



KALEIDO-SOLO

High-Quality Video and Loudness Monitoring with 3G/HD/SD SDI to HDMI Conversion

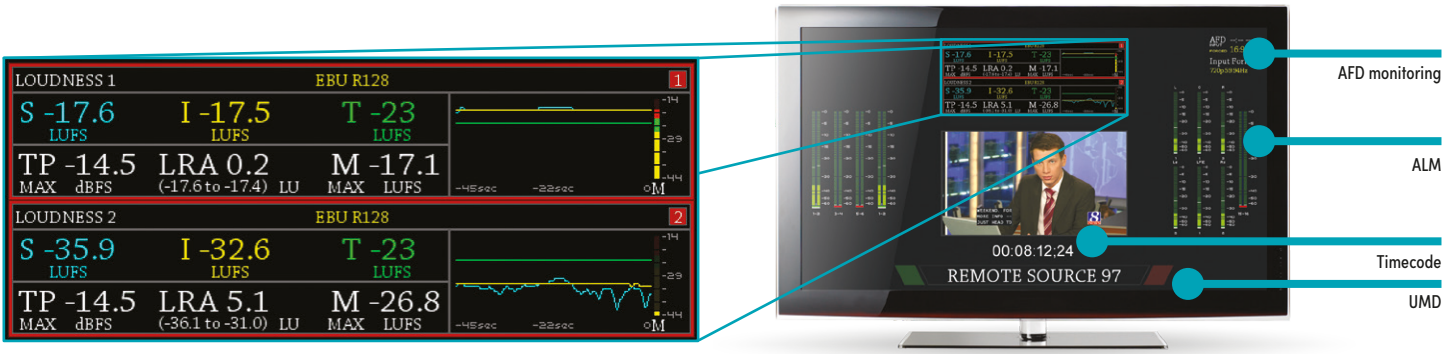
Cost-efficient performance and versatility.

Kaleido-Solo is a compact, standalone 3G/HD/SD SDI video to HDMI converter that enables the use of low-cost LCD displays for video and loudness/dialnorm monitoring.

Ideal for many professional monitoring applications, including production, mobile truck, post-production and broadcast, Kaleido-Solo eliminates the cost and complexity of a traditional loudness monitoring device.

Key Features

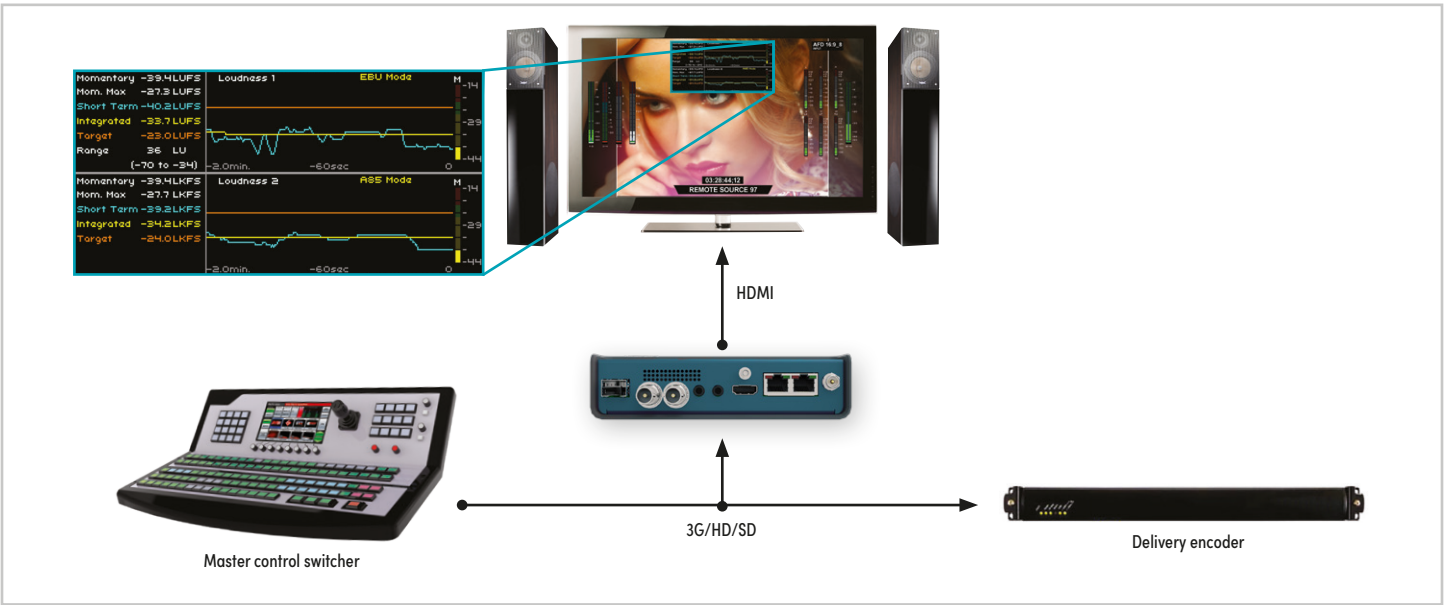
- 3G/HD/SD to HDMI converter for video and audio monitoring
- Offers high quality and rich monitoring using a low-cost LCD panel
- Dual program loudness and dialnorm monitoring over time (KS-910 only)
 - Enhanced loudness measurements
 - EBU R128
 - ATSC A/85 ITU BS.1770-1
 - ATSC A/85 ITU BS.1770-2
 - ATSC A/85 ITU BS.1770-3
 - ARIB TR-B32
 - Full-screen layout
 - Loudness configurable alarm threshold
 - Offline capture automation (EOM/SOM)
 - Optional logging capabilities via iControl™ or iControl Solo
 - Measure from internal down mix processing
- Automatic input format detection
- Supports 525i, 625i, 720p, 1080i and 1080p video resolutions
- Multiple frame rate support including 23.98p/PsF, 24p/PsF, 25p/PsF, 50i, 50p, 59.94i and 59.94p
- Built-in scaler/deinterlacer
- Optical SFP fiber input/output options
- S/PDIF digital audio terminal that can output either:
 - A 5.1 downmix
 - Any PCM stereo pair
 - An incoming Dolby Digital stream
- Analog audio terminal that can output either:
 - A 5.1 downmix
 - Any PCM stereo pair
- Selectable burn-in and metadata overlay
 - History graph of audio loudness levels and dialnorm
 - ALM (audio level, phase and peak meters)
 - Can display from Dolby-E (KS-910 only)
 - Can display from internal down mix (KS-910 only)
 - Timecode
 - AFD/WSS/VLI
 - Customizable names
- Aspect ratio markers
- Dynamic UMD (under monitor display) and tallies
- Subtitling (608, Legacy 608, 708, Teletext, OP-47)
- V-Chip/CAD
- Menu navigation through web browser
- Monitor power saving mode
- Configurable presets
- Configurable general purpose input/output (GPIO)
- Automatic aspect ratio support
- Video scaling and positioning options
- HDMI 5.1 audio support
- Easy configuration using on-screen menus
- Failsafe mechanism for unsupported monitor resolutions
- Convenient mounting bracket included
- Optional remote control for menu navigation and configurable buttons



History graph with loudness and dialnorm

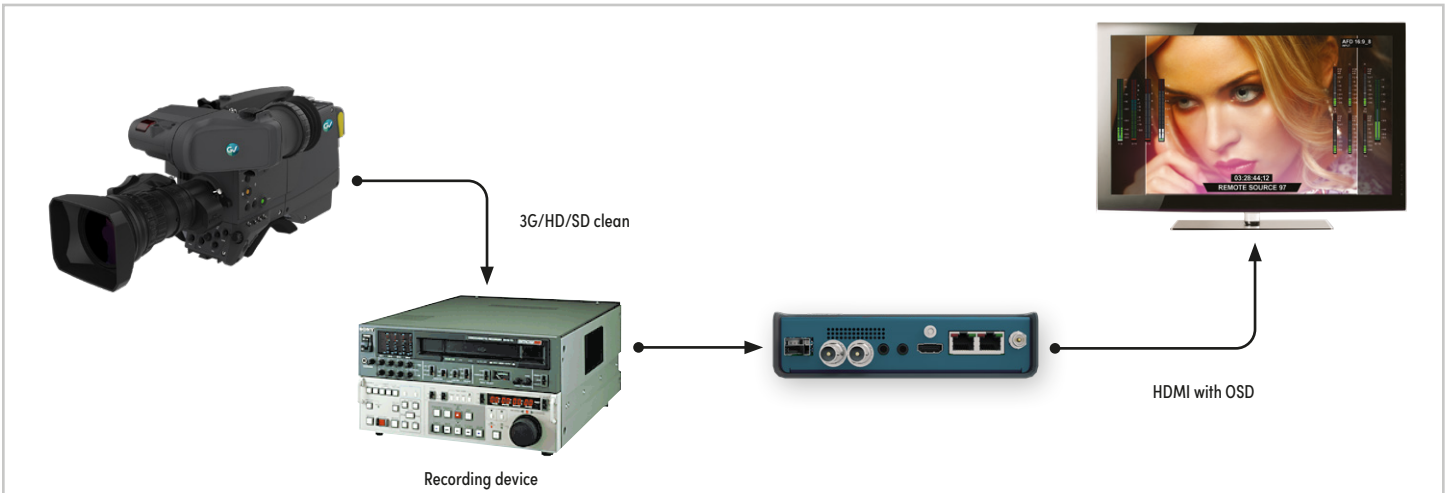
Broadcast Application: Loudness Monitoring In Master Control

Kaleido-Solo can be used to monitor the video and loudness level at the output of a master control switcher.



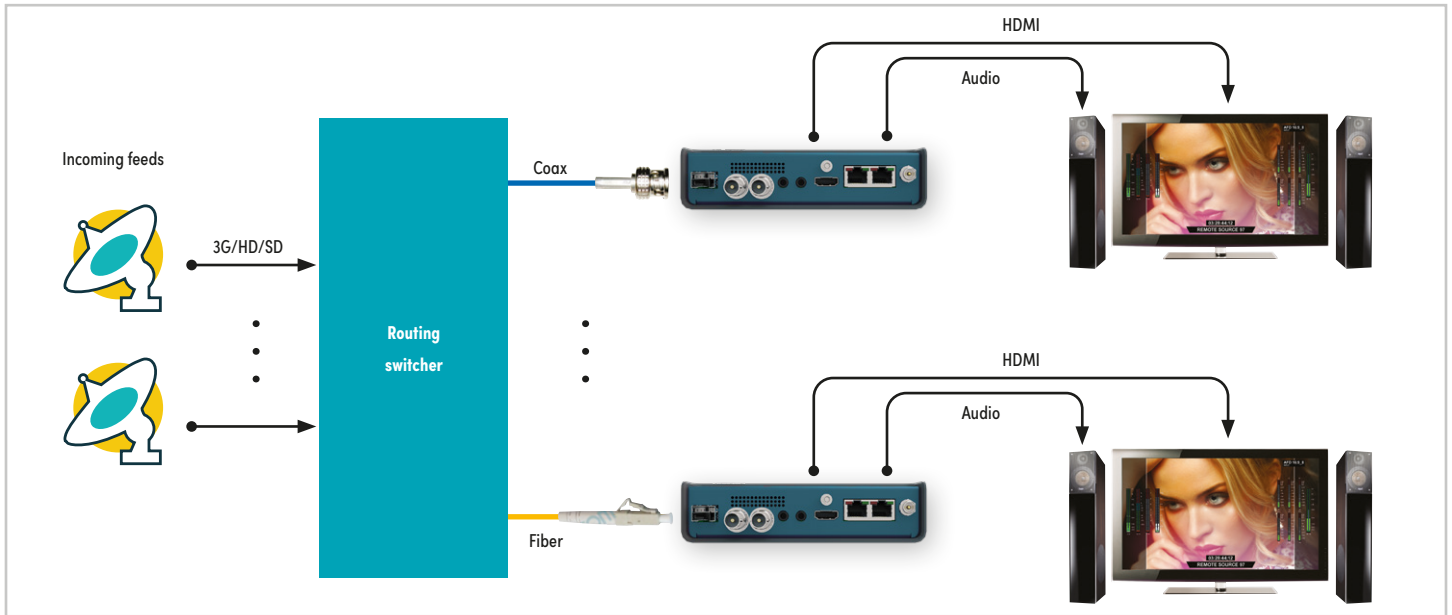
Production Application: On-Set Monitoring

Kaleido-Solo is used to feed a low-cost display with HDMI input for full 3G/HD monitoring, with all essential on-screen-display information.



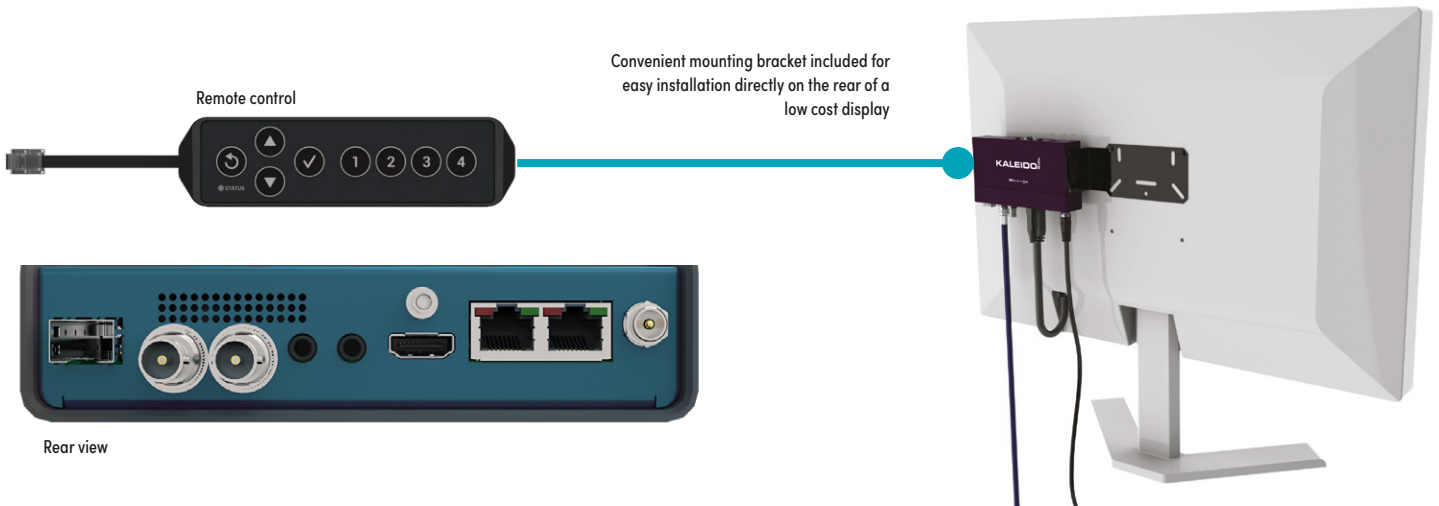
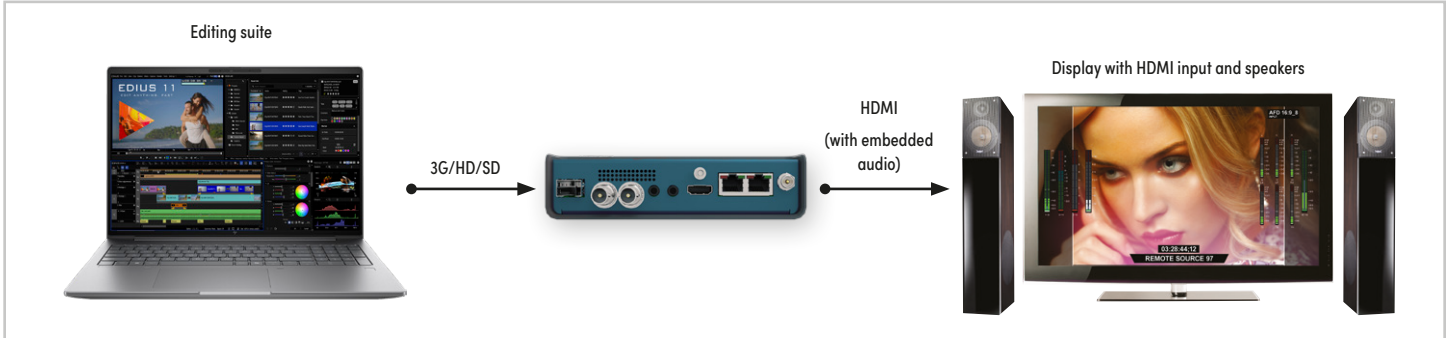
Broadcast Application: Incoming/Outgoing Feed Monitoring

Monitoring the incoming feeds, or the feeds going on-air, including the AFD, loudness, and dialnorm metadata.



Post-Production Application: Editing Suite Monitoring

Kaleido-Solo is used for client monitoring in the editing suite, and for video confidence monitoring during dubs in the machine room. This solution supports 3G, HD and SD, and thereby removes the need for a setup change when switching back and forth between HD and SD sessions.



Specifications

Video Input

Signal:

SMPTE ST 259-C (270 Mb/s)
 SMPTE ST 272-C (270 Mb/s with embedded audio)
 SMPTE ST 292, SMPTE ST 299 (HD: 1.485, 1.485/1.001 Gb/s)
 SMPTE ST 425 (2.970, 2.970/1.001 Gb/s)

Supported formats:

SD: 480i59.94, 576i50
 HD: SMPTE ST 274: 1080i50/59.94, 1080p/PsF23.98/24/25
 HD: SMPTE ST 296: 720p50/59.94
 3G: SMPTE ST 425 level A (mapping 1): 1080p50/59.94

Cable length:

240m (787 ft.) Belden 1694A at 270 Mb/s
 150m (492 ft.) Belden 1694A at 1.485 Gb/s
 120m (393 ft.) Belden 1694A at 2.97 Gb/s

Return loss:

>15 dB up to 1.5 GHz
 >10 dB up to 3 GHz

Jitter:

HD/SD: <0.2 UI as per alignment jitter in SMPTE spec.
 3G: <0.3 UI as per alignment jitter in SMPTE spec.

Fiber I/O

SMPTE ST 297-2006 compliant
 Single receive or transmit or receive/transmit SFP module: Dual receive or transmit modules can be installed, but only one Rx or Tx channel will be used
 For full specifications on SFP optical modules, please see www.grassvalley.com

HDMI Output

Connector: HDMI Type A
 Standard: HDMI 1.3a
 Format: Compliant to EIA/CEA-861-D

Analog Audio Output

Connector: 3.5 mm (0.138 in.) stereo jack
 Signal: 2 channels unbalanced analog audio
 Level: 2 Vp-p
 Impedance: 10 kΩ

S/PDIF

Connector: 3.5 mm (0.138 in.) stereo jack
 Signal: IEC 60958
 Level: 0.5 Vp-p ±20%
 Impedance: 75Ω unbalanced
 Sampling rate: 48 kHz

Ethernet

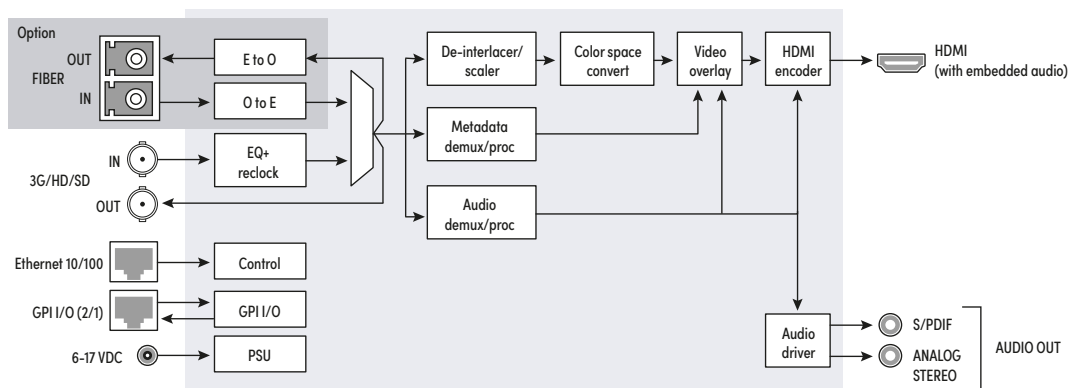
Connector: RJ45

Processing

Signal path: 8 bits
 Processing delay: 1 frame

Electrical

Voltage range: 6 to 17 VDC
 Power: 10W



Kaleido-Solo functional block diagram

Ordering

KS-900

3G/HD/SD to HDMI converter with audio

KS-910

3G/HD/SD to HDMI converter with audio and loudness meter

KS-Remote

Kaleido-Solo remote control

Options (hardware)

SFP-R-LC

Single fiber Rx (input) cartridge with LC/PC connector

SFP-RT-S13-LC

Dual fiber Rx/Tx (input/output) cartridge 1310 nm with LC/PC connector

SFP-T-S13-LC

Single fiber Tx (output) cartridge at 1310 nm with LC/PC connector

Other types of SFP Optical Plug-In Cartridges may be available for this product

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

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