Enhanced viewing clarity and sophistication with 4K UHD displays.

The Kaleido-MX 4K from Grass Valley, a Belden brand, 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!
Kaleido-MX 4K Ultra High-Definition Multiviewer

**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 NVISION router family and Grass Valley’s Kayenne/Karrera production switchers
- Supports third-party routers and production switchers for tally and labels

**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 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: 485 mm (19 in.) x 286 mm (11.25 in.)
  - 3 RU: 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 1102: ABT-64D-110 and ABT-128D-110
  - AES 75Ω: ABT-64D-75 and ABT-128D-75

**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 NVISION 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
Kaleido-MX 4K Ultra High-Definition Multiviewer

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-64D-110  64 channel 110Ω AES audio bridge terminal
ABT-64D-75  64 channel 75Ω AES audio bridge terminal
ABT-128A  128 channel analog audio bridge terminal
ABT-128D-110  128 channel 110Ω AES audio bridge terminal
ABT-128D-75  128 channel 75Ω AES audio bridge terminal

Power Supplies
DENSITE 3+FR1-PSU-AC  Optional redundant power supply for KALEIDO-MX-16x1-4K
DENSITE 3-PSU-AC  Optional redundant power supply for KALEIDO-MX 4K 3 RU models

Accessories
Note: DXF-200 HDMI optical extension system is not compatible with Kaleido-MX 4K models.
Output extension should be accomplished via coax cables using SDI output
ADV C1  Any In to SDI Multifunctional Converter
KALEDIO-RCP2  Ethernet remote control panel and KM Gateway
PSU-POE  Replacement power over Ethernet module
KRP-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

Routers and Switchers Interface Options
KMX-OPT-RT-NVISION  Control and UMD support for NVISION routers
KMX-OPT-RT-GVID7000  Control and UMD support for GV 7000 routers
KMX-OPT-RT-ENCORE  Control and UMD support for Encore controllers
KMX-OPT-RT-DATATEK  Control and UMD support for Datatek routers
KMX-OPT-RT-EVERTZ  Control and UMD support for Evertz routers
KMX-OPT-RT-JUPITER  Control and UMD support for Jupiter routers
KMX-OPT-RT-HARRIS  Control and UMD support for Harris/Imagine routers
KMX-OPT-RT-NETWORK  Control and UMD support for Nevison (Network Electronics) routers
KMX-OPT-RT-SNELL  Control and UMD support for Snell routers
KMX-OPT-RT-PESA  Control and UMD support for PESA routers
KMX-OPT-RT-UTAH  Control and UMD support for Utah routers
KMX-OPT-TLY-KAYENNE  Tally interface for Grass Valley Kayenne production switchers
KMX-OPT-TLY-KARRERA  Tally interface for Grass Valley Karrera production switchers
KMX-OPT-TLY-KALYPSO  Tally Interface for Grass Valley Kylpyso production switchers
KMX-OPT-TLY-KAIK  Tally Interface for Grass Valley Kayak production switchers
KMX-OPT-TLY-2000D  Tally Interface for Grass Valley 2000D production switchers
KMX-OPT-TLY-KAHUNA  Tally Interface for Snell Kahuna production switchers
KMX-OPT-TLY-SONY  Tally Interface for Sony production switchers (serial protocol)
KMX-OPT-TLY-SYNERGY  Tally Interface for Ross Synergy production switchers
KMX-OPT-TLY-ACYTUS  Tally Interface for Ross Acuity production switchers

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.

Copyright © 2015-2016 Grass Valley Canada. All rights reserved. Specifications subject to change without notice.