openGear®

The Ultimate openGear Applications Guide

2025

MultiDyne® Video & Fiber Optic Systems

ROSS®

COBALT®

APANTAC

VITEC

AJA® VIDEO SYSTEMS

DECIMATOR DESIGN

OPENGEAR® IS A REGISTERED TRADEMARK OF ROSS VIDEO LTD.

WHY openGear?

openGear® is an open-architecture, modular frame system that frees users to choose the feature, performance, and budget options that best meet the needs of their broadcast, production, or distribution facility and enables them to maintain common control and monitoring through the DashBoard control system for the openGear ecosystem. Introduced as the world's first modular infrastructure platform open to any manufacturer, the Emmy Award-winning openGear today provides solutions derived from hundreds of individual signal processing cards from dozens of vendors.

Free Common Control System

DashBoard, available for free, provides a unified control system across openGear products from all manufacturers. This allows for simple setup, monitoring, alarms, and management. With the included Custom Panel panel builder, users can easily create custom workflows across multiple products to suit their exact needs.

High Reliability

The oGx fourth-generation openGear modular infrastructure platform is built for 24/7 operation. Redundant power and adaptive cooling ensure maximum reliability, while front-loading, hot-swappable modules and a passive backplane make maintenance service a snap and eliminate downtime.

Comprehensive Portfolio

openGear offers a wide range of best-of-breed modular infrastructure solutions, including distribution, conversion, branding, audio, data, fiber, timing, and more all in a compact, economical frame. The openGear platform has the flexibility to support signal types and formats from analog to UHD to IP, and it is architected to meet the most complex processing demands of evolving IP and UHD applications.

Future-Proof Investment

The openGear industry-standard platform is a lasting investment that is both backward-compatible and future-proof. Users benefit from continuous development by an extensive ecosystem of manufacturers, ensuring best-in-class solutions at competitve prices. The platorm allows users to take advantage of a pay-as-you-go model, buying only the modules they need today, with room for future growth.

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openGear Leader Partners

AJA Video Systems manufactures high-quality, cost-effective technology solutions for video professionals, all designed and assembled in Grass Valley, California.

Go to AJA Video Systems' apps ⏩

Apantac LLC is a leading designer and developer of high quality, cost effective image signal processing equipment. The Apantac product line has been specifically designed to provide users with a flexible and innovative technology solution for image processing, and signal extension and processing.

Go to Apantac apps ⏩

Established in 1997, Cobalt designs and manufactures award-winning IP and 12G/6G/3G/HD/SD conversion, throwdown, multiviewer and compression technology for the live video production and broadcast television environments. All products are made in the USA and backed by a five-year warranty.

Go to Cobalt Digital's apps ⏩

Decimator Design is an Australia-based company that is dedicated to the design and manufacture of advanced video broadcast solutions.

MultiDyne offers the most comprehensive range of fiber optic transport modules available for the openGear® platform. Whether you need 4K/8K production signal extension on the studio lot or high-capacity, bi-directional 12G-SDI metro links, MultiDyne has the openGear card for the job.

Go to MultiDyne's apps ⏩

Ross powers live video productions for billions of global viewers daily with the industry's widest range of high impact, high efficiency solutions and services.

Go to Ross Video's apps ⏩

VITEC is a market-leading provider of IPTV, Video, Streaming and Digital Signage Solutions that help organizations harness the power of video to engage, empower and evolve. From corporate, broadcast and venues, to accomodation, government and military, VITEC has global expertise in delivering complex proAV solutions.

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CONTACT
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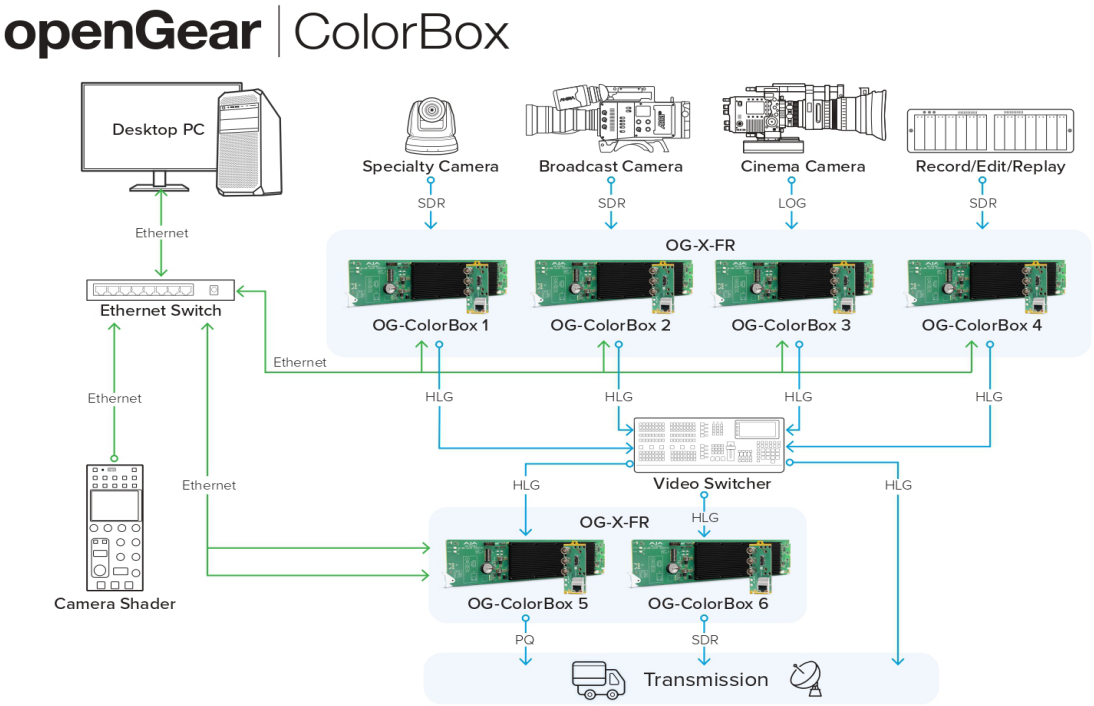
Application

Live Production Workflow – HDR Conversion and Color Correction



In this live television OB truck production workflow, we see several 12G-SDI outputs from a variety of UltraHD camera systems, including SDR BT.709 action cameras and a LOG cinema camera, that are input into multiple AJA OG-ColorBox openGear cards via 12G-SDI. Color management and conversion are provided by the OG-ColorBox with less than ½ of a video line of latency, in this case converting each input to an HLG BT.2020 output suiting the needs of the live production single master HDR workflow. OG-ColorBoxes on the output of the switcher convert HLG to different deliverable formats, including SDR and PQ. As sources are added, more OG-ColorBox units can also be easily added to accommodate a production as it scales. The openGear OG-X-FR frame itself supports redundant power supplies, critical for live environments and constant up time.

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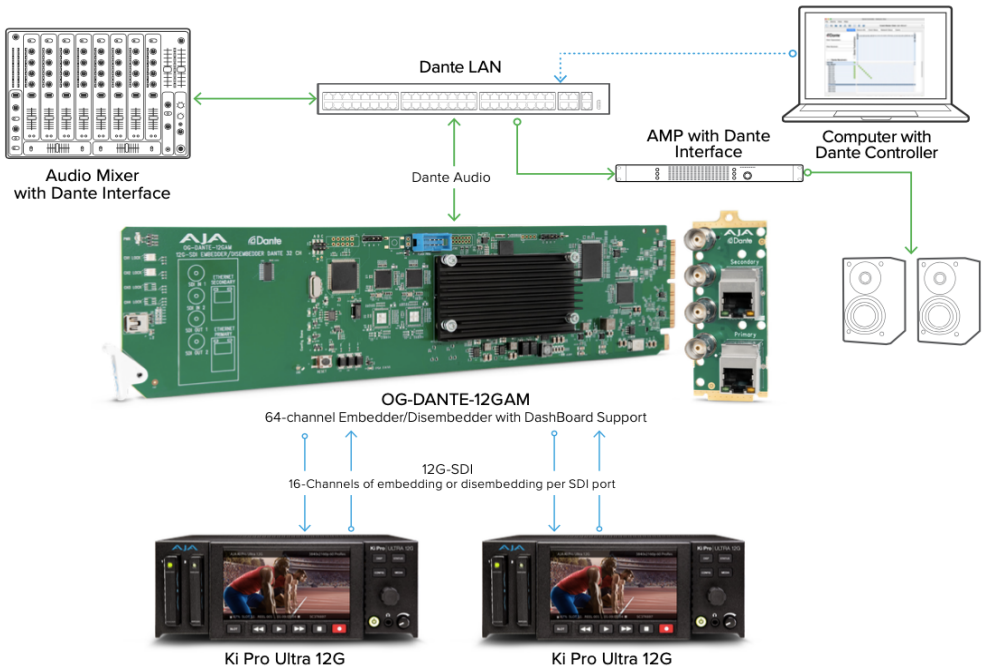
Application

Live Event UltraHD/HD 12G-SDI/Dante Workflow



Bridge Between SDI/Dante Sources and Destinations

OG-DANTE-12GAM bridges between SDI sources and destinations with embedded audio to/from the Dante audio ecosystem. The OG-DANTE-12GAM provides two 12G-SDI ports for input and two ports for outputs, providing single cable support of 4K/UltraHD/2K/HD/SD video material and up to 16-channels of embedded audio support per SDI connection. This enables simultaneous 64-channels of SDI/Dante bridging. Audio can be bridged, mapped, and embedded from Dante sources into each SDI stream or disembedded from SDI and served to Dante destinations using Dante Controller software.

Redundancy across the Primary and Secondary 1 GigE Ethernet Dante audio connections in OG-DANTE-12GAM provides security and peace of mind. The openGear format offers high density with up to 10 cards within each openGear frame. This offers up to 640-channels of audio bridging between SDI and Dante audio in a single rack frame, ideal for flypacks, OB vans, and facilities. The openGear OG-X-FR frame itself supports redundant power supplies, critical for live environments and constant up time.

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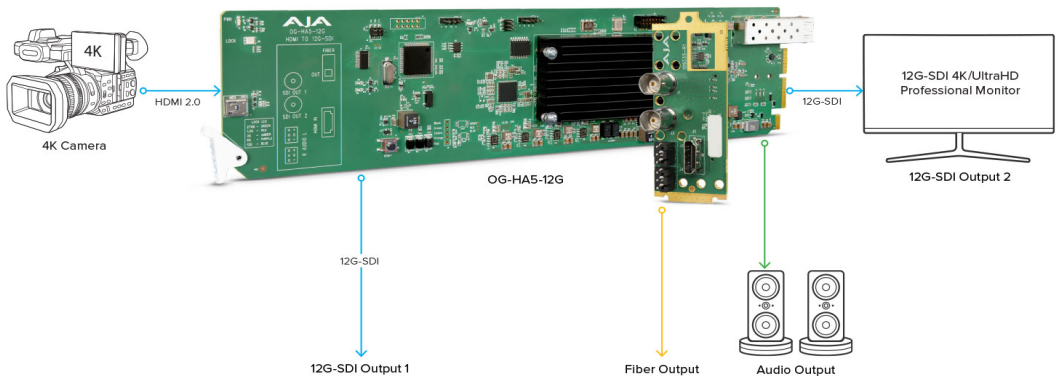
Application

SDI to HDMI or HDMI to SDI Conversion

openGear | OG-HA5-12G



UltraHD HDMI 2.0 Source with 2x 12G-SDI Destinations

AJA HDMI openGear converters offer support for raster sizes all the way from SD and HD to 4K/UltraHD, as well as connections for the 12G-SDI and HDMI 2.x standards.

Designed for use in high density openGear 2RU frames including AJA's OG-X-FR frame, new DashBoard Software support on Windows®, macOS®, and Linux® offers remote control and monitoring of the openGear architecture and provides convenient and industry-standard configuration, monitoring, and control options over a PC or local network.

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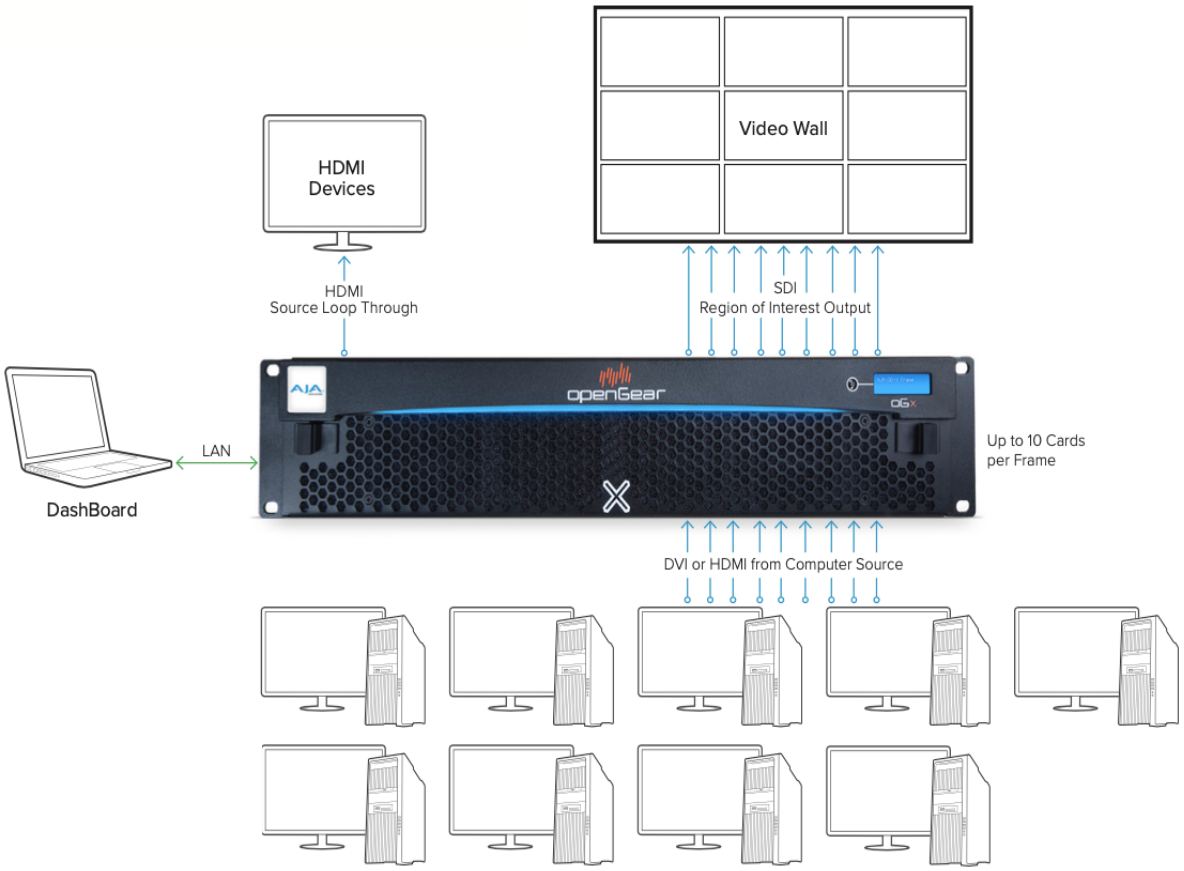
Application

OG-ROI Connectivity for Video Wall



AJA's openGear ROI family of scan converters allow exceptionally high quality conversion of computer and video signals in an easy-to-deploy openGear form factor. openGear ROI converters offer Region of Interest support, allowing computer signals and extraction of video source signals, including DVI, HDMI, and 3G-SDI to be scaled and converted to 3G-SDI and for some models, to HDMI video.

With incredible image scaling and rotation, extensive aspect ratio and frame rate conversion, openGear ROI converters fulfill the need to scale computer and video sources to a desired resolution, all in real-time, in a scalable and easy-to-use package.

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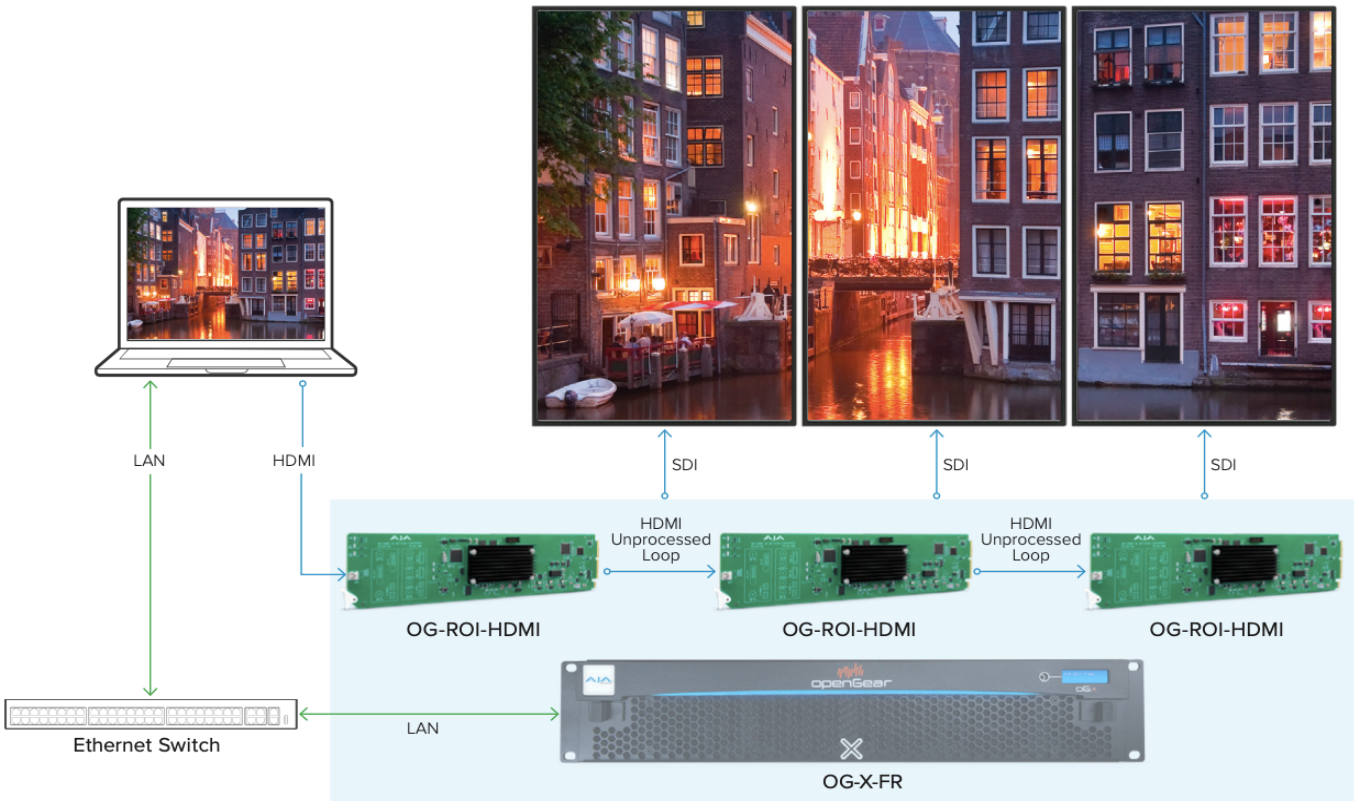
Application

OG-ROI Window Wall Workflow



Easily create highly effective and engaging displays by using OG-ROI-HDMI openGear converters. By utilizing three OG-ROI-HDMI openGear converters in the appropriate rackframe, you can feed three display monitors side by side, each rotated to portrait mode. By using the HDMI pass through of the OG-ROI-HDMI, the HDMI routed image is in sync, with each OG-ROI-HDMI providing the necessary region of interest output via SDI. Settings for each of the OG-ROI-HDMI openGear converters are provided via ethernet control and DashBoard via an ethernet switch. The result is a visually exciting and creative way to feed display content.

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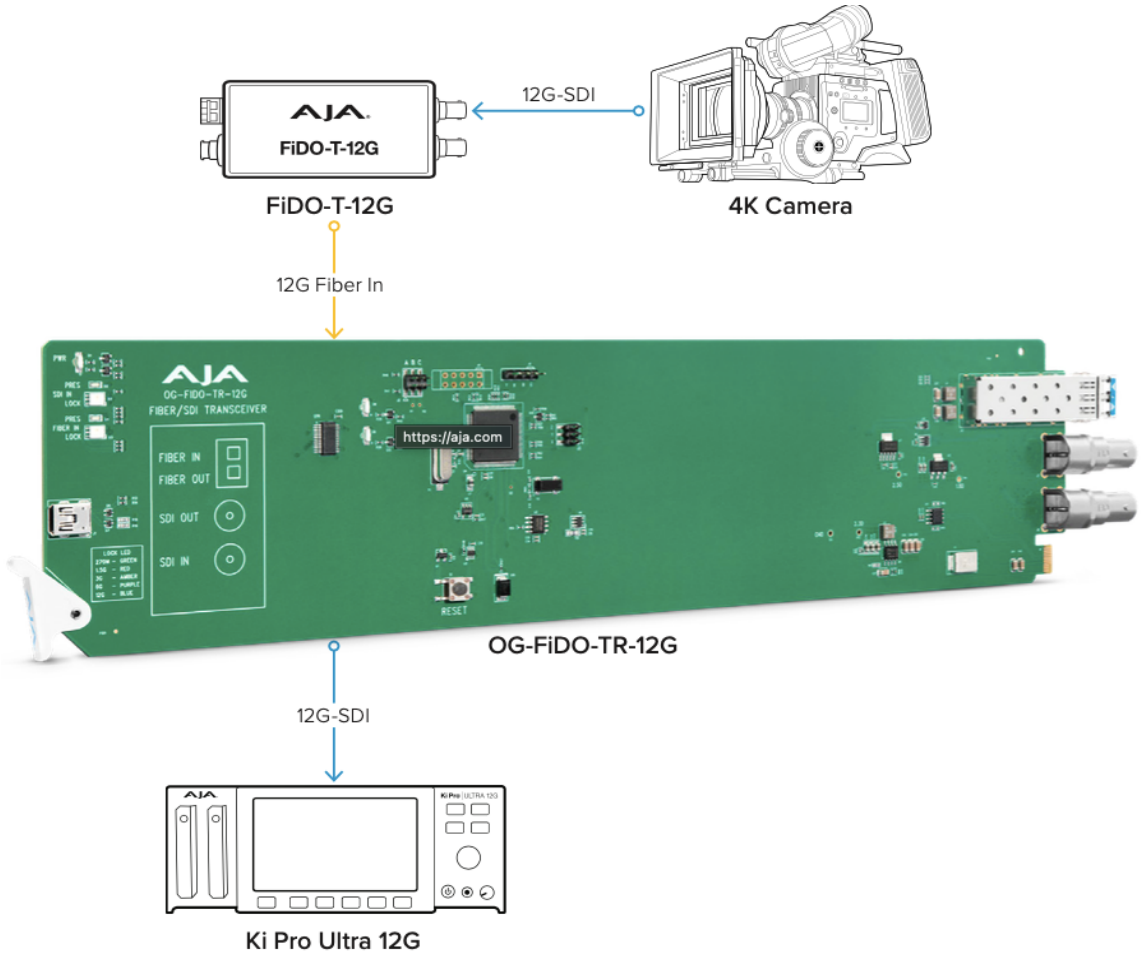
Application

12G-SDI to Fiber and Fiber to 12G-SDI



The OG-FiDO-TR-12G is a state of the art, openGear compatible 12G-SDI/Fiber transceiver. Both 12G-SDI to Fiber and Fiber to 12G-SDI conversions are supported. openGear cards offer unmatched flexibility and cost efficiency for 12G-SDI to/from Fiber conversion, allowing for long cable runs up to 10 km (32,808 ft) for single mode.

AJA openGear products are designed for use in high density openGear 2RU frames including AJA's OG-X-FR frame, with industry standard DashBoard software support on Windows®, macOS®, and Linux®, offering remote control and monitoring over a PC or local network.

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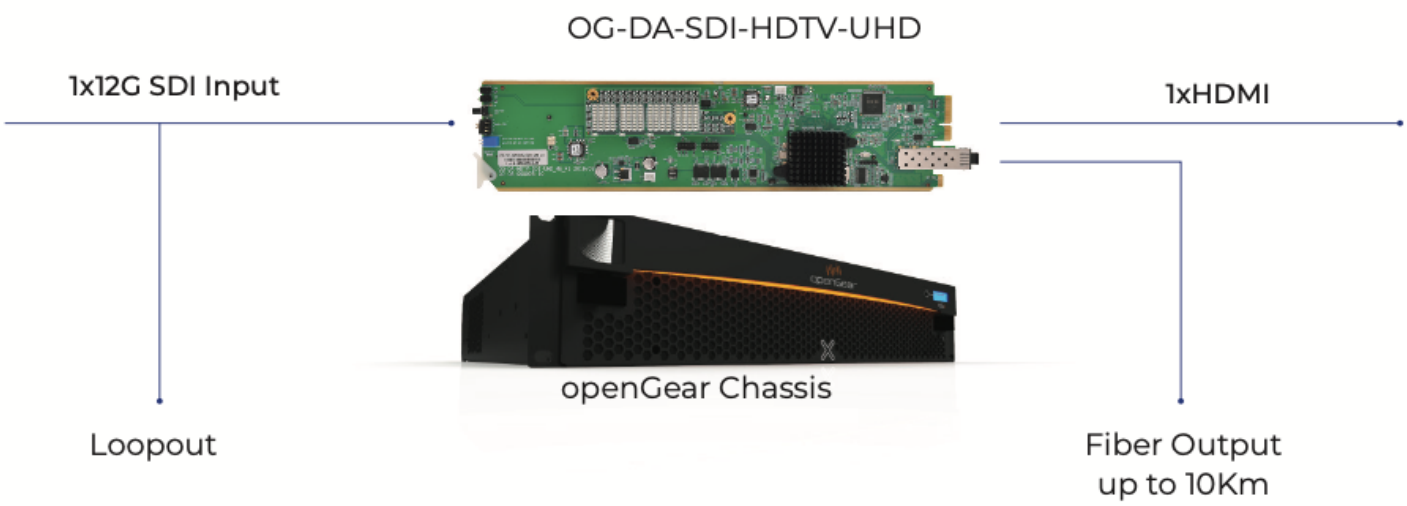
Application

12G SDI UHD to HDMI Conversion

12G SDI Source to UHD HDMI 2.0 Destination



SUPPORTED SIGNAL TYPE/FORMATS

12G-SDI	8 bit/10bit output (SW 1, on = 10bit), 709/2020 output follows input
3840x2160	CbCr 4:2:2 60p/59.94p/50p YCbCr 4:4:4 30P/29.97p, 25p, 24p/23.98p RGB 4:4:4 30p/29.97p, 25p, 24p/23.98p
4096x2160	YCbCr 4:2:2 60p/59.94p/50p YCbCr 4:4:4 30P/29.97p, 25p, 24p/23.98p RGB 4:4:4 30p/29.97p, 25p, 24p/23.98 p
6G-SDI	8 bit/10bit output (SW 1, on = 10bit), 709/2020 output follows input
3840-2160	YCbCr 4:2:2 60p/59.94p/50p
3G-SDI Level A	YCbCr 4:4:4 30P/29.97p, 25p, 24p/23.98p, 60i/59.94i/50i
1920x1080	RGB 4:4:4 30p/29.97 p, 25p, 24p/23.98p. 601/59.94i/50i YCbCr 4:4:4 30P/29.97p, 25p, 24p/23.98p, 60i/59.94i/50i RGB 4:4:4 30p/29.97 p, 25p, 24p/23.98p, 60i/59.94i/50i

2048×1080	YCbCr 4:2:2 60p/59.94p/50p YCbCr 4:4:4 30P/29.97p, 25p, 24p/23.98p RGB 4:4:4 30p/29.97 p, 25p, 24p/23.98p
1280x720	YCbCr 4:4:4 30p/29.97p
	RGB 4:4:4 30p/29.97p
3G-SDI Level B	8 bit/10bit output (SW 1, on = 10bit), 709/2020 output follows input
1920x1080	YCbCr 4:2:2 60p/59.94p/50p
1.5G-SDI	8 bit/10bit output (SW 1, on = 10bit), 709/2020 output follows input
1920X1080	YCBCR 4:2:2 30p/29.97p/25p/24p/23.98p/60i/59.94i
1280×720	YCbCr 4:2:2 60p/59.94p/50p

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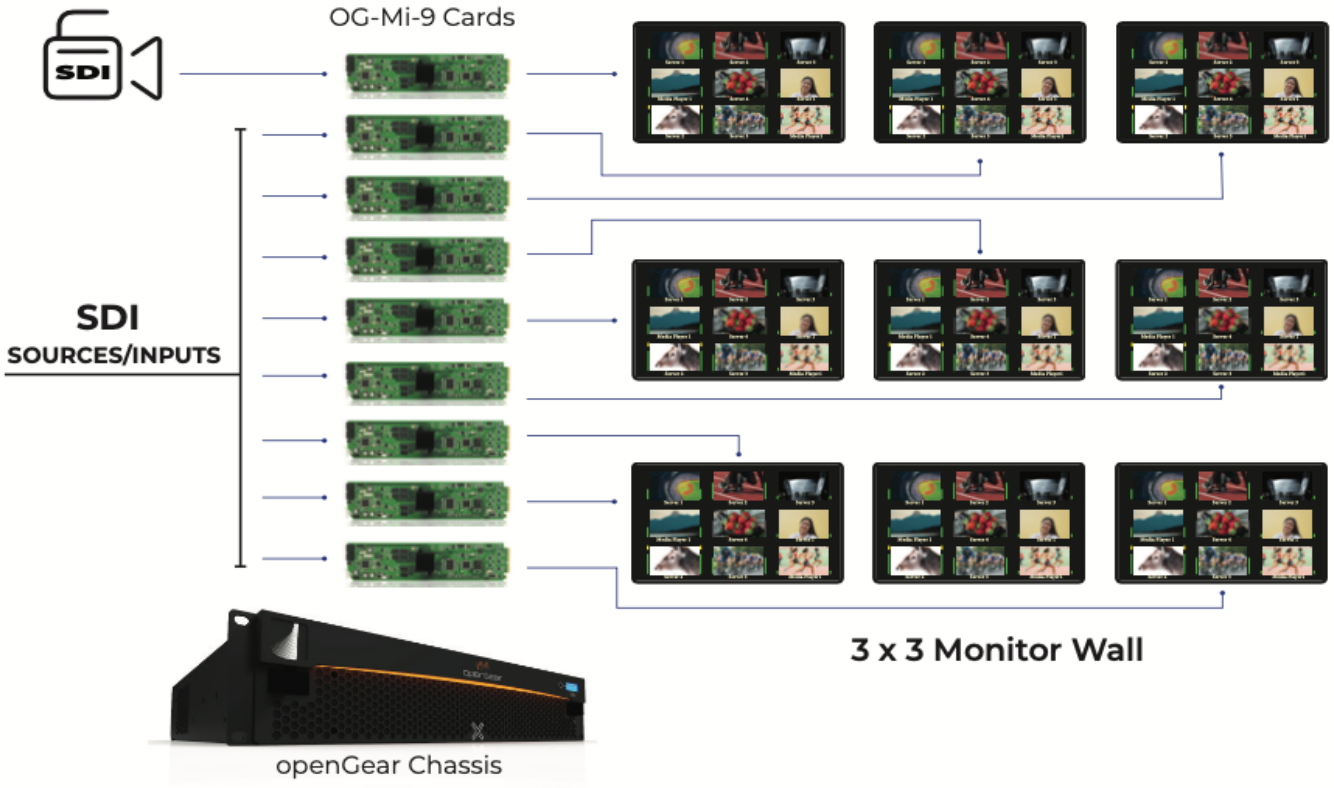
Application

OB VAN Live Sports Broadcast Application

9x1, 9x2 SDI Video Multiviewer with HDMI and SDI Output Feeding Multiple Displays



Features:

- Fit up to 10 boards in an openGear frame
- Low latency - single frame processing delay
- 9 auto-detect 3G (Level A/B)/HD/SD-SDI inputs
- Windows can be sized and moved freely
- Decode up to 16 embedded audio per SDI input
- Ethernet for configuration, dynamic labels & Tallies (TSI)
- Standalone labels, customizable logo
- 9 GPIs for tallies, count up/down trigger or preset recall
- Built-in analog/digital clocks can sync with LTC/NTP
- Border can be turned on or off
- Two sets of safe area makers
- Visual alarm tags for video/audio alarm
- HDMI and SDI outputs have embedded stereo audio pair
- 5 year limited warranty
- Low power consumption - 15W

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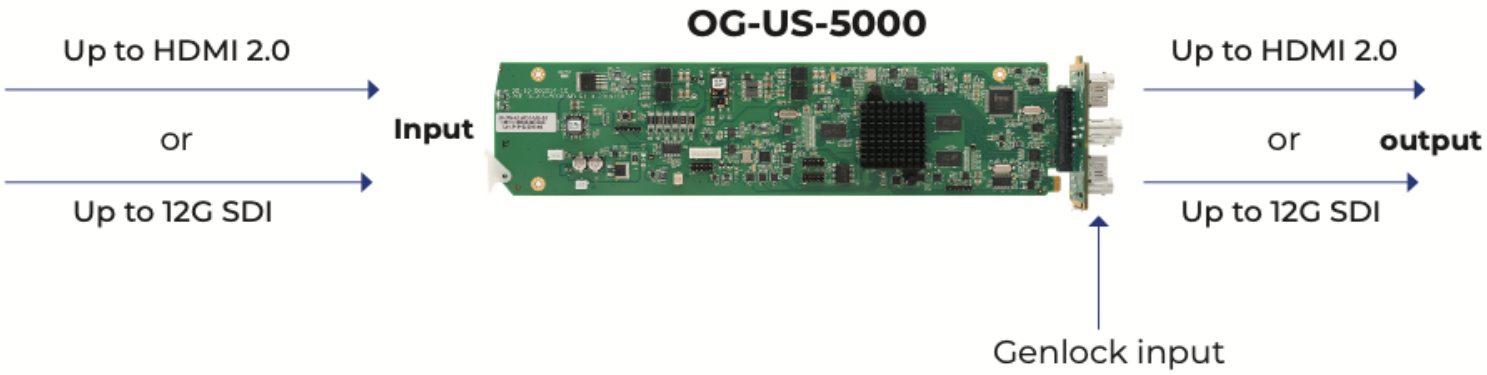
Application

UHD Bi-Directional Scan Converter



SUPPORTED SIGNAL TYPE/FORMATS

HDMI

4K 24Hz
4K 23.98Hz
2560x1080 60Hz
1080P 60Hz
1080P 59.94H7
1080P 50Hz
1080P 30H7
1080P 29.97Hz
1080P 25Hz
1080P 24Hz
1080P 23.98Hz

1920x1200 59.94Hz
1920x1200 50H7
1920x1200 49.93Hz
720P 60Hz
720P 59.94H7
720P 50Hz
640×480 60Hz
640×489 59.94Hz
480P 60Hz
480P 59.94Hz

12G-SDI

3840×2160p 60Hz
3840x2160p 59.94 H7
3840×2160p 50Hz
3840×2160p 30Hz

6G-SDI

3840×2160p 30Hz
3840×2160p 29.97Hz
3840×2160p 25Hz
3840×2160p 24Hz
3840x2160 23.98Hz

3G-SDI
Level A and Level B

1920×1080p 60Hz
1920x1080p 59.94Hz
1920×1080p 50Hz
1.5G SDI
1920x1080p 30Hz
1920x1080p 29.97Hz
1920x1080p 25Hz
1920x1080p 24Hz
1920×1080p 23.98Hz

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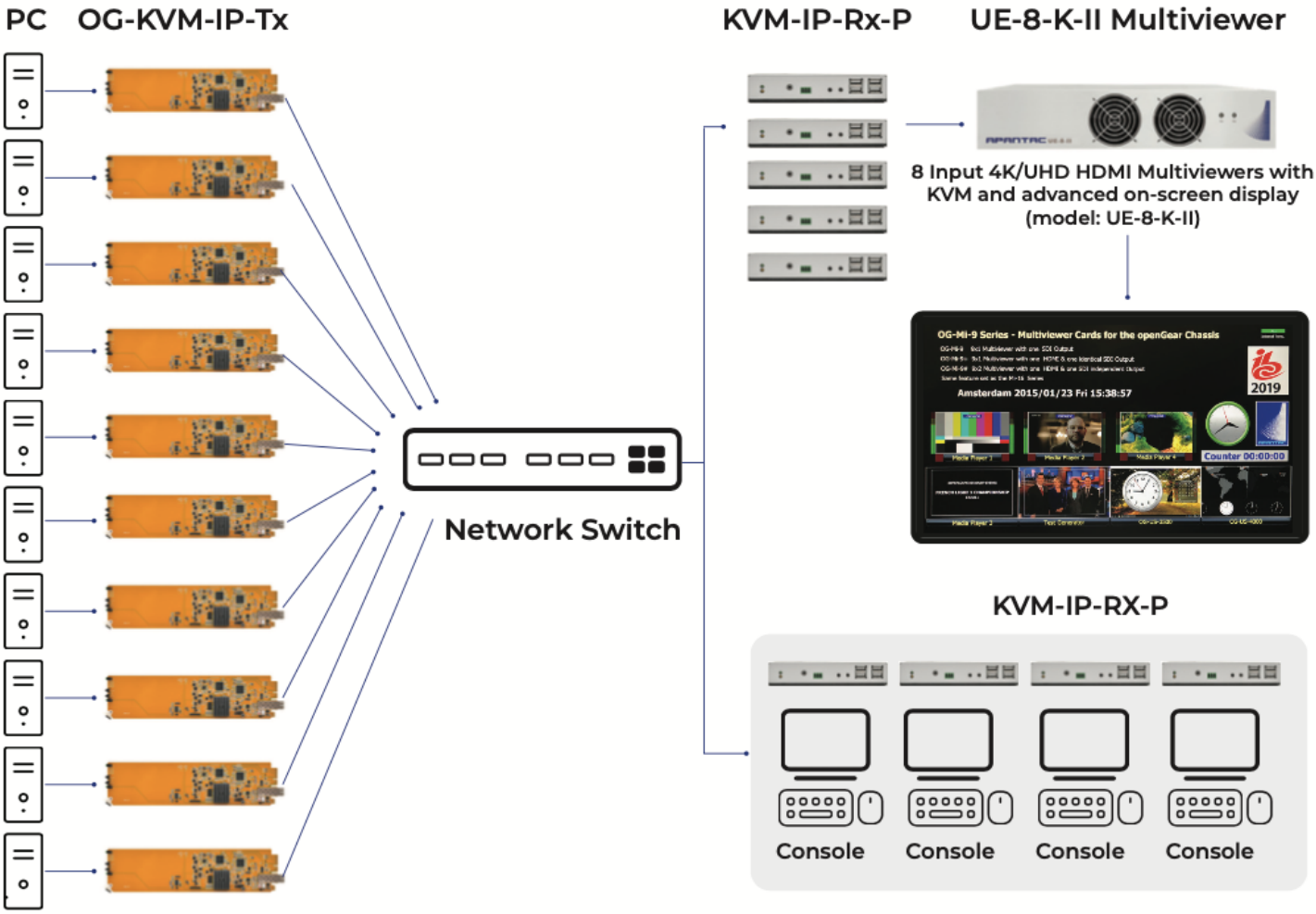
Application

IP Control & Monitoring

Extend and switch video signals, keyboard and mouse functions, as well as USB 2.0 and analog audio signals over IP



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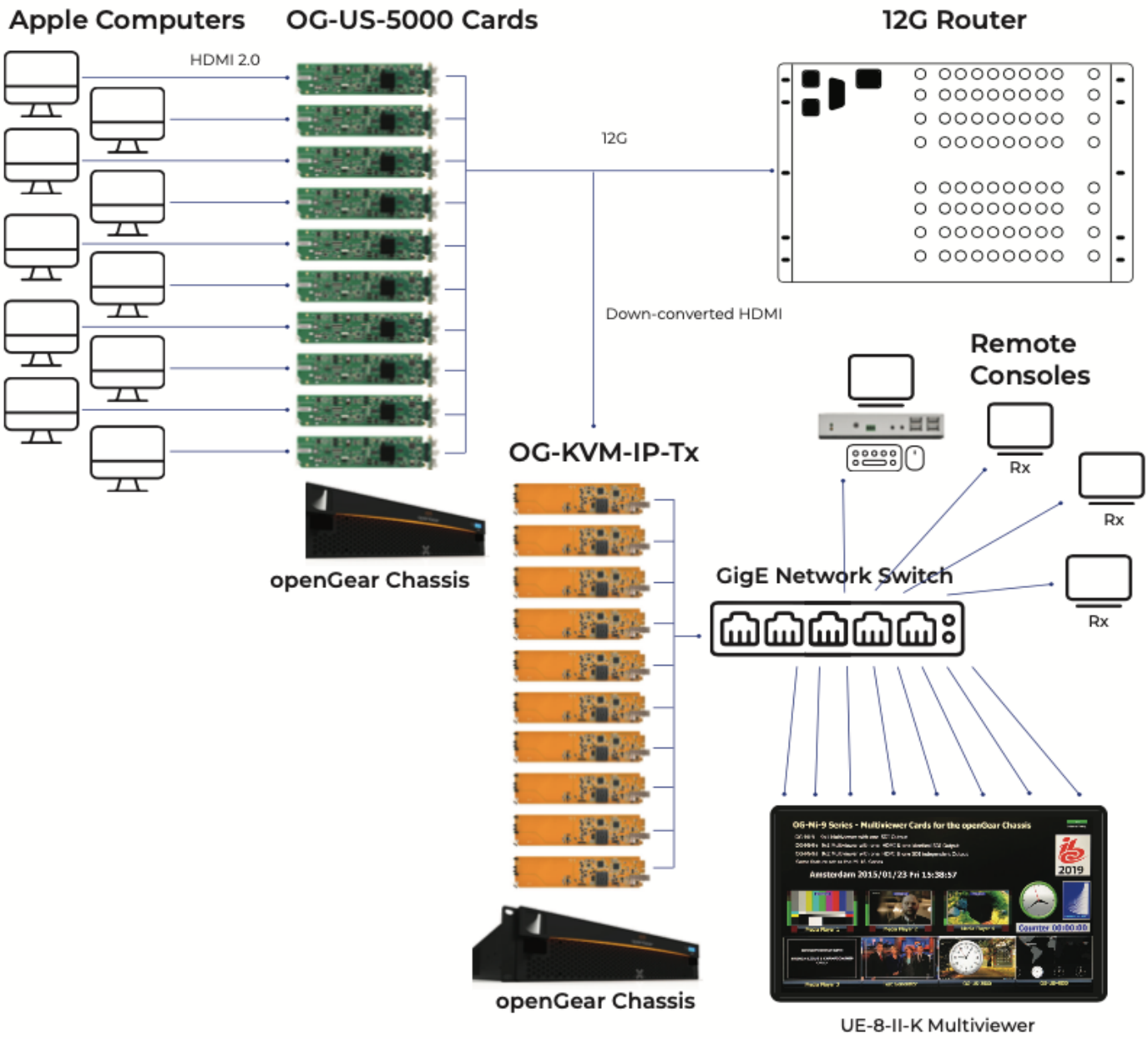
Application

Enterprise Event Center Application



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CONTACT
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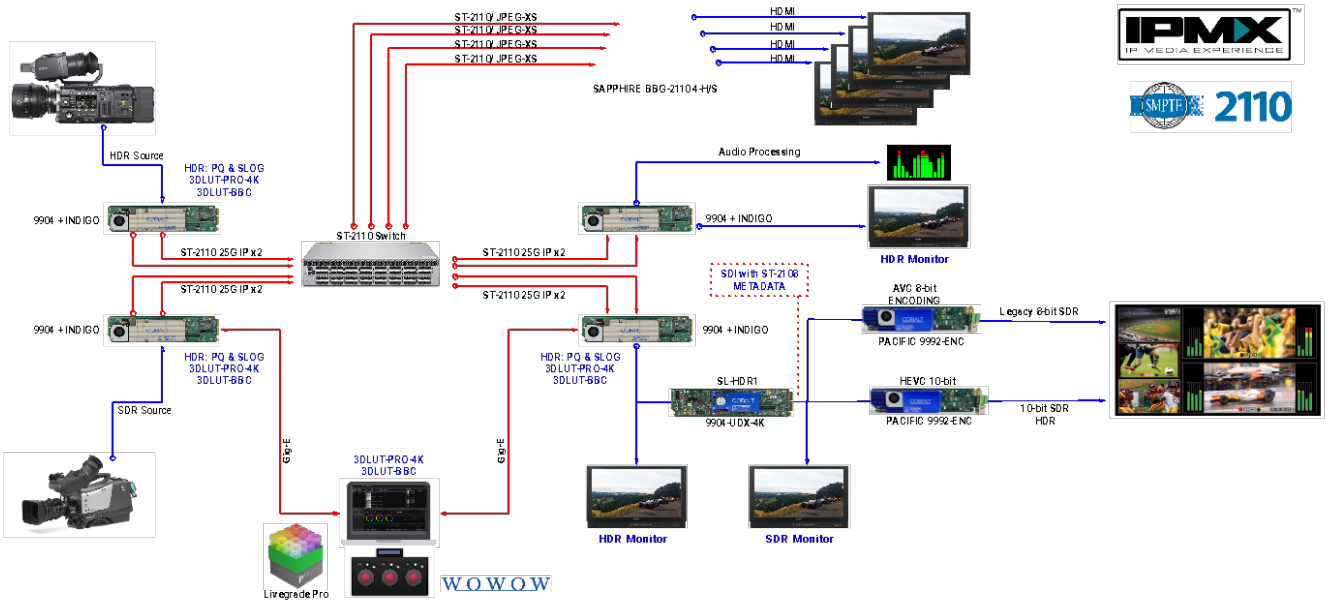
Application

Native HDR Processing in ST 2110



If you want to upgrade your perceived video quality, the best return on investment is High Dynamic Range (HDR) with the deeper color experience provided by Wide Color Gamut (WCG).

The best approach is to produce in HDR. However, there are always legacy SDR sources and content that needs to be integrated into this workflow. For basic static conversion Cobalt has real-time 3D-LUT support, and you can use pre-defined LUTs from NBCU and BBC, or your own. For a more advanced dynamic conversion, Cobalt's 9904-UDX integrated with AHDR technology can analyze the content scene-by-scene and optimize the conversion process.

Once you have produced your HDR content, you may need to create an SDR version to support legacy devices. Cobalt has multiple options for this, including 3D-LUTs for basic static conversion. And, at emission, the Cobalt PACIFIC 9992-ENC/DEC series of encoders and decoders have full support for the required HDR signaling.

Cobalt also offers all the HDR processing natively in ST 2110-enabled devices, which include the legacy SDI interfaces. This is offered as the INDIGO ST 2110 interface to the quad-channel 9905-MPx HD or the 9904-UDX 4K processors, the INDIGO ST 2110 interface to the PACIFIC 9992-ENC series, and the INDIGO ST 2110 bi-directional quad-channel gateway (OG-2110-BIDI4-GATEWAY).

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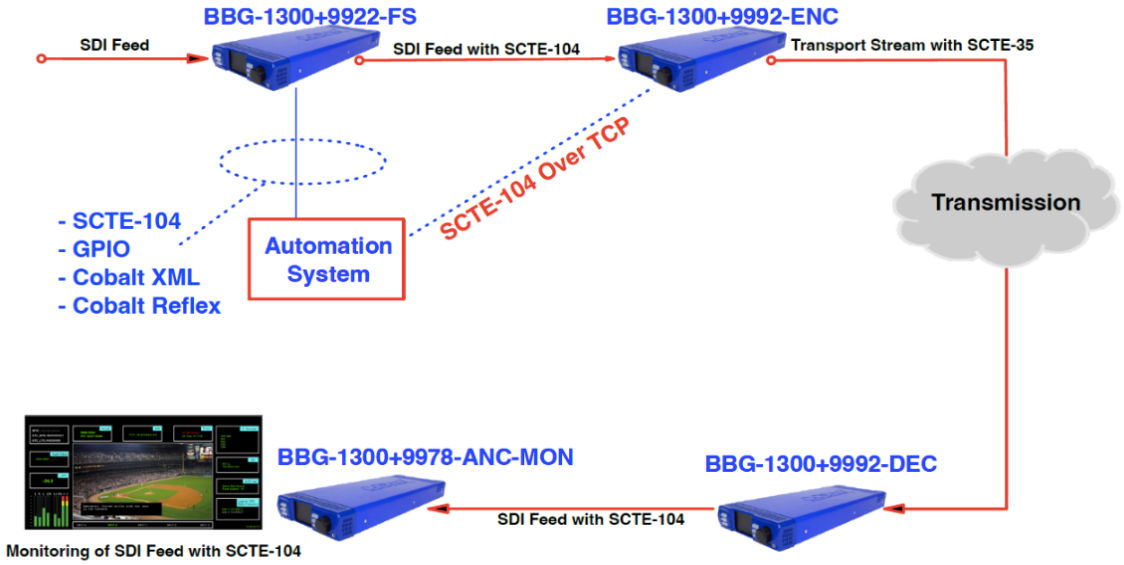
Application

Dynamic Network-Side Ad Insertion with Monitoring



Cobalt offers a complete programmer-side Ad Insertion solution, ready to connect to your traffic system. Our ancillary data inserters and frame syncs can be licensed to add SCTE-104 triggers to an SDI signal, in a frame-accurate manner. These devices can be interfaced with your traffic system using the following options:

- GPIO signals
- SCTE-104 signaling over TCP
- Easy-to-use Cobalt's own openly available XML-based protocol

This functionality is available for the 9902-UDX, 9922-FS, 9950-EMDE-ANC and 9904-UDX cards.

For compression applications, all Cobalt encoders support SCTE-104 to SCTE-35 conversion. The SCTE-104 signaling can be received directly on the SDI signal, or over TCP – thus avoiding the need for an inserter, if your workflow just requires SCTE-35. Additionally, the 9992-ENC encoder supports SCTE- 35 insertion on HLS manifests and is compatible with required YouTube markings. On the receive side, all Cobalt decoders can receive a transport stream with SCTE-35 markers and convert them back to SCTE-104 ancillary data packets on SDI.

If you need monitoring and logging of the triggers, the 9978-ANC-MON can be placed anywhere in the SDI path, and will provide a user-friendly screen output, as well as a downloadable log.

All the solution elements are available as standalone devices using the Cobalt BBG-1300- FR or as openGear cards.

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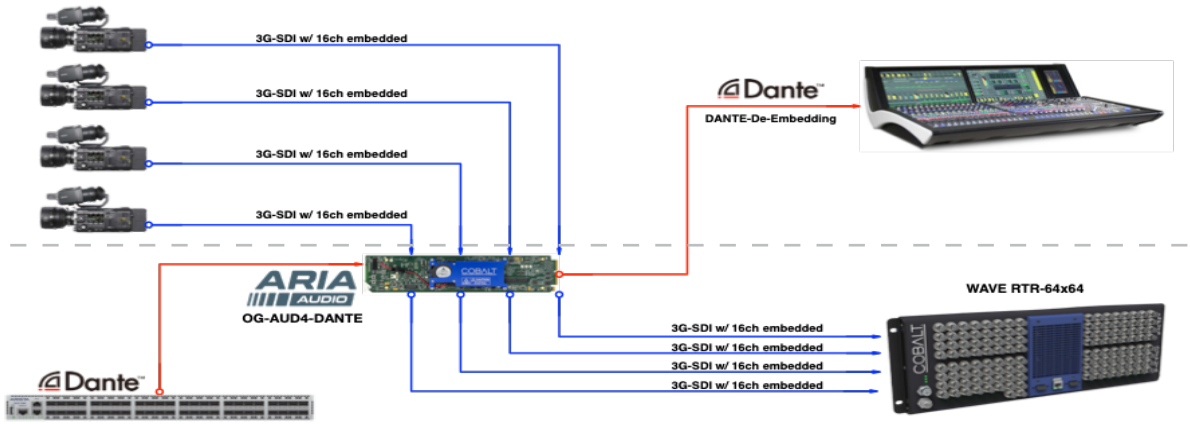
Application

High Density Audio Processing with DANTE



The new Cobalt ARIA OG-AUD4-DANTE card has four video paths supporting up to 12G SDI, as well as DANTE, AES, and MADI inputs and outputs. The card can simultaneously embed and de-embed audio between SDI, DANTE, AES, and MADI with flexible routing and mixing. It also includes a built-in frame sync.

The ARIA OG-AUD4-DANTE card features two gigabit Ethernet ports, and a 64×64 Dante channel matrix mixer. Ten cards can be combined into a single frame to support up to 2,000 audio channels, making it the most comprehensive audio embedding and/or de-embedding solution in the market.

The card inputs and outputs include SDI (supporting resolutions up to 4K/12G-SDI), MADI, AES, and DANTE, as follows:

- Four SDI inputs and four SDI outputs, with a full crosspoint between them, supporting signals up to 12G-SDI.
- Separate and independent MADI input and output, supporting 64 channels.
- Eight AES ports, software configurable as inputs or outputs in groups of four.
- Two Gigabit Ethernet ports for redundant DANTE input and output.
- 64 DANTE inputs and 64 DANTE outputs.
- Built-in four-channel framesync.

ARIA is also available in a dual-channel version for smaller applications, the ARIA OG-AUD2-DANTE card.

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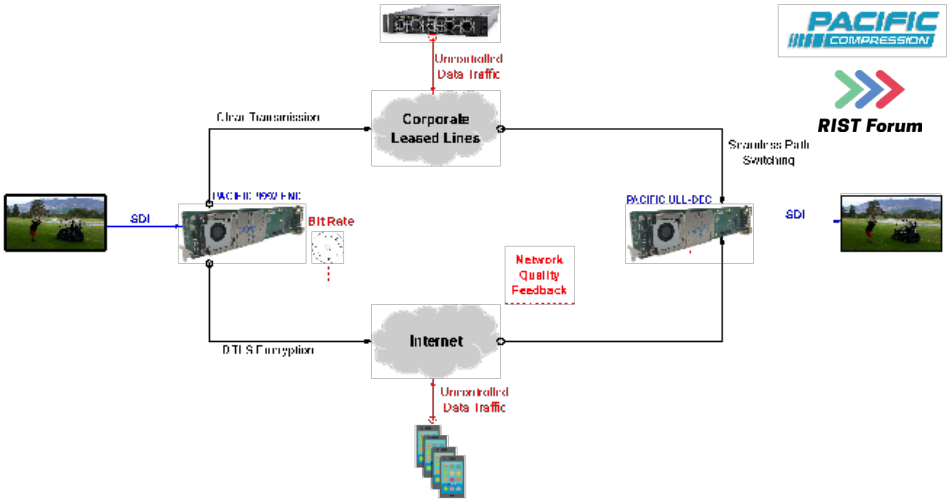
Application

Reliable Internet Stream Transport



With the Reliable Internet Stream Transport (RIST), you can use your current Internet service for low-latency, reliable, secure content contribution – without being tied up to a vendor-proprietary solution. RIST is an open specification from the Video Services Forum and is currently widely available in the industry. RIST support in the Cobalt encoders and decoders combines all the best features of RIST in a single package:

- Latency can be fine-tuned for the network conditions.
- Seamless path switching for increased reliability – no glitches if a path degrades or goes down.
- Top of line DTLS security, supporting AES 128 and AES 256 encryption, as well as certificate-based authentication.
- Support for VSF TR-06-4 Part 1 Source Adaptation: the encoder will dynamically and seamlessly change the bit rate in response to changed network conditions, for situations where there is variable network capacity. Additionally, the PACIFIC ULL-DEC decoder can generate a compliant IP output to drive legacy devices at the receiving site.

If you need extremely low latency, combine the PACIFIC 9992-ENC in Ultra-Low Latency (ULL) mode with the PACIFIC ULL-DEC for sub-frame end-to-end latency.

Additionally, Cobalt offers the SafeLink Gateway, which can add RIST support to legacy devices. The SafeLink gateway is available as an openGear card and (coming soon) as a software package or cloud instance.

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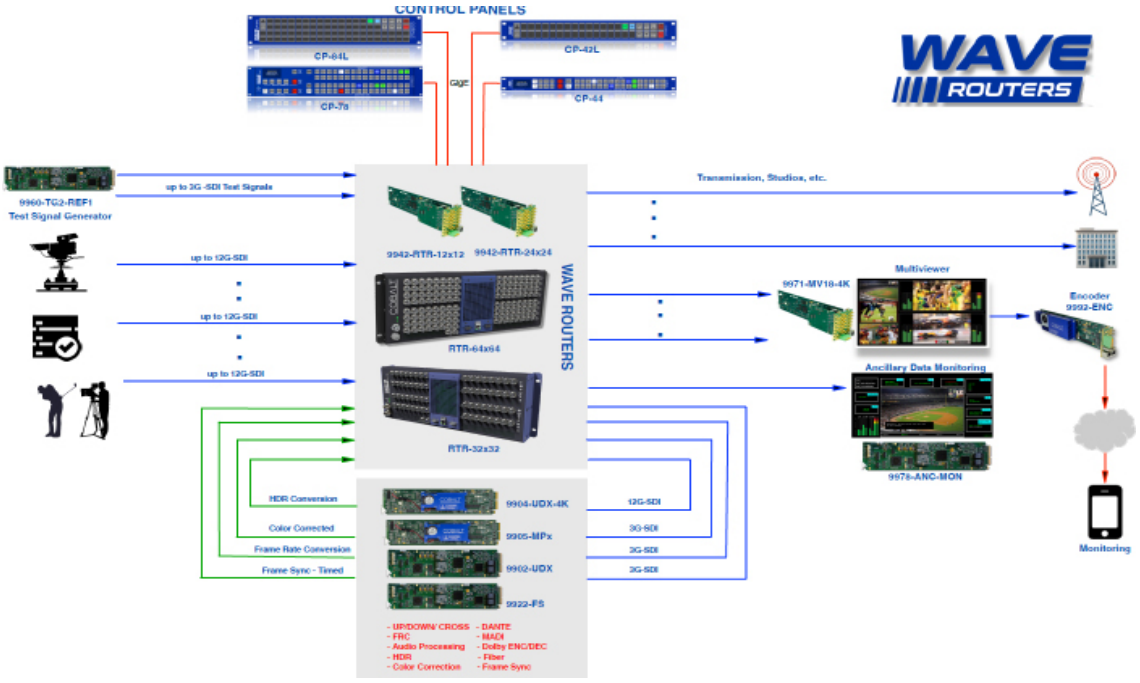
Application

Cobalt Local/Remote Routing/Head-End Management Solution



For most traditional head-end applications, the core is the SDI router, which is now often controlled through an IP network. Cobalt can plan your infrastructure properly so you can do a lot remotely. Cobalt offers the WAVE line of routers, that go from 12x12 and 24x24 openGear based routers, all the way to 32x32 and 64x64 standalone units, all seamlessly integrated. They all support a wide range of signals. Cobalt also offers the WAVE control panels, which can be controlled remotely or via the very intuitive web interface.

If you need the Cobalt general-purpose processing elements, such as framesyncs, up/down/cross converters, or ancillary data inserters, just connect their inputs and outputs to the router and now you can easily switch in and out of these resources.

You can see your sources remotely with one of the Cobalt multiviewers, such as the 9970 or 9971, and feed that to the PACIFIC 9992-ENC Cobalt encoder. These encoders support several protocols that allow you to see the video in real-time on any device.

To debug something you can run a line to the Cobalt 9960-TG2-REF1 test signal generator to have known test patterns available as sources and connect a Cobalt 9978-ANC-MON to monitor the outputs. Now, you can do all this from the comfort of your home!

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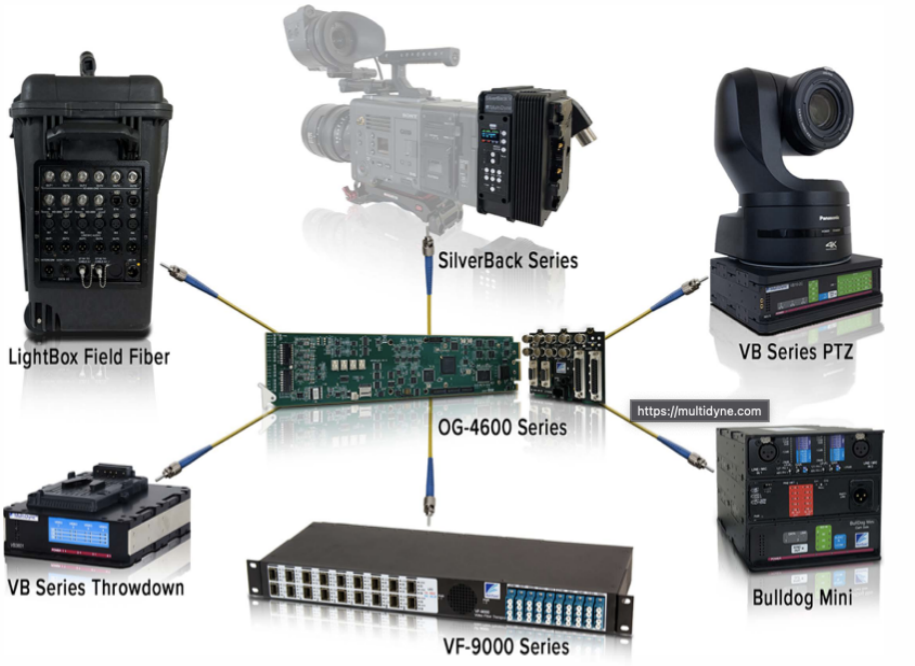
Application

OG-3600/4600 Series Multi-Platform Cross-Compatibility



MultiDyne's OG-3600 (3G-SDI) and OG-4600 (12G-SDI) Series cards have been engineered to work with a wide range of products within their portfolio. For rack-to-rack applications the cards can be used together to provide high-density bi-directional transport for a compre-hensive range of signals, but when the remote side of a link demands a specialty form-factor or enclosure the cards can easily be paired with the perfect MultiDyne unit for the job.

OB trucks, centralized control rooms and flypacks all benefit from the density and system resiliency the openGear frame system offers. The remote side of a link on the other hand may need to support a PTZ camera (VB Series), a cinema camera (SilverBack Series) or a ruggedized all in one remote production interface with intercom, mic preamps and multiple Ethernet paths (LightBox Series).

MultiDyne's OG-3600 and OG-4600 Series cards make the rack equipment side of the system a simple solution.

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MultiDyne®
Video & Fiber Optic Systems

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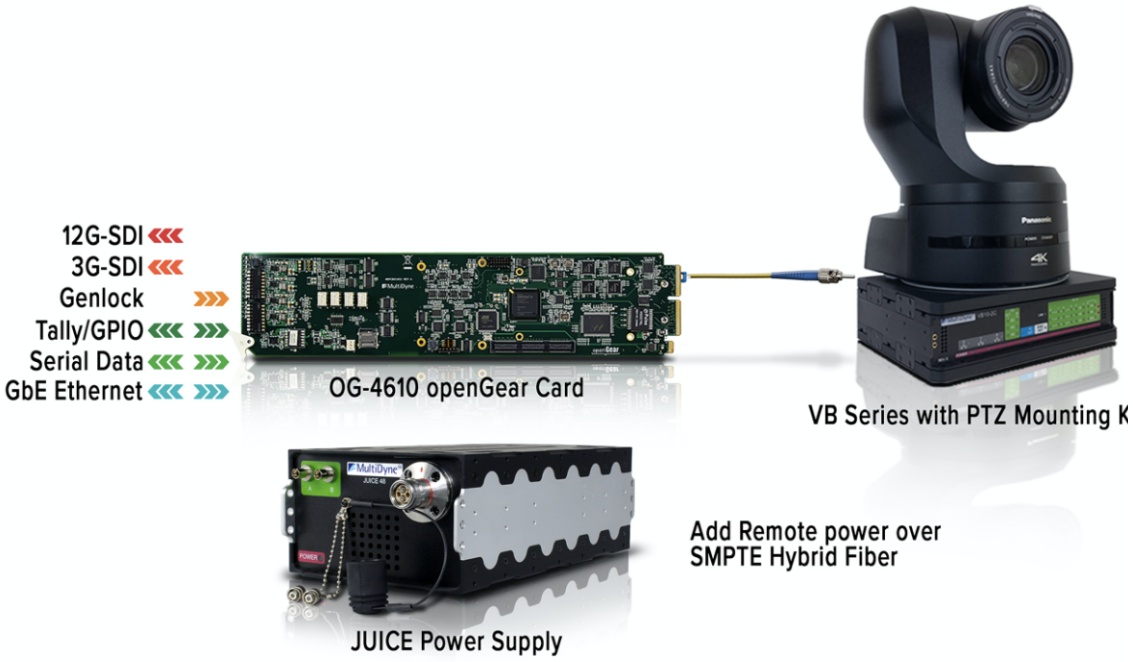
Application

OG-3600/4600 Remote PTZ/POV Camera Extension



Remote controlled PTZ and POV camera system are an increasingly popular choice for venues and live productions that have fewer camera operators or have long distances between operators and the action. These cameras have a wide range of signal types that need to be transported bi-directionally and with minimum to no latency. Fiber optic extension is the perfect solution for this demanding application and the OG-3600/4600 Series is ideal control room side of the system with the compatible VB platform handling the camera side.

Up to ten OG-3610/4610 cards can be housed in one 2RU OGX frame so extreme density is achievable for the machine room side of a campus wide remote control camera network. If remote power extension is required, the bi-directional fiber I/O of the 0G-3600/4600 can be converted to SMPTE hybrid power which can then supply power to the PTZ camera and VB fiber extension system.

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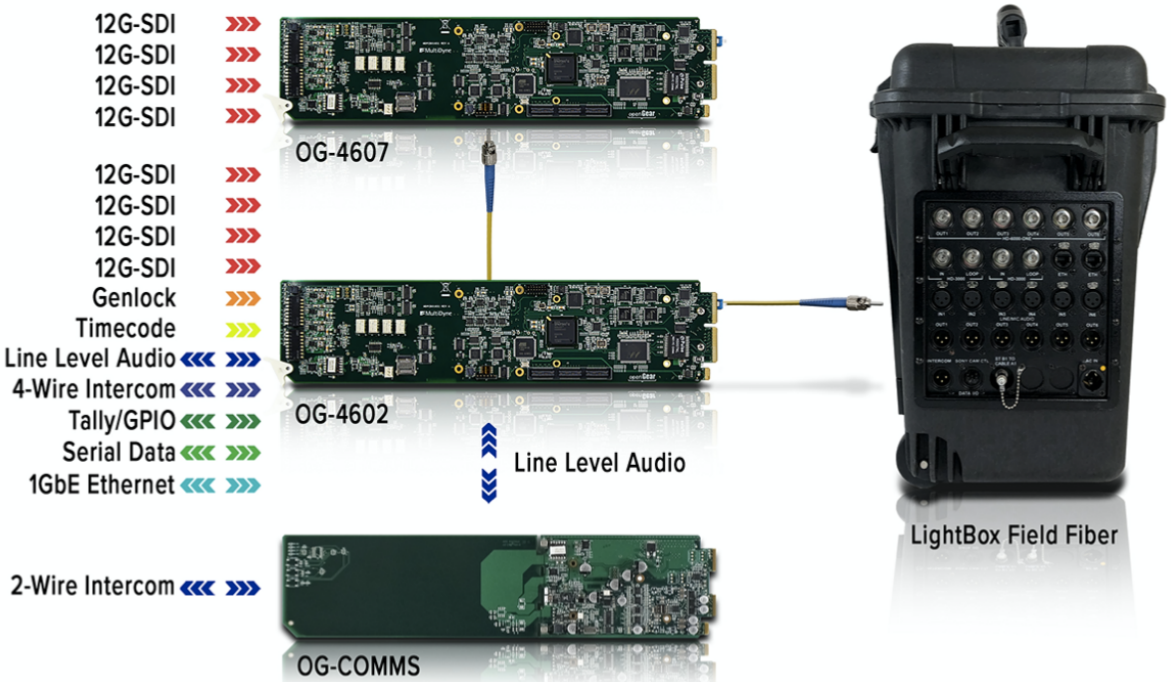
Application

OG-3600/4600 Remote Field Deployable Fiber Transport



OG-3600/4600 Series cards are available in a wide range of configurations with support for simple video transport or fully loaded with Ethernet, Analog and AES Audio, Timecode, Genlock, Serial Data, and GPIOs. The cards can be combined to increase the signal payload as needed and still operate all over one fiber. The OC-COMMS 2-Wire Intercom to 4-Wire Intercom converter card can be used in conjunction with the OG-3600/4600 cards to accommodate Party-Line Intercom and supply power to multiple Intercom belt packs.

All this signal support can be deployed in the field using the LightBox platform which is housed in a rugged package that can be powered over SMPTE Hybrid fiber, batteries, or local AC. The LightBox is customizable at order time so a user can define the amount of video, audio, and data channels and the OG-3600/4600 platform allows for the same flexibility in the control room, truck or flypack.

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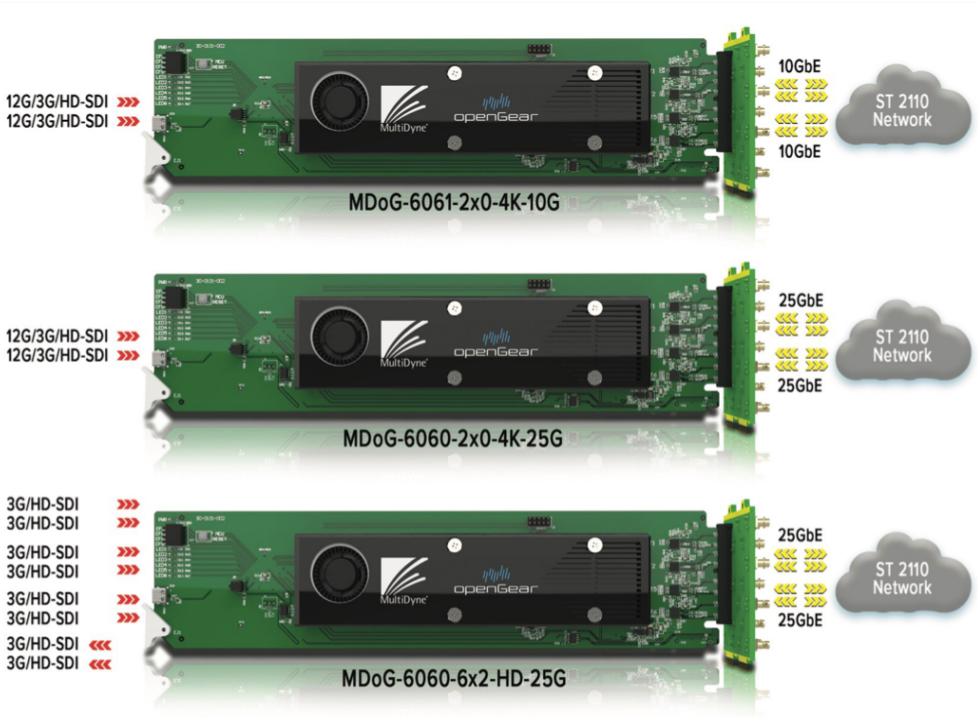
Application

MDoG-6060 ST 2110 Gateways & MDoG-6061 JPEG-XS Codecs



MultiDyne introduces the upcoming openGear JPEG-XS Codec and ST-2110 Gateway cards, known as the MDoG-6061s and MDoG-6060s respectively. The MDoG-6061 JPEG-XS encoders and decoders support low-latency compression or decompression of up to two channels of 12G-SDI via TR-08 and provide 2022-7 redundancy over dual 10G Network interfaces.

The MDoG-6060 Gateways are available in multiple I/O configurations including 3x3, 6x2 and 2x6 3G-SDI and 1x1, 2x0 and 0x2 12G-SDI versions. These cards also support 2022-7 redundancy and provide dual 25GbE Networks interfaces. With the ability to house up to five cards in an openGear frame, users can get up to thirty 3G/HD-SDI signals on or off a ST 2110 network or JPEX-XS compress or decompress up to ten 4K signals. These cards are scheduled for a mid-2024 release.

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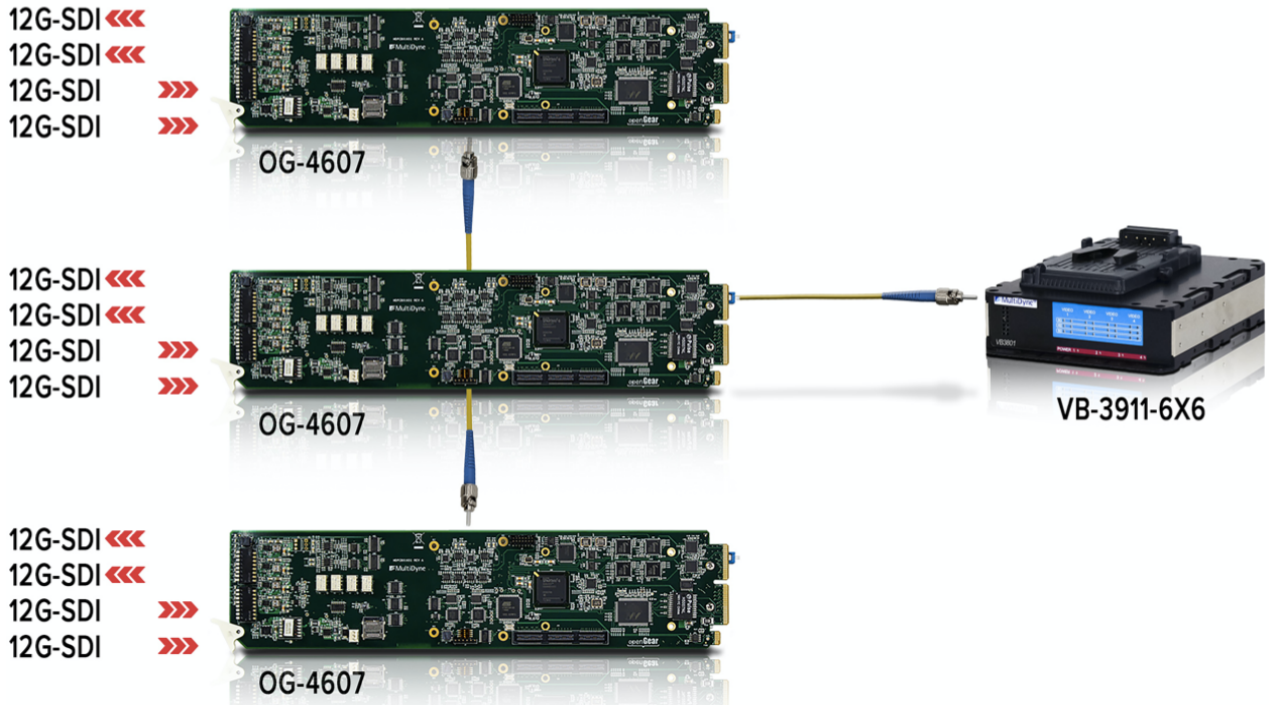
Application

OG-3600/4600 VB Series Utility Signal Transport



With the OG-3600/4600 Series' ability to be combined a system designer can provide the right signal types and quantities per the application. With card cascading the system can support up to 18x wave lengths which can be used for various signal types including up to 18x 12G-SDI signals on one fiber. Alternatively, 16x wave lengths can be used to support 16x 12G-SDI and the remaining 2x wave lengths can be used for a full 1GbE extension all over the same fiber.

The companion VB Series is a customizable stand-alone or rack mountable system that can be configured to match the OG-3600/4600 card arrangement for use in situations where a 2RU rackmount frame is not an option. Just like openGear, the VB Series is available with optional redundant power supplies so a high-profile application can have the same resiliency as if both sides were openGear-based.

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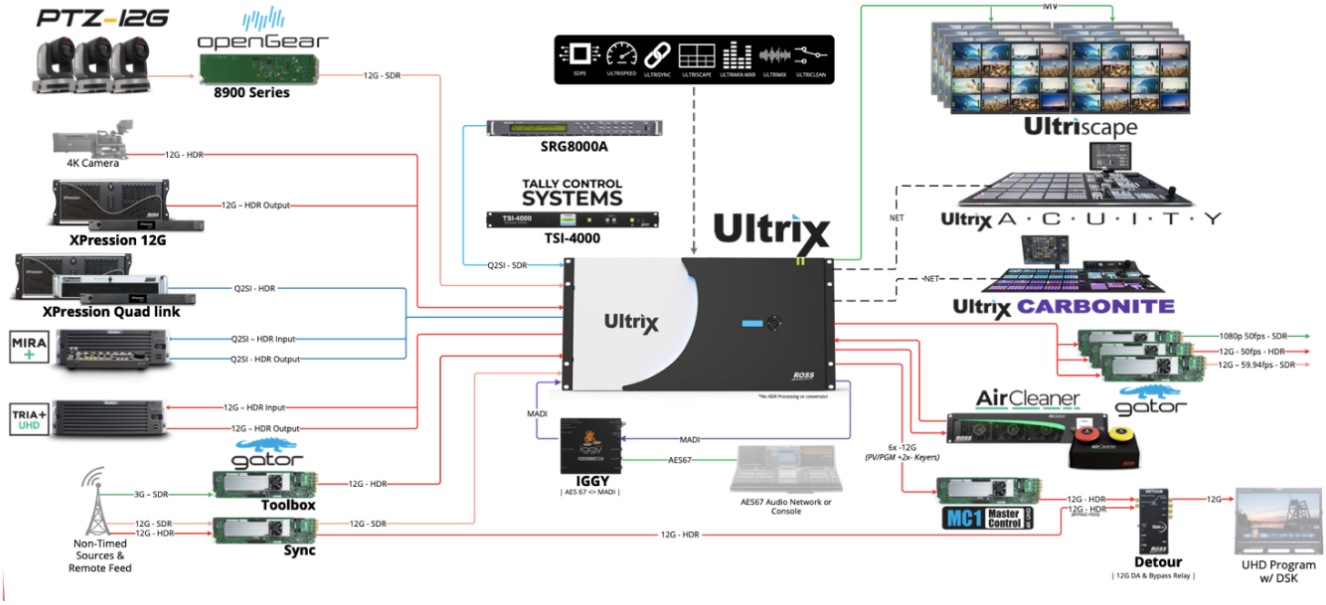
Application

12G-SDI, HDR, WCG and 4K UHD



4K UHD is rapidly becoming an in-demand production format. As the world's television manufacturers switch-over production from HD displays to 4K UHD ones with support for high dynamic range (HDR) and wide color gamut (WCG), live web streaming and broadcasting facilities are racing to leverage the advantages of the new format. Ross has a complete end-to-end 4K UHD portfolio that produces impressive results for these high-resolution displays.

The next generation of serial digital interconnect (SDI) 12G extends SDI into 4K UHD applications with the plug-and-play ease of use and reliability that people across the industry know and love from SDI. Ross has been a pioneer in 12G SDI, which has now been broadly adopted with a large ecosystem of products and vendors supporting the standard.

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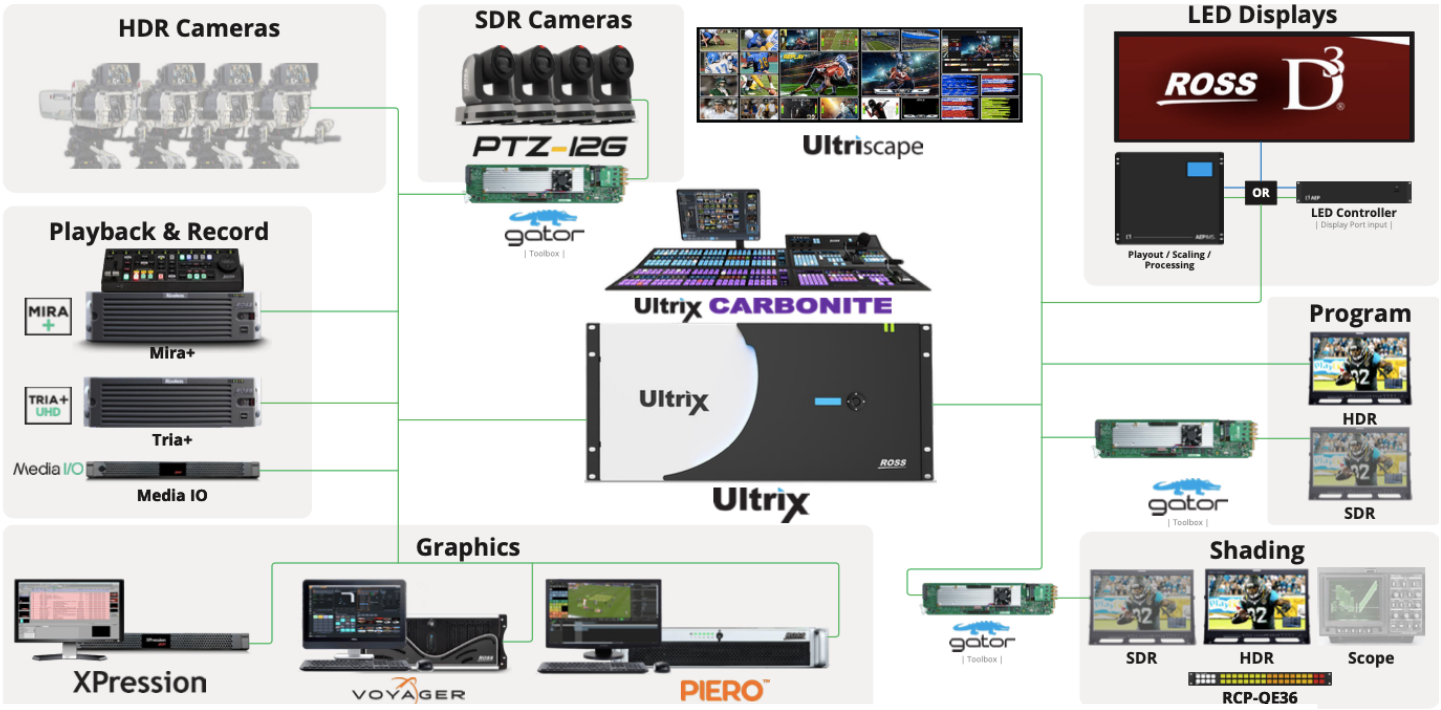
Application

High Dynamic Range (HDR)



High Dynamic Range (HDR) and the companion technology Wide Color Gamut (WCG) combine to provide better images. HDR offers greater dynamic range, giving brighter highlights and deeper, clearer shadows. WCG expands the palette of available colors to reproduce the world we see more faithfully. This is achieved without significant changes to existing signal standards and does not require a complete overhaul of infrastructure.

Since television's inception, standards have produced better pictures, a transition to digital, and allowed for bigger images with the introduction of high-definition (HD) and ultra-high-definition (UHD). However, the restrictions on individual pixels remained until HDR introduced techniques and technology to make better pixels which produce superior images through brighter highlights, detailed shadows and a broader palette of colors significantly improving the viewer experience .

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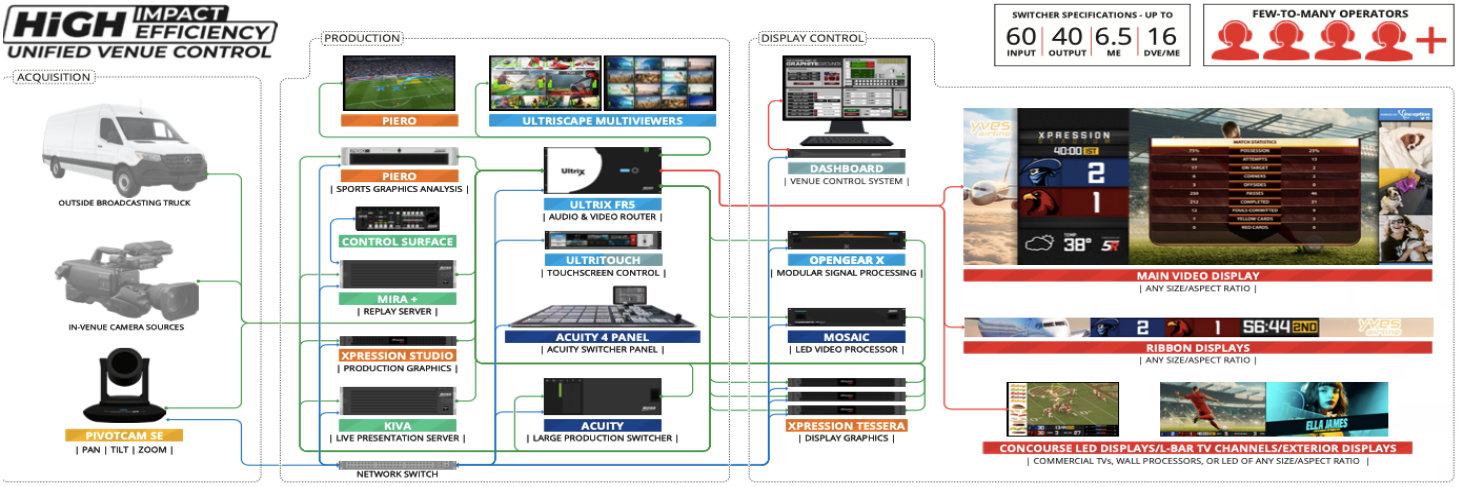
Application

Sports Venue



Today's fans and sponsors expect more. The challenge is both art and science. Ross has deep venue experience that can get you where you want to go, providing the specialized technology as well as working with you on the creative content – the solution to engaging your fans and delighting your sponsors.

Ross provides an end-to-end turnkey solution that combines the traditional production control room with LED display control, allowing for unmatched creative flexibility and scalability. When you include our DashBoard Venue Control System to trigger all Ross products and limitless 3rd party products such as LED lighting, audio players, and mechanical devices, you have the most powerful production system on the planet!

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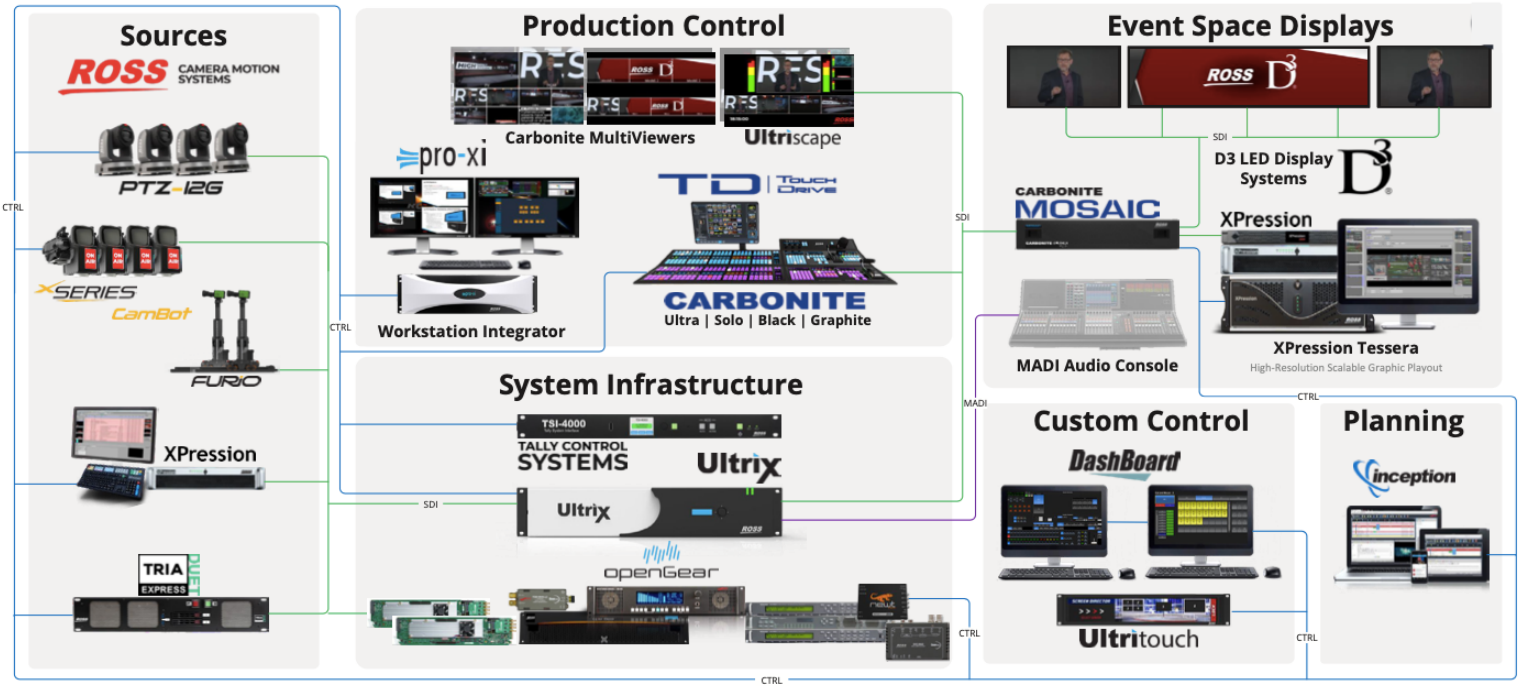
Application

Corporate Event Space



Modern corporations leverage video to connect with new and existing customers, employees, partners, and shareholders. Ross can help you take advantage of this opportunity with tailored solutions that fit a wide range of budgets.

Remove the stress from hosting live events with broadcast quality and reliable technology. The tailored easy to use solutions make your staff more efficient and support a wide variety of web, social platforms, screen sizes and more.

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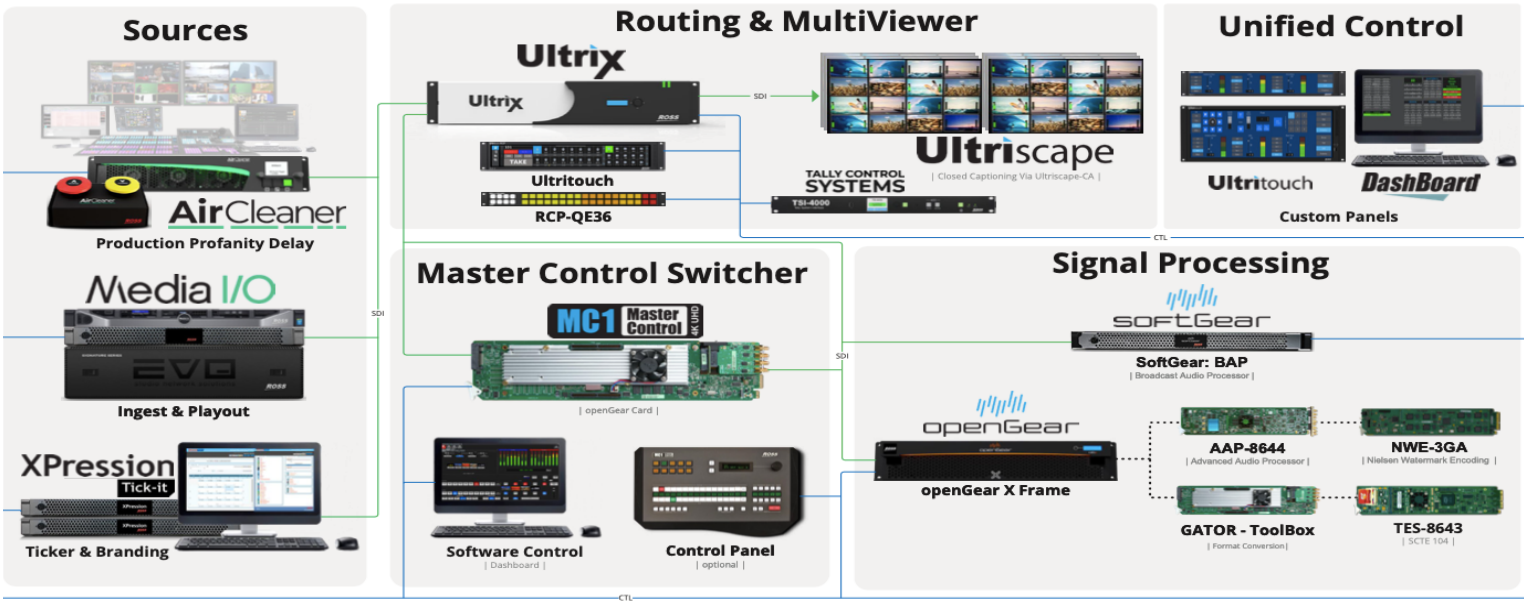
Application

Master Control



MC1 is a cost-effective, modular Master Control Switcher and Branding solution. Supporting workflows from SD to UHD 4K, the MC1 system scales from stand-alone branding to multi- channel master control installations adapting easily to manual or automated control.

As part of an integrated solution, MC1 delivers the complete functionality of a Master Control system, offering multiviewers, frame synchronizers and advanced audio connectivity that easily fits into your broadcast or playout workflow.

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CONTACT
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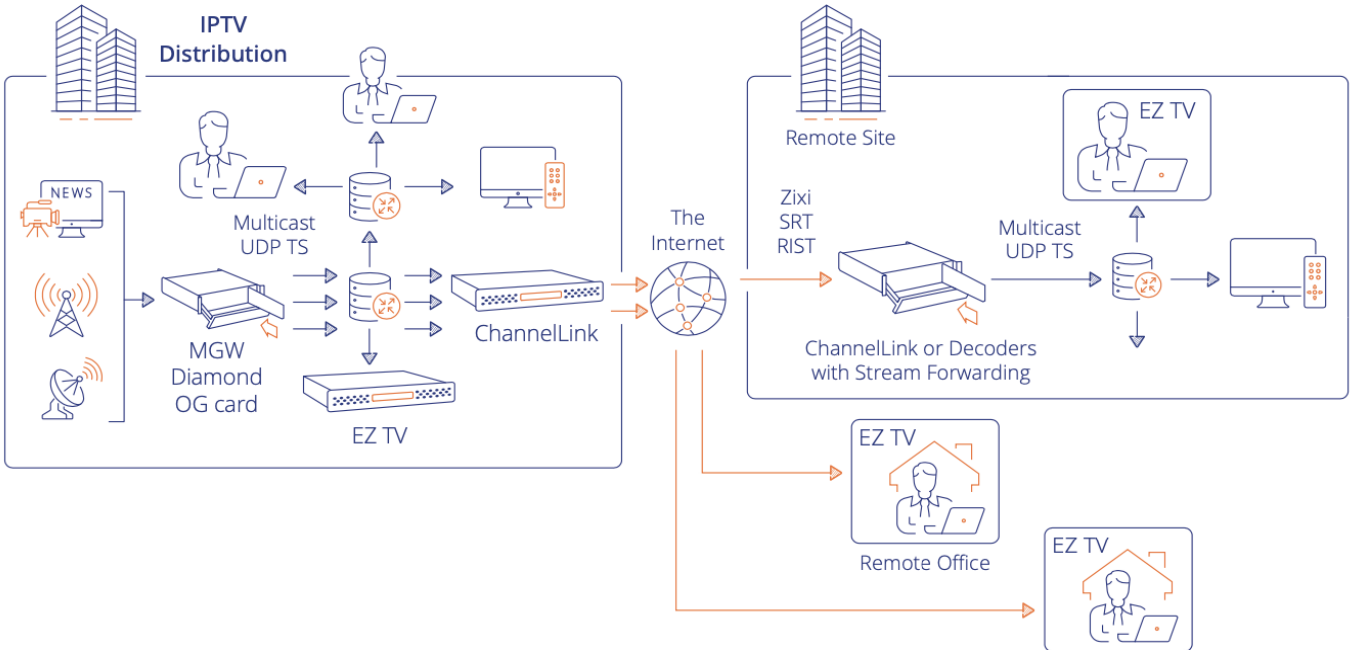
Application

High Quality, Low Latency IPTV Video Distribution



VITEC offers IP encoding and decoding openGear (OG) cards to address dense IPTV applications such as remote production, contribution, distribution, full-motion video, and more. Content can be captured in the field and confidently streamed over IP across any remote production network including the internet.

Leveraging the flexibility of the openGear platform, VITEC OG cards allow for the highest IP-channel density in a 2RU configuration. Examples include:

- x10 UHD HEVC encoder for 4K contribution (x10 MGW Diamond OG)
- x10 UHD HEVC decoder for multichannel / dense decoding applications such as contribution or direct-to-web applications (x10 MGW Ace Decoder OG)
- x40 HD HEVC/H.264 encoding channels for IPTV distribution (x10 MGW Diamond OG)
- x8 HD encoding/decoding channels for full-duplex applications (x2 MGW Diamond OG and x8 MGW Ace Decoder OG)

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VITEC
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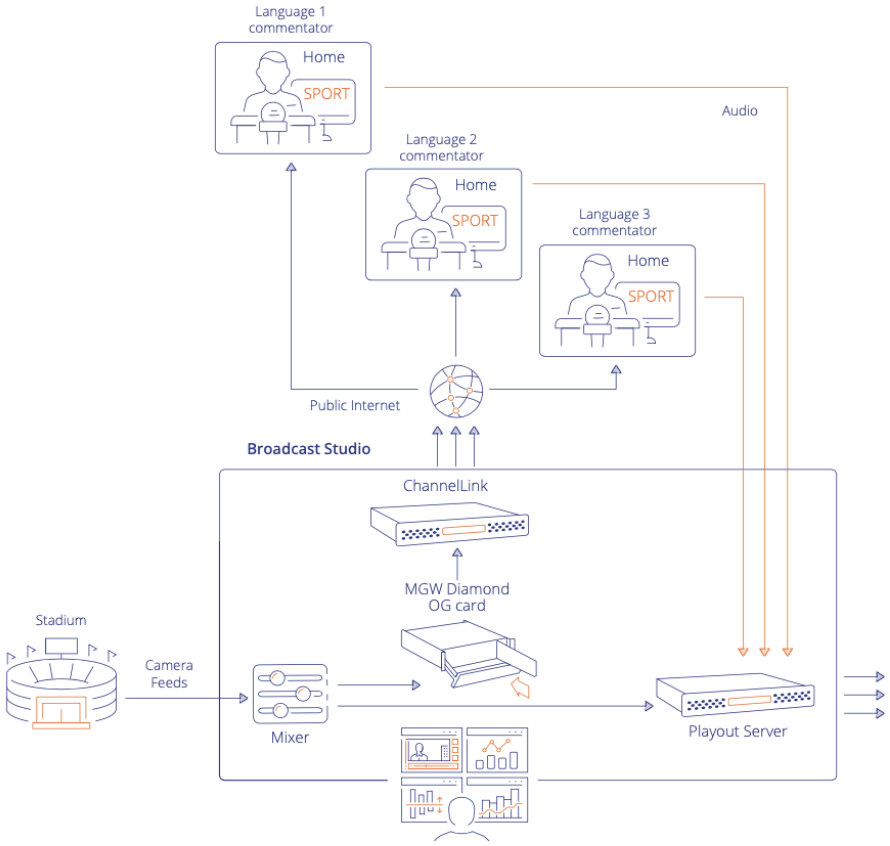
Application

Remote Commentary



Insert live commentary for events (from home/away):

- 300ms glass-to-glass latency to a software decoder
- Network link: the internet
- Software decoder

Solution:

- Feed encoded using low latency profile
- Distribution with ChannelLink
- Transport over SRT to commentator software players
- Live latency monitoring
- Audio sent back to the broadcast station
- Distribution to different content providers

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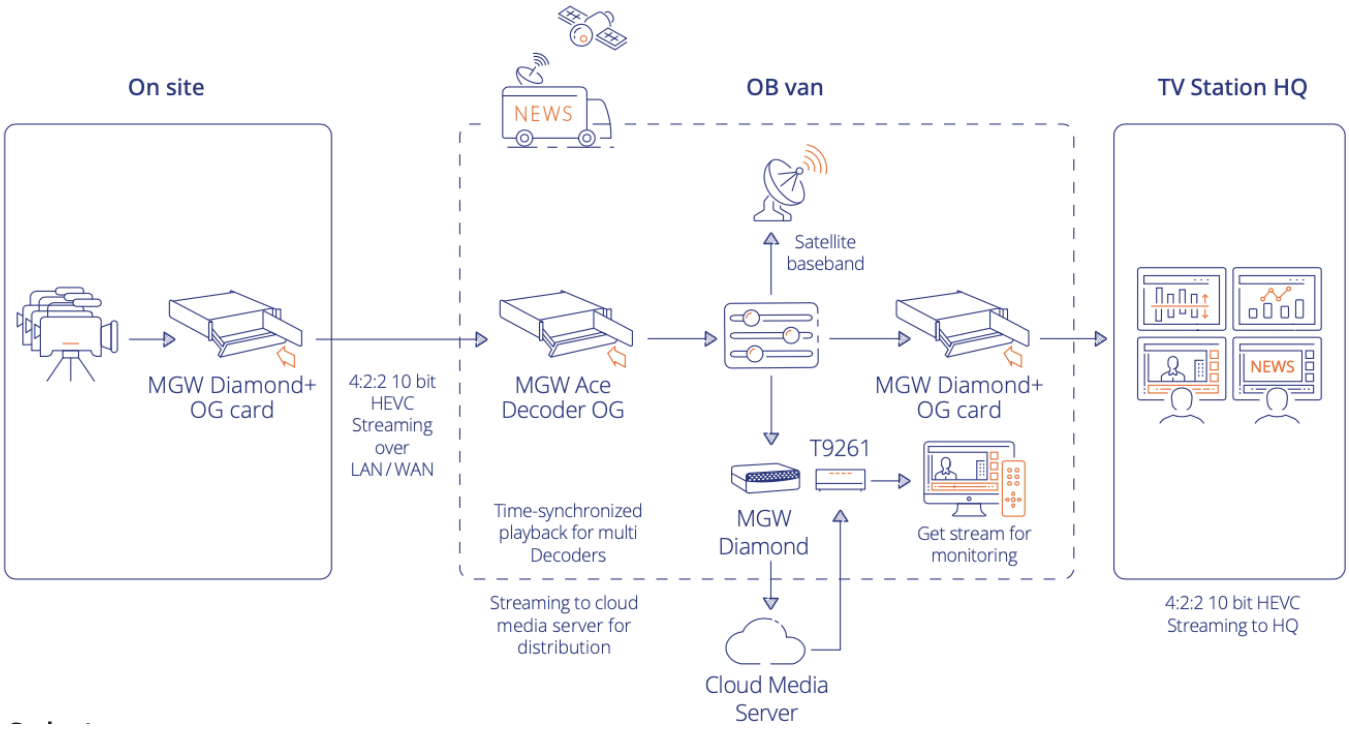
Application

Remote Production



Solution:

- Remote cameras signals encoded and streamed through WAN (or LAN, when available) to the OB van
- Camera signals are decoded and ingested into OB van vision mixer
- Contribution: Live signal streamed to HQ via Diamond+ OG Encoders using public internet and SRT with ultra-low latency
- Live latency monitoring
- Primary distribution: Live signage encoded in 4K via Encoders for internet and social media distribution
- Monitoring: Viewers' reception is monitored in OB van using VITEC T9261 (T21) decoder.

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Contact us for a free 15-minute review of your next project or upgrade.

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