Kaleido-MX 4K

Ultra High-Definition Multiviewer

Enhanced viewing clarity and sophistication with 4K UHD displays.

The Kaleido-MX 4K from Grass Valley is the latest addition to the Kaleido family of multiviewers, and it offers stunningly beautiful, seamless 4K pictures (without visible quadrants) for monitoring on large 4K screens. Kaleido-MX is an ultra high-definition multiviewer that can natively drive a 4K display for the most demanding monitoring applications. Available in four configurations for up to 64 SD/HD or 3G inputs, the Kaleido-MX 4K is perfect for high-end in-studio TV productions, outside broadcast trucks, as well as playout facilities.

Kaleido-MX 4K offers low power consumption and a lightweight, compact design that's ultra-quiet and runs cool. With advanced probing features, which rapidly and clearly alert operators to on-air problems, the Kaleido-MX 4K is perfect for ensuring a high quality of broadcast for playout.

The Kaleido-MX 4K is perfect for monitoring in facilities which require the ultimate picture quality. The Kaleido-MX 4K multiviewer takes the superb video and graphics viewing that Kaleido is best known for to the next level by natively supporting 4K ultra high-definition screens. The enhanced resolution provides the ultimate viewing experience, and is ideal for high-end in-studio TV productions, outside broadcast trucks, as well as playout facilities. If you want the best multiviewing experience, this is it!

Replace four HD displays with one larger 4K UHD display for a smooth, elegant and ergonomic control room monitor wall

4 × HD Displays

1 × UHD Display

KEY FEATURES

Choice of Configuration

- 16 inputs x 1 UHD output (1 RU)
- 32 inputs x 1 UHD output (3 RU)
- 48 inputs x 1 UHD output (3 RU)
- 64 inputs x 1 UHD output (3 RU)

Uncompromised I/O Capabilities

- Up to 64 inputs 3G/HD/SD SDI formats
- Quad-link 3 Gb/s output or HDMI 2.0 output at 3840x2160 @59.94/50p

Unmatched Image Quality and Layout Flexibility

- Unmatched multiviewer picture quality and superior on-screen graphics
- Ultimate level of layout flexibility, with unlimited signal repetition and sizing across all displays, without blocking, grouping restrictions or bandwidth restrictions
- Display up to 128 images (64 unique) on a 4K UHD display

Router and Switcher Integration

- Kaleido-MX 4K offers rich integration with the GV Orbit router family and Grass Valley's Kayenne/Karrera production switchers
- Supports third-party routers and production switchers for tally and labels

Robust and Serviceable Design

- Unique Auto-Recovery feature provides fast automated recovery after a "cold" spare is inserted into the frame
- Hot swappable modules and power supplies
- 1 RU and 3 RU frame models with quiet cooling

Seamless Control Across Multiple Multiviewers

- Kaleido multiviewers can be "mixed-and-matched" to create a seamless monitoring system across a facility
- Choice of multiple control options such as standalone Kaleido-RCP2/RCP-200 panels, integrated with router control systems and panels, iControl and third-party control systems

Scalable for the Largest Systems

- Virtually limitless multiviewer system expansion with upstream GV Orbit router
- Create combined multiviewer/router system with up to 1,152 video inputs, 72 UHD multiviewer outputs

Advanced Probing and Alarming

- Closed captioning and teletext subtitling display and alarming to ensure compliance with regulation, includes XDS and AFD
- Software licensable Dolby E metadata extraction for metering and content alarming without the need of expensive hardware decoders
- Sophisticated on-screen alarm displays for clear operator alerts, supporting multicolor and blinking statuses based on severity, latching and status

SPECIFICATIONS

Video Inputs
Quantity: 16, 32, 48 or 64
Connector: DIN 1.0/2.3

SD-SDI
Signal: 4:2:2 SMPTE ST 259-C (270 Mb/s)
Formats: 525 and 625

HD-SDI
Signal: 4:2:2 SMPTE ST 292-C (1.5 Gb/s)
Formats: 720p24/25/29.97/50/59.94, 1080PsF23.98p/24p/25i/29.97i, 1080i50/59.94, 1080p23.98/24/25/29.97

3G-SDI
Signal: SMPTE ST 424-2006 (2.97, 2.97/1.001 Gb/s) Level A and B
Formats: 1920x1080p59.94, 1920x1080p50

Mosaic Output
HDMI x 1
  Signal: HDMI V2.0
  Format: 3840x2160 at 50 Hz or 59.94 Hz

HD-SDI x 4
  Signal: 3G/HD-SDI SMPTE ST 424 Level A
  Formats: 1920x1080p59.94, 1920x1080p50

LTC Inputs
Signal: SMPTE ST 12-1995 (EBU-3259-E), SMPTE ST 309
Connector: DIN 1.0/2.3

Reference
External: SMPTE ST 170, SMPTE ST 318, ITU 624-4, BUT 470-6, PAL and NTSC composite sync, SMPTE ST 274, SMPTE ST 296, SMPTE ST 240
Connector: DIN 1.0/2.3

Frame
Power supply: Hot swappable redundant power supplies (optional)
Input voltage: 100-240V
Frequency: 50/60 Hz
Power:
  1 RU: 150W max.
  3 RU: 350W max.
Dimensions:
  1 RU x 485 mm (19 in.) x 286 mm (11.25 in.)
  3 RU x 485 mm (19 in.) x 286 mm (11.25 in.)
Full spec temperature range: 0-40 °C (32-104 °F) (ambient)
Weight:
  1 RU: 4.2 kg (9.2 lbs.)
  3 RU: 4.8 kg (10.6 lbs.)

Control
Ethernet (3)
  Signal: 10/100 Base-T
  Connector: RJ-45
Serial Port (2)
  Signal: RS-422 (SMPTE ST 207, EBU-3245)
  Connector: RJ-45

GPIO
Connector: DB-44
Number of inputs:
  1 RU: 20 opto-isolated
  3 RU: 20 or 40 (optional) opto-isolated
Number of configurable inputs or outputs:
  1 RU: 8
  3 RU: 8 or 16 (optional)

Analog Audio Monitoring (4)
Signals (2): Balanced analog stereo
Connector: WECO

DVI / HDMI / VGA Inputs (Optional)
Device: Grass Valley ADVC G1 converter

Discrete Audio Inputs (Optional)
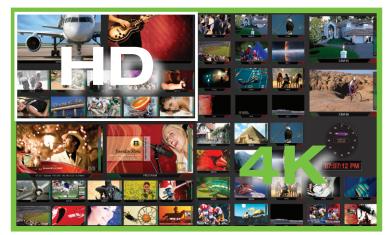**Analog Audio:**
  ABT-64A or ABT-128A
Digital Audio:
  AES 110Ω: ABT-64D-110 and ABT-128D-110
  AES 75Ω: ABT-64D-75 and ABT-128D-75

APPLICATIONS

Increased resolution offers the ability to view more sources on the same display without compromising picture quality.

Improved resolution with better pixel density of scaled video windows delivers accurate picture details.

Example of full HD quad-split on a 4K monitor.

ORDERING

KALEIDO-MX 4K Models

KALEIDO-MX-16X1-4K
16 input, single 4K UHD output multiviewer in 1 RU

KALEIDO-MX-32X1-4K
32 input, single 4K UHD output multiviewer in 3 RU

KALEIDO-MX-48X1-4K
48 input, single 4K UHD output multiviewer in 3 RU

KALEIDO-MX-64X1-4K
64 input, single 4K UHD output multiviewer in 3 RU

Input Options

KMX-IN-16-OPT-3GBPS
3 Gb/s signal format license (per 16 inputs)

KMX-IN-16-OPT-CSX
CC/Subtitling and XDS data license (per 16 inputs)

KMX-IN-16-OPT-DOLBY
License for extraction of Dolby E metadata (per 16 inputs)

Audio Input Modules

ABT-64A
64 channel analog audio bridge terminal

ABT-128A
128 channel analog audio bridge terminal

Power Supplies

DENSITÉ 3+FR1-PSU-AC
Optional redundant power supply for KALEIDO-MX-16x1-4K

DENSITÉ 3-PSU-AC
Optional redundant power supply for KALEIDO-MX 4K 3 RU models

Accessories

ADVC G1
Any In to SDI Multifunctional Converter

KALEIDO-RCP2
Ethernet remote control panel and KM Gateway

PSU-POE
Replacement power over Ethernet module

KRCP-RK2
Kaleido-RCP2 rackmount bracket

GPI-1501-TBA
GPI I/O terminal block adapter

GPI-1501
Additional GPI I/O module for KALEIDO-MX 4K 3 RU models

REF-1801
Redundant reference for KALEIDO-MX 4K 3 RU models