



# MV-1200 SERIES STANDALONE MULTIVIEWERS

## 1 RU High Performance Multiviewer Systems

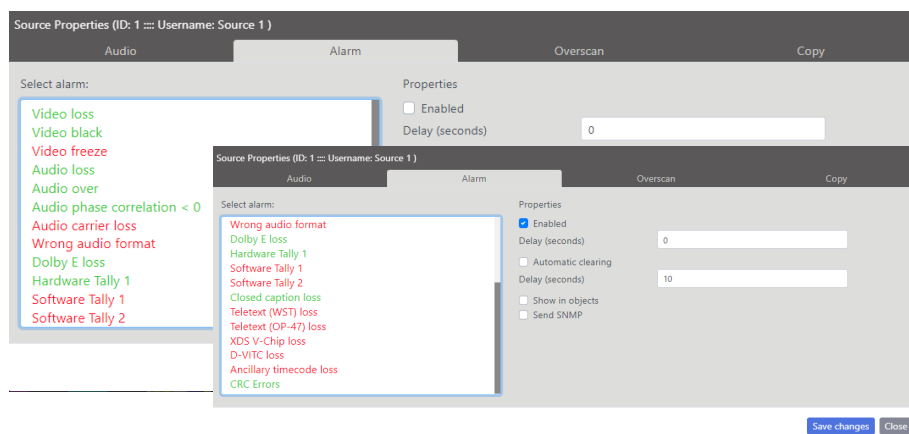
Grass Valley's multiviewer technology gives broadcasters the flexibility to work the way they want to work today, yet future-proof their operations for tomorrow.

The MV-1200 Series of standalone multiviewers are designed as a flexible, cost-effective solution for multi-image displays. Models MV-1216, MV-1232 and MV-1248 are standalone systems that allows the configuration of multiple multiviewer outputs within a single frame.

The MV-1200 Series of multiviewers handles up to 3G SDI inputs as standard, with the option for 12G SDI inputs.

### Powerful Suite of Alarms and Indicators

- **VIDEO** alarms can be generated from Video Loss or Video Frozen with definable zone-based monitoring inside the tile
- **LUMINANCE** alarms can be configured for over- or under-range values or black level
- **AUDIO** alarms include carrier loss, silence, over-range, phase error and mono
- **METADATA** alarms including CC and subtitling can be configured on every input
- **INDICATORS** can be configured with a variety of colors and flashing borders with indicators based on alarm severity and status



## Key Features

- Fully-featured broadcast-quality multiviewer in 1 RU
- Up to 48x 3G/12G-SDI (12G via SW license)
- Up to 8x 3G SDI outputs or 4x 3G HDMI outputs
- Up to 2x 12G outputs with simultaneous Quad-Link-SDI and HDMI
- Sources can be displayed on any output screen with arbitrary size and location
- Sources may be duplicated without consuming additional scaler resources
- Hot-swappable, intelligent power supplies with IEC inlets
- Low-noise fans adapt to frame temperature
- Remote control over Ethernet via an integrated HTML5 browser
- Local control and source status via color LCD touchscreen



## Layout Workspace

The integrated web browser uses ubiquitous HTML5 for maximum interoperability. Tiles are created and customized in the layout workspace. Navigation is simple and intuitive using the Object selection filter on the left panel. The main parameters for each Object can be quickly adjusted on the right-hand panel with changes reflected immediately on the layout before committing

to the multiviewer. There is no restriction on the size and location of any of the objects which can be of type: video, audio, text, clock, logo or timer up to a maximum of 128 tiles. The multiviewer includes a number of factory layouts. Customized layouts can be stored and recalled as required. Up to 16 audio channels can be configured for each source. Dolby E Metadata can be configured with up to eight channels per source pair. Clock/date display data can

be derived from the system clock, NTP synchronization, LTC or VITC from a chosen SDI input. D-VITC and ATC decoding and display is supported. Hardware and software tallies for each source. Up to two lines of UMD text can be left, center or right justified and may be placed anywhere in the tile. UNICODE is used for storing UMDs. Any TrueType font can be installed to allow any set of characters to be displayed.

## Specifications

### Frame Features

#### Dimensions:

- 1 RU
- 440x44x516 mm (17.3x1.7x20.3 in.) (WxHxD)
- 483x44x516 mm (19.0x1.7x20.3 in.) (WxHxD) with rack mount brackets

**Weight:** 8 kg (two PSUs)

**Cooling fans:** 5 fans each 40x40x28 mm (1.5x1.5x1.1 in.) nominal 6-12V closed-loop speed control according to internal temperature

**AC/DC power supplies:** Up to 2 hot-swappable power supplies with current sharing and intelligent monitoring

**HID color touch screen:** Color touch LCD screen with status information and control

**Modular architecture:** Hot-swappable modular video processing cards

**Remote control:** Linux OS with Integrated HTML5 browser

#### Protocols supported:

- Grass Valley SW-P-02, SW-P-08, RollCall
- Open Protocol/TSL Protocol v3.1 and v5.0

**Firmware updates:** Field upgradable via IP with on screen progress meter

**Fault monitoring:** CSV log files accessible via LAN and browser

**Layouts:** Burnt-in layouts, edit and save as new layouts, recall and upload/download

**Redundant PSU:** Slot available for additional hot swap PSU

### Signals

**Inputs 3G-SDI:** Maximum input resolution FHD50/59/60

**Inputs 12G-SDI:** Maximum input resolution UHD50/59/60

#### SDI/HDMI outputs:

- In 4K UHD mode maximum resolution is 2xUHD50/59/60
- In 2K FHD mode maximum resolution is 4xFHD50/59/60

**High frame rate input:** Up to 6x frame rate with 6 streams/camera up to 5 cameras

**Multiple source scaling:** Sources can be routed to any output with arbitrary scaling and location with the proviso that each source is assigned to a dedicated scaler

**High Dynamic Range:** BT2100 up-mapping/down-mapping

**Maximum pips:** 128 unique tiles available

#### GPIO:

- High-density 44-way D-type
- Assignable 32x GPIO inputs, 8x GPIO outputs

**Ethernet:** RJ45 LAN: 100base-T

**Audio:** 1 x 3.5 mm stereo audio jack

**RS422 & RS485:** 1 x RJ45

### Audio

#### Audio meters:

- 48 fully configurable tiles with left/right or split meters
- All pairs of embedded audio can be displayed

**Embedded Audio on Outputs:** SDI or HDMI outputs can be individually configured to include up to 4 pairs of embedded audio from any of the inputs

**Audio Monitoring Out:** 1 pair of embedded audio from any input can be monitored on an analog line level output

#### Reference

**Genlock reference:** BB/Tri-level sync nominal 1 Vp-p 75Ω HD BNC

**Time reference:** LTC input or NTP (network protocol) Nominal 1 Vp-p

#### Source Data

**Subtitles:** WST on SD-SDI or OP-47 on HD-SDI

**Aspect ratio:** Automatic adjustment using AFD decoding

**Timecode:** D-VITC and Ancillary TC SD/HD-SDI

**User Logo:** PNG format with storage capacity up to 50 MB

**Idents:** Idents, text boxes and any TrueType fonts

### Alarms

**Alarms:** Video, audio, and metadata (CC, WST, OP-47, D-VITC, ATC loss and CRC errors)

#### Alarm Outputs:

- Hard and Soft Alarm outputs
- Soft Outputs via LAN and/or SNMP

#### Tallies:

- Hard (GPIO Input) and Soft Tally input support. 2 tallies per tile
- Maximum 32 x GPIO inputs can be assigned

**Under monitor displays:** Under Monitor Display (UMD) information may be generated from remote sources via the LAN operating on a remote PC or serial using TSL/Open protocols

#### Clocks/Dates:

- Analog and digital clocks with foreground and background colors. Date display with digital clock. Clock/date display data can be derived from several sources: the system clock, NTP synchronization, LTC or VITC from a chosen SDI input
- Time-zone and offset settings

#### Timers:

- Programmable Countdown Color, Transition Color and Destination Color. Countdown timer may be setup to start at a certain time of the day or controlled by GPIO inputs
- Timer modes for single and dual GPIO inputs supporting Pause, Resume and Reset

**Battery Backup:** A battery ensures the time and date settings are retained if power is lost or the unit is powered down

### Environmental

**Temperature:** 0°C to 40°C (32°F to 104°F)

**Humidity:** 30% to 90% (no condensation)

#### AC/DC Power Module:

- 90 VAC ~ 264 VAC, 50/60 Hz
- Safety compliance: CB, CE, CCC, cUL, UL, TÜV

**Max. Power Consumption:** 151.7W at 200-240 VAC, 50 Hz, 0.68A

#### Compliance:

- EMC – Emissions EU: EN55103-1 USA: FCCR 47 CFR: 2009, Part 15, Sub-part B (Class A)
- EMC – Immunity EU: EN55103-2. Safety EN: EN60950-1 USA: Tested to UL1419 (3rd Edition)
- Hazardous Material UK: RoHS-6 – Complies with EU Directive

## Ordering

### MV-1216

MV-1200 Series 16 Input Multiviewer with 8 Heads

### MV-1232

MV-1200 Series 32 Input Multiviewer with 8 Heads

### MV-1248

MV-1200 Series 48 Input Multiviewer with 8 Heads

### MV-1216-OPT-12G

License to enable 12G SDI inputs for MV-1216

### MV-1232-OPT-12G

License to enable 12G SDI inputs for MV-1232

### MV-1248-OPT-12G

License to enable 12G SDI inputs for MV-1248

### MV-1200-PS

MV-1200 Series Standalone Multiviewer power supply

### MV-1200-RCP-18

MV-1200 Series Standalone Multiviewer remote control panel with TFT LCD and 18 switches with GPIO breakout

### MV-1200-RCP-34

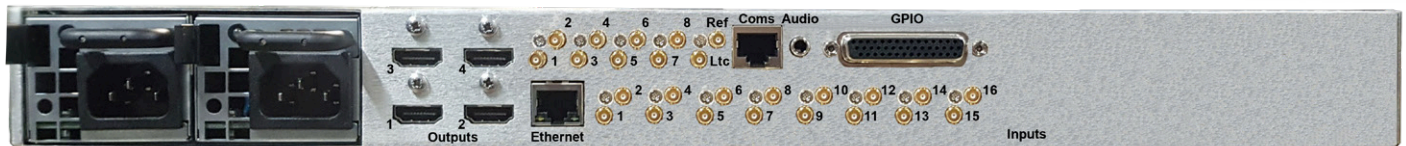
MV-1200 Series Standalone Multiviewer remote control panel with TFT LCD and 34 switches with GPIO breakout

### MV-1200-RCP-PS

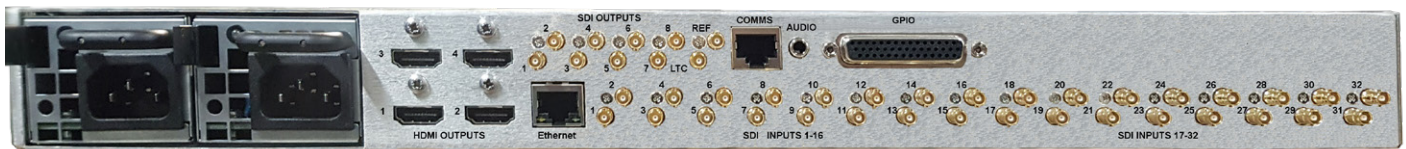
MV-1200 Series Standalone Multiviewer remote control panel 12V power supply with IEC 15W



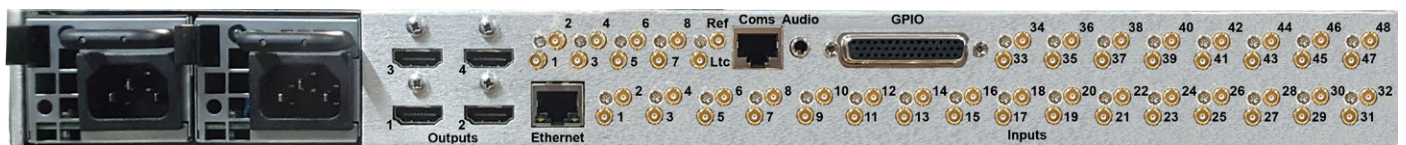
MV-1200 Series Multiviewers Front View



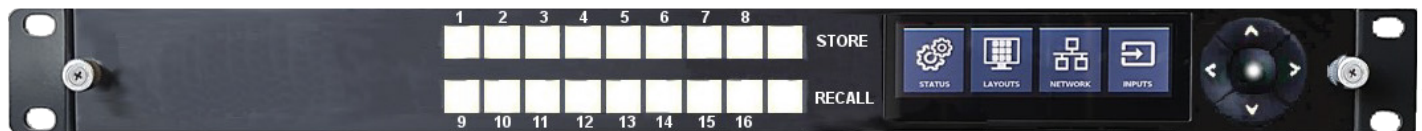
MV-1216 Rear View



MV-1232 Rear View



MV-1248 Rear View



MV-1200-RCP-18



MV-1200-RCP-34

This product may be protected by one or more patents. For further information, please visit: [www.grassvalley.com/patents](http://www.grassvalley.com/patents)

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