The MV-821 is a high-density multiviewer that’s perfect for applications requiring space-saving solutions yet still need the highest quality image display. Two variants are available: the MV-821-HDBNC for SDI workflows including single stream 12G 4K UHD and the MV-821-IP for IP networks.

The MV-821 multiviewer is part of the MV-8 series multiviewer range. It is small and compact but with a high-density I/O and the only multiviewer to offer 48 inputs and 12 outputs in a 2 RU chassis. This makes the MV-821 ideal for on-the-road productions, flyaway packs, houses of worship and conference and events.

Benefits
- Excellent picture quality
- Comprehensive monitoring and alarm capability
- Simple intuitive configuration
- High-density in compact chassis

Applications
The MV-821 external multiviewer is ideal for use in any application that benefits from a single or multiple display(s):
- Playout control rooms
- Studio galleries
- OB trucks
- Houses of worship
- Conference and events

Architecture
Extend and expand input and output monitoring with MV-821-H264 license, independent of the primary multiviewer.
- MV-821 high-resolution low-latency primary monitoring application
- MV-821-H264 confidence streaming of all inputs

See ordering section for more details.

Advanced Monitoring Capability
With the development of advanced technology within the MV-821 standalone multiviewer, we can offer some unique, powerful features including integrated control and monitoring.

Multichannel Monitoring
The MV-821 provides high-quality images even when it’s used in advanced multichannel display. No compromise on quality provides the highest picture output for today’s broadcast environment.
- Multichannel display with graphical background and channel logos for clear identification
- Mix on-air, program, preset and key previews
- Full audio metering
- Automation playlist display
- On screen clock with regional time offsets
KEY FEATURES

- Superior density 48 inputs to 12 outputs — 4 standard outputs
- MV-821-HDBNC — all 48 inputs are 12G-SDI capable
- MV-821-IP — all IP I/O streams on just 4 QSFP28 modules including full SMPTE ST 2022-7 hitless redundancy
- HDR downmapping of HDR sources (for SDR displays) and HDR upmapping of SDR sources (for HDR displays)
- Media Biometrics generation for Media Assurance with SigMA platform
- World-class image processing and scaling
- Up to 32 channels of audio metering per source
- Internal and external UMD and tally support
- Clock and timers
- Optional unique input source streaming (H.264 compressed)
- Integrated control and monitoring of system wide external devices as well as internal video and audio sources
- Full audio, video and metadata alarm support
- Multiple display wall control
- SDI coax, SDI fiber and HDMI SFP output options (each HDMI output in place of two SDI outputs)
- Mix HD, 3G & 4K UHD sources on HD, 3G and 4K UHD displays simultaneously
- AFD/WSS auto support
- Full RollCall integration

MV-821-HDBNC Connectivity

MV-821-IP Connectivity
**MV-821-HDBNC**

**Inputs** – 48
SD 525/59.94 & 625/50
HD 720p (50, 59.94 & 60 frames)
HD 1080i (25, 29.97 & 30 frames)
3G 1080p (50, 59.94 & 60 frames)
4K UHD quad link 2SI or SDQS (uses 4 inputs per 4K UHD source)
4K UHD 12G 2160p (25, 29.97, 30, 50, 59.94 & 60 frames, 4:2:2 YCbCr) – Requires MV-821-12G license

**Outputs** – Up to 12 SDI
4 video outputs (coax or fiber) (upgradable to 12):
4K UHD, 3G 1080p (50, 59.94 & 60 frames, locked to reference)
Video delay – 1 input field/frame (interlaced/progressive) plus 1 to 3 output frames (typically 1)
Quad link 4K UHD output support only

**MV-821-IP**

**Inputs** – 48 IP Streams

Video formats:
Same as MV-821-HDBNC but 4K UHD quad link only
Main IP: 2x QSFP28 both configured as 2x 50 GbE ports
Each 50 GbE RX link supports up to 12x 3G IP input streams
Redundant IP: 2x QSFP28 both configured as 2x 50 GbE ports
Same as ‘Main IP’ above
Uncompressed video transport using either SMPTE 2110-20/30 or SMPTE 2022-6 encapsulation
SMPTE ST 2022-7 compliant for hitless redundancy

**Outputs** – Up to 12 Simultaneous IP and SDI Streams
4 video outputs (upgradable in pairs to 12)
Main IP: 2x QSFP28 (as per IP inputs)
First QSFP28 TX-link supports 8x 3G IP output streams
Second QSFP28 TX-link supports 4x 3G IP output streams
Redundant IP: 2x QSFP28 (as per IP inputs)
Same as ‘Main IP’ above
SDI outputs same as MV-821-HDBNC

**MV-821-HDBNC and MV-821-IP**

**Monitoring Outputs**
48 inputs encoded as H.264 compressed IP output streams
Requires MV-821-H264 option

**On-screen Monitoring**
Fully flexible layouts: any object can be any size, in any position (48 scalars any scaled source can be duplicated in any position on any output)
Up to 16 audio channels per video signal
Bars outside or overlaid on picture
Audio meter scales on/off
Adjustable laying and transparency of objects over video or other objects or background video
Display up to 48 tiles on a single screen, plus additional tiles for clocks and tallies:
Programmable color & alarm thresholds
WSS/AFD flags to auto adjust aspect ratio of images within a video tile audio:
Metadata & control
Metering of AES embedded audio, UI, extended UI, DIN, BBC, Nordic scales including Dolby E:
Closed caption & subtitle detection with display on screen
UMD source names via:
– Grass Valley general remote protocol
– SW-P-08 over IP
– TSL v3.1 or v5 protocol over IP

**MV-821-OP910**

License upgrade to enable outputs 9 & 10. SFP for SDI outputs ordered separately

**MV-821-OP112**

License upgrade to enable outputs 11 & 12. SFP for SDI outputs ordered separately

**CC-THH-3G-N**

Dual output HD-BNC coaxial SFP module

**ST31ST31-3**

Dual output SDI fiber SFP module (1310 nm single mode LC/PC)

**MV-821-OP12**

License upgrade to enable outputs 1 & 2. SFP for SDI outputs ordered separately

**MV-821-H264**

Factory installed option for H.264 streaming of multiviewer inputs

**MV-821-HDBNC and MV-821-IP**

**Alarm Notifications**
Border alarm
In-picture message
Master GPO
Video alarms
Video black
Video frozen
Loss of video
Loss of CC
Loss of VITC data
SNMP support

**Audio Alarms**
Audio over level
Audio under level/loss
Loss of embedded channels
Dolby E

**Status Indicators**
Input standard
CC standard
Source ID
V-Chip status

**Alarm Control**
Configurable alarms threshold and trigger delays:
• Alarm acknowledge form hard and soft panels via RollCall interface
• Alarm acknowledge/clear/previous fault indication (border color or tally alarm box):
  • Alarm auto-clear after preset delay

**SPECIFICATIONS**

**MV-821-HDBNC**

**MV-821-IP**

**MV-821-OP56**

License upgrade to enable outputs 5 & 6. SFP for SDI outputs ordered separately

**MV-821-OP78**

License upgrade to enable outputs 7 & 8. SFP for SDI outputs ordered separately

**MV-821-OP112**

License upgrade to enable outputs 11 & 12. SFP for SDI outputs ordered separately

**MV-821-H264**

Factory installed option for H.264 streaming of multiviewer inputs

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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