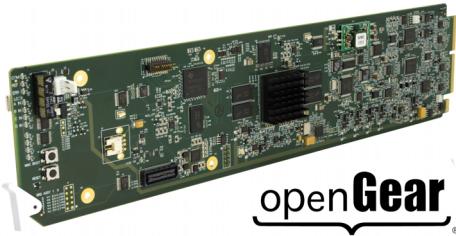


9971-MV6-4K • 12G/6G/3G/HD/SD Expandable UHD Multiviewers



The Cobalt® **9971-MV6-4K 12G/6G/3G/HD/SD Expandable UHD Multiviewers** suite is Cobalt's next generation of advanced UHD high-capacity channel multiviewers for the openGear® platform. Full-flexibility design accommodates 12G/6G/3G/HD/SD-SDI and UHD1 3840x2160 Square Division (SDQS) or Two-Sample Interleave (2SI) quad 3G-SDI based formats as I/O, and can output ST 2082 12G-SDI for single-wire 4K transport. Using 12G-SDI "single-wire" inputs, up to 6 discrete PiP images can be supported. With both 12G-SDI and quad 3G-SDI inputs, the 9971-MV6-4K can downconvert 12G and quad UHD. The **9971-MV6-4H-4K** model directly works with commercial/consumer HDMI signals as both inputs and outputs without any video converter boxes being required. All 9971-MV6-4K models provide up to two HDMI 2.0 outputs for economical 4K video monitoring.

The 9971-MV6-4K suite offers unprecedented ease of setup and also offers an unprecedented ease of use. Fully-flexible layouts using any of several one-button template presets or fully customizable layouts using easy to use sizing/positioning custom controls. Any template layout or custom layout changes can be done "on-the-fly" in real time, without

tedious setup or layout programs like many other multiviewer products. Graphical overlay features include user text "burn-in" insertions that can correlate the images displayed with contextual information. Numerous one-button preset layout formats are available, as well as custom layouts as desired. Custom layout and configuration settings can be saved to user presets, allowing the custom settings to be recalled with one click.

Multiple 9971-MV6-4K cards can be cascaded to provide splits greater than the base six-split. The 9971-MV6-4K PIP6 input can be used in a cascaded chain of 9971-MV6-4K cards that provides multiviewer layouts of up to 8x8 (64:1). The QuickSet grid definer precisely and easily sets up a multiviewer grid where columns and rows of each of the cards PIPs are arranged to work together in a cascaded aggregate arrangement. Low-latency processing allows multiple 9971-MV6-4K cards to be cascaded without significant accumulated delays within the chain. The high-density openGear® design allows for up to five 9971-MV6-4K cards to be installed in one 2RU openGear® frame. Card control/monitoring is available via DashBoard user interface, integrated HTML5 web interface, SNMP, or Cobalt's RESTful-based Reflex protocol.

9971-MV6-4K Models:

9971-MV6-4K 12G/6G/3G/HD/SD Expandable UHD Multiviewer with Six SDI Inputs

9971-MV6-4H-4K 12G/6G/3G/HD/SD Expandable UHD Multiviewer with Six SDI Inputs and Four HDMI 2.0 Inputs

FEATURES

High-density openGear comprehensive UHD multiviewer solution

Allows easy, real-time "on the fly" custom layout changes without needing setup or layout programs

Supports Square Division (SDQS) and Two-Sample Interleave (2SI) quad UHD formats

Easy to configure PiP sizing and borders

DashBoard Output Preview function provides display of regularly-sampled screen captures in the device DashBoard page. Provides remote-access program video content/presence and multiviewer layout confidence monitoring via the device's DashBoard display without needing collocation with the device or its input/output video signals.

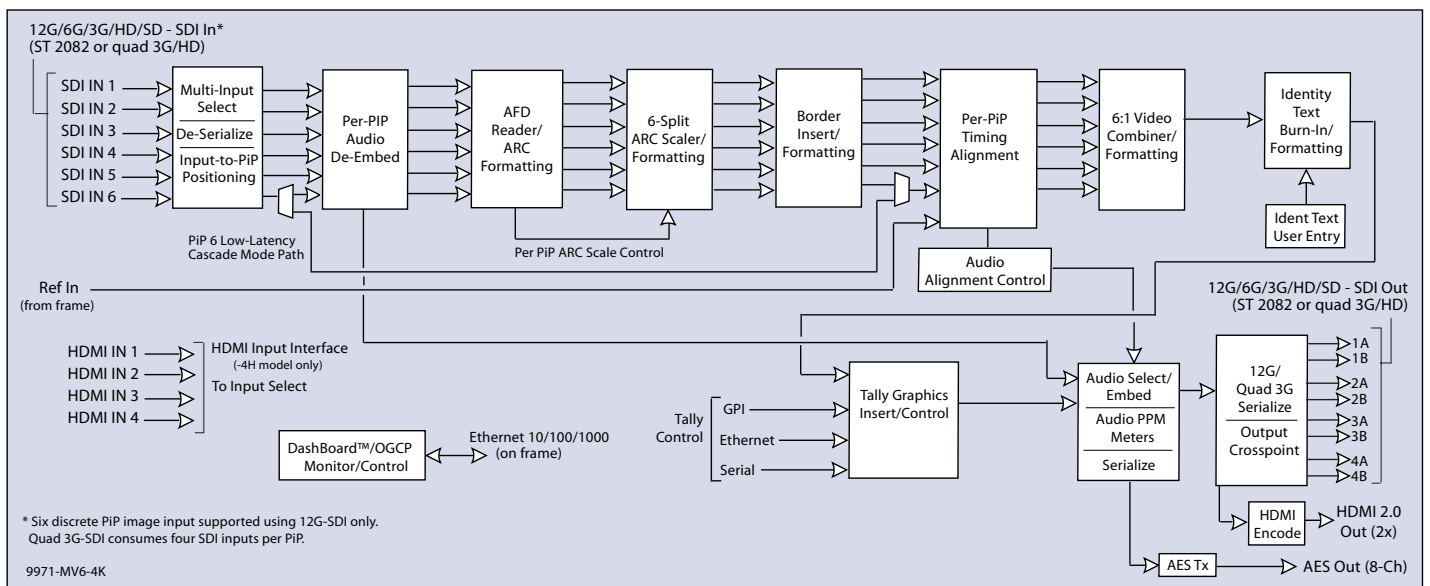
Cascading Mode and QuickSet grid definer offers expanded multiviewer functions using multiple cascaded (daisy-chained) 9971-MV6 cards (up to 64:1). Two cards can provide an 11:1 multiviewer, with up to 13 cards providing a 64:1 multiviewer.

Full embedded audio processing with user delay offset and AES outputs

UHD 3840x2160 output raster support

Remote control/monitoring via DashBoard™ software, OGCP-9000 remote control panels, integrated HTML5 web interface, SNMP, or Cobalt's RESTful-based Reflex protocol

Five year warranty

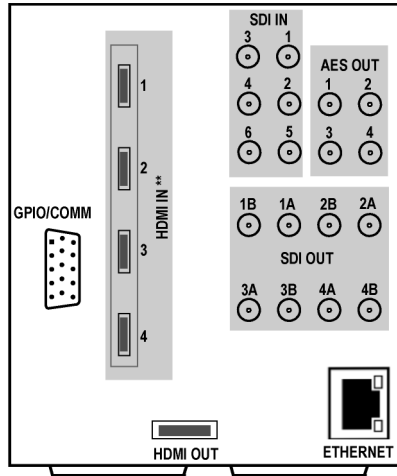


9971-MV6-4K • 12G/6G/3G/HD/SD Expandable UHD Multiviewers

- COMM / GPIO PINOUTS**
- 1 - *COM A_RX2 / 422(+)
 - 2 - *COM A_TX2 / 422(+)
 - 3 - COM B_RX2 / 422(+)
 - 4 - GPO OUT1
 - 5 - GND
 - 6 - *COM A_RX1 / 422(-)
 - 7 - *COM A_TX1 / 422(-)
 - 8 - COM B_RX1 / 422(-)
 - 9 - GPI IN5 / GPO OUT 2
 - 10 - GPI IN4
 - 11 - GPI IN1
 - 12 - GPI IN2
 - 13 - GPI IN3
 - 14 - NC
 - 15 - NC

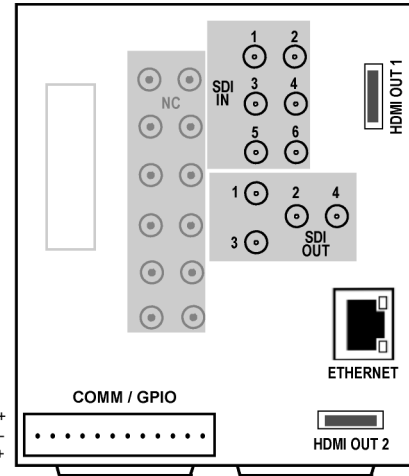
* Port can be GUI-configured as two RS-232 ports (Tx and Rx), or as a full-duplex RS-422 port.

** HDMI inputs applicable to model -MV6-4H-4K only. HDMI connectors are mounted on card assembly and project through opening on rear module.



RM20-9971-B-HDBNC

- GPI/COMM**
- 1 - GPI IN 1
 - 2 - GPI IN 2
 - 3 - GPI IN 3
 - 4 - GPI IN 4
 - 5 - GPI IN 5
 - 6 - GPI IN 6
 - 7 - GND
 - 8 - GND
 - 9 - COMM A RX1/-
 - 10 - COMM A RX2/+
 - 11 - COMM A TX1/-
 - 12 - COMM A TX2/+



RM20-9971-C-HDBNC

SPECIFICATIONS

12G/6G/3G/HD/SD-SDI Inputs/Outputs

- (6) 75Ω inputs (max)
- (8) 75Ω outputs (max)
- SDI Formats Supported: SMPTE ST2082-1, ST2082-10, 424M, 292M, SMPTE 259M-C. All inputs/outputs 12G compliant and SDQS/2SI quad 3G compliant.
- Return Loss:
 - > 15 dB up to 1.485 GHz
 - > 10 dB up to 3 GHz
 - > 7 dB up to 6 GHz
 - > 5 dB up to 12 GHz
- Input Cable Length:
 - 60m Belden 1694A cable at 11.88 Gbps
 - 120m Belden 1694A cable at 2.97 Gbps
 - 240m Belden 1694A cable at 1.485 Gbps
 - 400m Belden 1694A cable at 270 Mbps
- Output Signal Level: 800 mV ± 10%
- DC Offset: 0 V ± 50 mV
- Rise and Fall Time @ 11.88 Gbps: < 45 ps
- Alignment Jitter (12G/3G/HD/SD): < 0.3/0.3/0.2/0.2 UI

Audio Output

16-ch embedded; 8-ch AES3-id (AES outputs available only with rear module RM20-9971-B). Per-PIP select allows routing of PIP input 16-ch embedded audio to combined SDI output. HDMI output tracks with group 1/2 audio as selected for SDI embedded audio output.

HDMI Inputs (model 9971-MV6-4H-4K only)

(4) HDMI 2.0; type C-mini connector

HDMI Output

(2, max) HDMI 2.0 Output; type A standard connector

Frame Reference Input

(2) reference from frame bus. SMPTE 170M/318M "Black Burst", SMPTE 274M/296M "Tri-Level"

ORDERING INFORMATION

9971-MV6-4K 12G/6G/3G/HD/SD Expandable UHD Multiviewer with Six SDI Inputs

9971-MV6-4H-4K 12G/6G/3G/HD/SD Expandable UHD Multiviewer with Six SDI Inputs and Four HDMI 2.0 Inputs

RM20-9971-B-HDBNC 20-Slot Frame Rear I/O Module (Double-Width) (6) 12G/6G/3G/HD/SD/SD-SDI Inputs, (8) 12G/6G/3G/HD/SD/SD-SDI Processed Outputs, (4) AES Outputs, GPIO/COMM (HD-15 connector), HDMI 2.0 Output (type A standard), 10/100/1000 BaseT Ethernet Port (All coaxial connectors HD-BNC.)

Note: RM20-9971-B rear module, when fitted to model 9971-MV6-4H-4K has four (4) HDMI inputs (type C mini). These inputs reside on the card assembly and project through a cutout on the rear module. The connectors are **not** part of the rear module assembly.

RM20-9971-C-HDBNC 20-Slot Frame Rear I/O Module (Double-Width) (6) 12G/6G/3G/HD/SD/SD-SDI Inputs, (4) 12G/6G/3G/HD/SD/SD-SDI Processed Outputs, GPIO/COMM, (2) HDMI 2.0 Output (type A standard), 10/100/1000 BaseT Ethernet Port (All coaxial connectors HD-BNC.)