels of up to 16 channels embedded in each 3G/HD/SD-SDI signal. Use Layout Manager to customize displays for positions, the number of channels shown, and the display groups.



Vertical/Horizontal Level Meter

View level meters not only horizontally but also vertically, as needed. Choose a layout for easier checking with the type of windows selected.

Audio Monitoring Output

Audio from any channel can be monitored via HD-SDI, HDMI, or analog audio output.

View up to 64 sources at once by cascading four units (4 × 16), with negligible sync signal latency.

Using One Unit

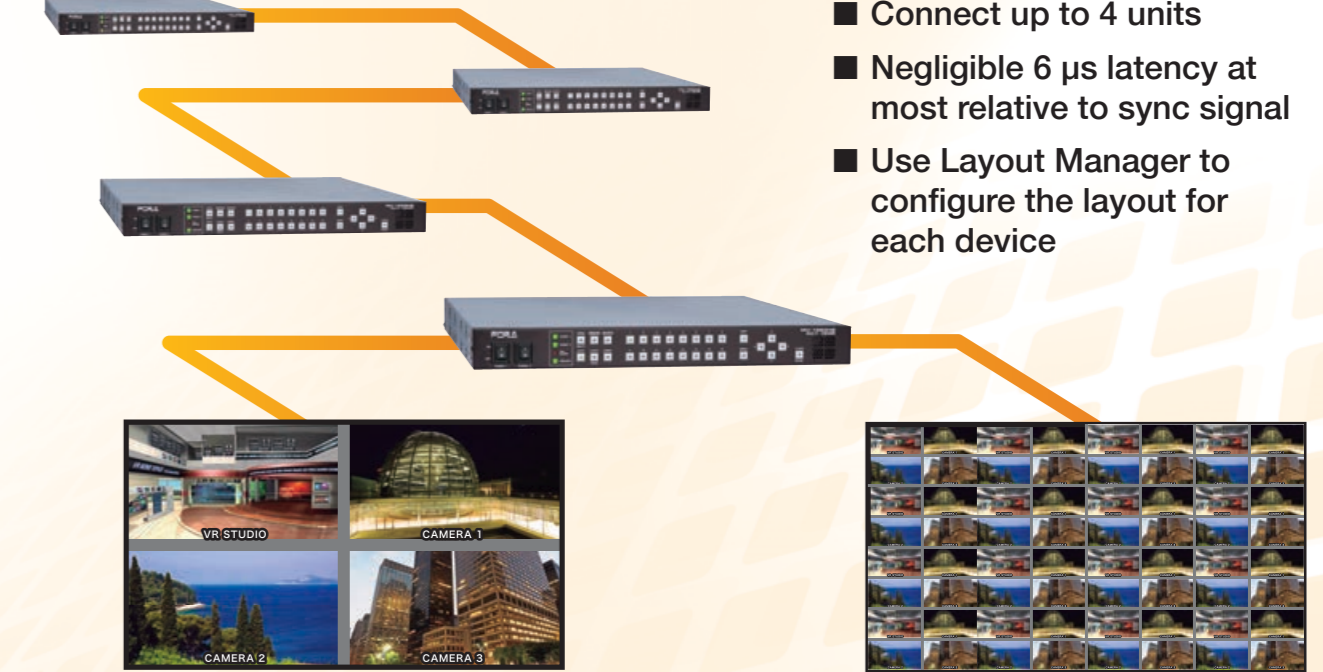


Monitor 1

Monitor 2¹

- View two channels in different layouts
- View up to 20 windows for two channels
- View up to 4 clocks for two channels
- View up to 2 logos and 1 background per output

Cascaded Connection¹

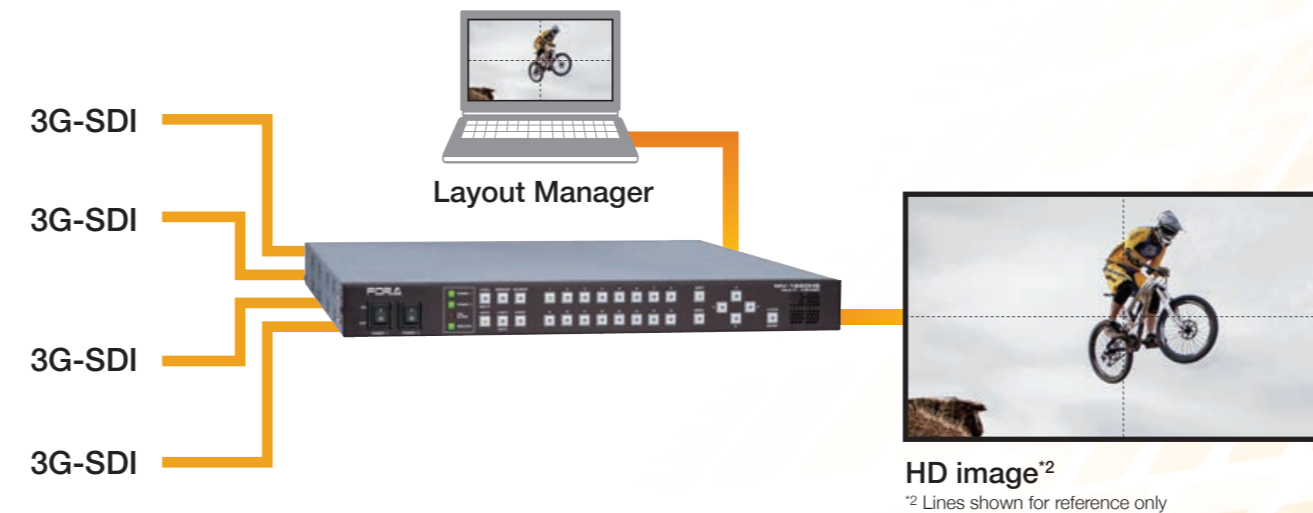


Monitor 1

Monitor 2

¹ Using an optional MV-1620DO for dual output

Edit a single 4K image from four 3G-SDI inputs

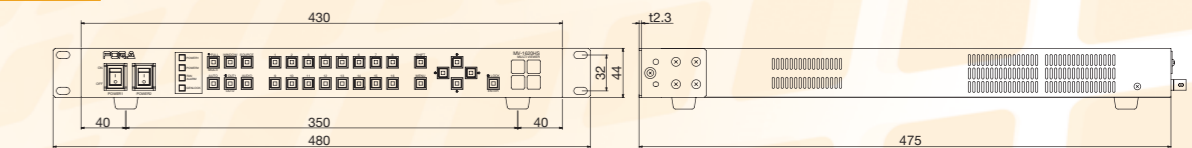


HD image²

² Lines shown for reference only

- Layout Manager enables easy layout of 4K video in a seamless display

External Dimensions



Rear Panel

