2025

PRODUCT BRIEF

COBALT

ENGINEERING BEYOND THE SIGNAL

COBALTDIGITAL.COM

BEYOND THE SIGNAL

ENGINEERING BEYOND THE SIGNAL STARTS WITH INNOVATION.

Cobalt Digital has proudly provided engineering solutions to meet customers' needs since 1997. By speaking and listening closely to end users, Cobalt has developed equipment offering the answer for many challenges. Our innovative products feature 24/7 service and support and many come with a five-year warranty, vital in today's broadcast industry. Our products are used extensively worldwide in production trucks, and by terrestrial, satellite and cable broadcasters, as well as many government facilities. As we navigate through our 28th year of innovation and service, we reflect on how far the industry has come, and look forward to engineering products for tomorrow's broadcast and beyond.

COBALT®

SAPPHIRE CONVERTERS

NEW — FOR — 2025

ST 2110/IPMX AND HDMI/ SDI FORMAT CONVERSION

SAPPHIRE BBG-2110-4Ho/4Sio QUAD-CHANNEL RECEIVER

The SAPPHIRE BBG-2110-4Ho/4Sio is a Quad-Channel ST 2110/IPMX to HDMI/ SDI format converter unit with four simultaneous HDMI and SDI outputs.

IPMX™ IP MEDIA EXPERIENCE

The SAPPHIRE BBG series of mini converters deliver high-quality design, function, and reliability in a small package. The units are the ideal choice for directly displaying incoming IPMX content on HDMI monitors, including content originating from a WAN connection, and for converting HDMI to compressed or baseband IPMX streams. The converters are available in single, dual, and quad-channel configurations, with some models capable of simultaneously transmitting and receiving. They feature audio sample rate conversion, and the receiving units can mix-and-match audio channels that are asynchronous to the video. The converters can be mounted directly behind the monitor, will not take up any rack space, and are incredibly quiet, which makes them ideal for small editing or control suites.

The units feature dual SFP cages with support for 10G and 25G Ethernet ports with an additional 1G copper Ethernet port for out-of-band management.

Support for SMPTE ST 2022-7 seamless switching up to Class-C operation for WAN environments, NMOS IS-04/IS-05 control and management, both in-band and out-of-band, uncompressed ST 2110-20 video, and JPEG-XS compressed ST 2110-22 video as an option. The new switching function allows the new channel to lock into place before releasing the old channel for a seamless experience. This also includes audio ramp down/ramp up to avoid a click.

NAB SHOW Product of the Year 2025 WINNER

best of show 2025 AVTECHNOLOGY WINNER

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KEY FEATURES

- Four simultaneous HDMI/SDI outputs
- Designed to be mounted behind the monitor
- Active cooling fan
- Redundant power connections
- (4) SFP cages - (2) 10/25G IP transport and (2) reserved for future use
- (4) Bidirectional SDI I/O
- (4) HDMI Outputs
- With the factory installed audio option there are (4) 3.5mm TRS jacks for consumer analog audio levels. Configurable in software as Analog Inputs or Outputs
- (1) Reference Input, (1) Reference Output - Note: Both for future use
- RJ45 - Ethernet control
- SAPPHIRE BBG units are capable of fully asynchronous operation and are IPMX-ready

ALSO AVAILABLE

SAPPHIRE BBG-2110-H/S Single-Channel Receiver
SAPPHIRE BBG-2110-2H Dual-Channel Receiver
SAPPHIRE BBG-2110-4Hi/4Sio Quad-Channel Sender
SAPPHIRE BBG-2110-2Hi2Ho/4Sio Dual-Channel Sender/Receiver

ARIA AUDIO MONITORS

1RU RACK MOUNT AUDIO MONITORING WITH LCD METERING

LEARN MORE AT COBALTDIGITAL.COM

NEW — FOR — 2025

Cobalt introduces the ARIA AUD-MON-V, a 1RU audio monitoring panel that delivers best-in-class sound in a compact rack-mounted design. Developed from customer feedback, it features a high-efficiency Class-D amplifier with DSP and specially selected speakers.

The ARIA AUD-MON-V is designed for simple and intuitive operation. Each of the eight individual volume controls includes a push-to-mute/solo function. Ergonomically placed V-shaped knobs allow quick channel adjustments, while a master speaker volume control with push-to-mute is positioned to the right of the LCD display. The display shows audio levels and live video, with options to expand for additional channels. A 1/4-inch headphone jack automatically mutes the speakers when in use. Factory presets offer a solid starting point for easy customization.

ARIA AUDIO

Best-in-class sound in a compact rack-mounted design.

The color LCD display monitors 16 SDI audio channels, 64 MADI channels, or up to 64 DANTE channels, displaying PPM with peak hold and loudness. The browser-based UI allows users to configure input channels, arrange screen layouts, and save settings to front-panel preset buttons.

The control Ethernet port offers web-based configuration and can power the unit using POE++. The web-based control system includes input and channel assignments, button presets, panel locks, and system management. Stored setups can be recalled from the browser to provide extremely flexible operations.

KEY FEATURES

- LCD display with signal bar graph meters, phase meters, loudness (BS.1770 / R128, LKFS, A/85) status display and live video (scaled)
- Inputs: (2) 12G SDI / MADI - Automatic frame rate detection and selection of video and embedded audio standards, (1) AES, (1) GPI, (2) Analog
- Outputs: (1) 12G SDI/MADI, (2) Analog
- Individual mute / solo buttons for all 8 volume controls. Master volume and mute control. Programmable shortcut buttons and Lock button function
- Simultaneous monitoring of different types of input audio sources
- 2-way, stereo speaker design for intelligibility
- 1G POE++ interface for device power, remote management (WebUI), and API access
- Downmix from multi-channel sources to L/R stereo or mono mix
- **Five year warranty**

ALSO AVAILABLE

ARIA AUD-MON-H 1RU RACK MOUNT AUDIO MONITORING WITH LCD METERING

HIGH DENSITY 12G DANTE EMBED/DE-EMBED

ARIA OG-AUD4-DANTE » 4 X 12G-SDI INPUTS/OUTPUTS
ARIA OG-AUD2-DANTE » 2 X 12G-SDI INPUTS/OUTPUTS

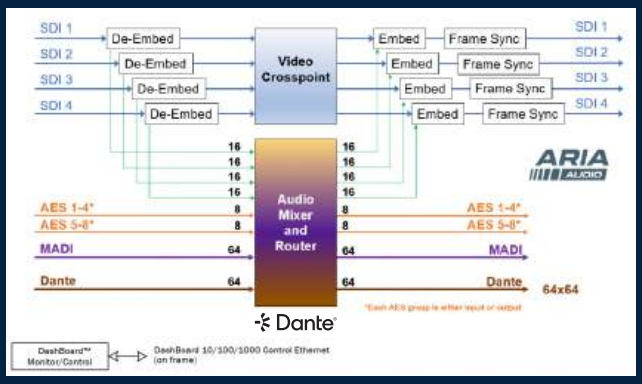
LEARN MORE AT COBALTDIGITAL.COM

The ARIA openGear® DANTE cards can simultaneously embed and de-embed audio between SDI, DANTE, AES and MADI, with flexible routing and mixing. The cards also include a built-in frame sync.

DANTE is also supported on Cobalt's 9904-UDX-4K and 9905-MPx processing cards.

NABSHOW PRODUCT of the YEAR 2024

BEST IN MARKET PRO AV AVTECHNOLOGY WINNER



ARIA OG-AUD4-DANTE Block Diagram

KEY FEATURES

- Two or four SDI inputs and outputs, capable of up to 12G-SDI operation
- MADI input and output
- 8 AES inputs/outputs - each block of 4 ports is software-configurable as input or output
- Simultaneous embedding and de-embedding
- Full routing and mixing between SDI, DANTE, MADI and AES
- One card can handle up to 200 audio channels
- SDI output crosspoint - connect any output to any input
- Dual Gigabit Ethernet ports for redundant DANTE operation
- DANTE matrix size:
  - ARIA OG-AUD4-DANTE: 64x64
  - ARIA OG-AUD2-DANTE: 32x32
- **Five year warranty**

ORDERING INFORMATION

ARIA OG-AUD4-DANTE

4-Channel up to 12G-SDI DANTE/AES/MADI Embedder/De-embedder with Frame Sync

ARIA OG-AUD2-DANTE

2-Channel up to 12G-SDI DANTE/AES/MADI Embedder/De-embedder with Frame Sync

WAVE ROUTERS & CONTROL PANELS

MULTI-FORMAT WAVE ROUTER FROM SD TO 4K

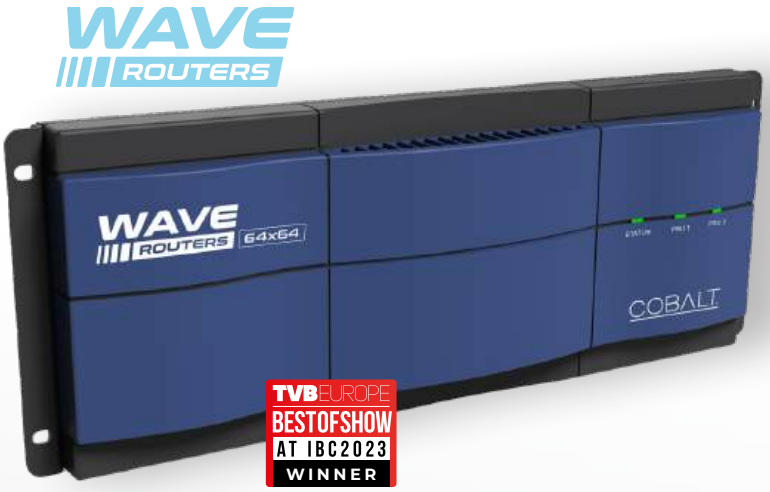
LEARN MORE AT COBALTDIGITAL.COM

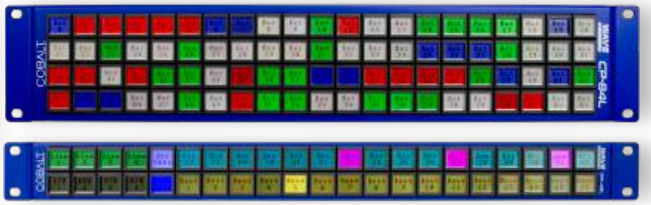
The WAVE RTR-64x64 and WAVE RTR-32x32 12G-SDI routers are midsize 64x64 or 32x32 crosspoint solutions contained within a compact 4U (7 inch) tall frame. They provide a high density solution that offers unprecedented flexibility, ease of use and integration. The frame is a thin 3.75 inch deep chassis.

WAVE Routers feature a single 10/100/1000 Ethernet port for IP based controls such as Cobalt's Router Protocol, General Remote protocol SW-P-08, and PESA PNET. The integrated web server supports browser control and system setups which can be saved and recalled quickly. This compact design is specifically optimized for 12G SDI operation but handles lower SDI rates with ease.

KEY FEATURES

- 64x64 or 32x32 Crosspoint Solutions in a Compact 4U
- Single 10/100/1000 Ethernet port for IP based control
- Full size BNC connectors
- RP-168 Switching Support
- Compatible with WAVE Control Panels





WAVE CP-84L AND WAVE CP-42L – *BACK-LIT LCD DISPLAY BUTTONS*

WAVE CP-78 AND WAVE CP-44 – *BACK-LIT BUTTONS*

WAVE CONTROL PANEL SERIES

CUSTOMIZABLE API AVAILABLE

2023 WINNER PRODUCT INNOVATION AWARDS

The WAVE CONTROL PANELS CP-42L and CP-84L feature 42 and 84 back-lit LCD dot matrix display buttons. The WAVE CONTROL PANELS CP-44 and CP-78 feature 44 and 78 back-lit buttons. All buttons are illuminated by RGB LEDs providing a wide array of background colors to choose from. Factory presets provide a solid starting point from which to customize each button color. Located on the rear of the unit is an Ethernet port with optional PoE++ capability for power and IP based communication. Two optically isolated General Purpose Outputs and two Inputs come standard with the option to get up to 20 of each.

KEY FEATURES

- Ethernet with PoE++ compatibility (license-based)
- Redundant DC power connections
- Optically Isolated - 20 GPO & 20 GPI (license-based)
- Quiet fan-less design
- Optional 2nd DC power supply

WAVE 9942-RTR SERIES OPENGEAR® CARDS ALSO AVAILABLE

WAVE 9942-RTR-12X12-12G 12G/3G/HD/SD-SDI/ASI/MADI 12x12 Router

WAVE 9942-RTR-24X24-12G 12G/3G/HD/SD-SDI/ASI/MADI 24x24 Router

MULTIVIEWERS

NEW — FOR — 2025

UltraBlue IP MULTIVIEWER

ULTRABLUE IP-MV

SCALABLE SOFTWARE-BASED MULTIVIEWER SOLUTION

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Cobalt is expanding its line of multiviewers with the addition of the UltraBlue IP-MV series of IP multiviewers, a series that can grow with the customer's needs. UltraBlue IP-MV is being offered as both a software package and a preloaded server for a turnkey solution. These software-based multiviewers can handle a variety of compressed and uncompressed IP/SDI inputs and an arbitrary number of outputs (including individual rotation to portrait), with very flexible audio routing, and an intuitive web interface. UltraBlue also offers support for a comprehensive set of protocols (UDP, RTP, RTMP, RIST).

NABSHOW PRODUCT of the YEAR 2025 WINNER

TVB EUROPE BEST OF SHOW AT IBC 2024 WINNER

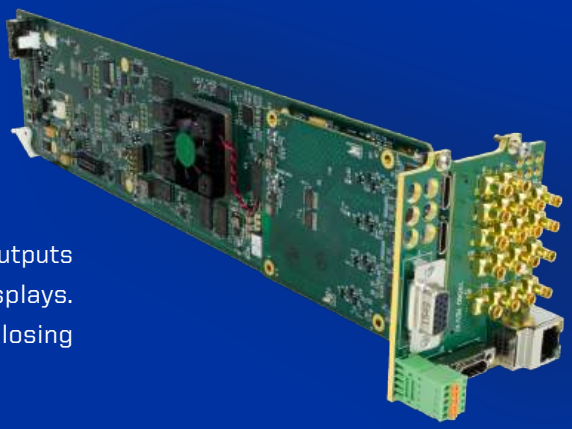
KEY FEATURES

- Control via an intuitive web interface
- Turnkey hardware option available
- Compressed and uncompressed IP inputs and multiple outputs
- Support for SDI inputs using capture cards
- Receive audio/video over IP over a variety of protocols and formats
- Multiple screens with arbitrary sizes and orientation
- Graphic overlays, ancillary data and tally
- Flexible monitoring support: video, audio and ancillary data triggers
- SDI input support with optional capture cards
- Flexible audio routing
- Configurable alarms
- Support for QC and Monitoring functions

HARDWARE-BASED MULTIVIEWERS

FULL 4K MULTIVIEWERS WITH 12G-SDI, HDMI 2.0

Cobalt's line of 4K openGear® multiviewers support 3840x2160 inputs and outputs via 12G-SDI & HDMI 2.0 so you can use cost-effective consumer 4K displays. Also, for 1080p input applications you can drive a 4K quad split without losing a pixel of resolution. They also feature multi-language capability.



	9970-QS	9970-QS-MC	9971-MV6-4K	9971-MV6-4H-4K	9971-MV18-4K
SDI Inputs	5	5	6	6	18
SDI Outputs	2	2	4	4	4
4K			●	●	●
HDMI 2.0 Inputs				4	
HDMI 2.0 Outputs			●	●	●
DUAL Output Capable			●	●	●
Feed Consumer or Professional Monitors	●	●	●	●	●
External Alarming		●			

9904-UDX-4K

UHD & HDR UP/DOWN/CROSS CONVERTER WITH FRAME SYNC & AUDIO SUPPORT

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The award-winning Cobalt® 9904-UDX-4K 12G/6G/3G/HD/SD UHD Up/Down/Cross Converter/Frame Sync/Embed/De-Embed Audio Processor is Cobalt's next generation of advanced scaler/frame synchronizers for the openGear® platform.

Next-generation scaler/frame sync featuring a 12G-SDI bridge to DANTE™ Audio

The 9904-UDX-4K upconverts 12G/6G/3G/HD/SD to either UHD 3840x2160 Square Division Multiplex (SDM) or Two-Sample Interleave (2SI) quad 3G-SDI based formats, or can output ST 2082 12G-SDI for single-wire 4K transport. With both 12G-SDI and quad 3G-SDI inputs, the 9904-UDX-4K can downconvert 12G and quad UHD. The 9904-UDX-4K provides an HDMI 2.0 output for economical 4K video monitoring. The 9904-UDX-4K offers numerous options, including SDR-to-HDR conversion and color correction.

+UDX-DANTE-16x16

LICENSE-BASED 12G-SDI BRIDGE TO DANTE AUDIO.

HIGH-DENSITY, CONVENIENT AND COST-EFFECTIVE.

Dante®

LINEAR ACOUSTIC

Dolby AUDIO

openGear

ALSO AVAILABLE

9904-UDX-4K-DSP 12G/6G/3G/HD/SD UHD Up/Down/Cross Converter/Frame Sync with DSP Advanced Audio Processing

KEY FEATURES

- Supports INDIGO 2110-DC-01 (see page 11)
- High-density openGear® comprehensive UDX solution
- Supports all popular formats: 480i, 576i, 720p, 1080i, 1080PsF, 1080p. Can support/accept 3G Level A or Level B-DL input with output as Level A or B-DL (via UI control) and also support RGB 4:4:4 / YCbCr 4:4:4 (see Ordering Info for details).
- Full up/down conversion between HD/3G, ST 2082 12G-SDI single-wire, and SDM/2SI quad 3G-SDI based formats, with ST 2082 12G-SDI single-wire and quad 3G UHD available at both input and output
- Supports Square Division Multiplex (SDM) and Two-Sample Interleave (2SI) quad UHD formats
- Frame sync and user delay
- Supports Cobalt's Reflex (JSON) API
- Full embedded audio processing with user delay offset and AES I/O
- Noise Reduction and Detail Enhancement provide image quality optimization
- Remote control/monitoring via Dashboard™ software, OGCP-9000 remote control panels, or Cobalt's RESTful-based Reflex protocol
- Supports options for 3D LUTs and BBC 3D LUTs and includes NBCU LUTs as standard
- **Five year warranty**

9905-MPx

3G/HD/SD QUAD-PATH UP/DOWN/CROSS CONVERTER/FRAME SYNC/ EMBED/DE-EMBED AUDIO PROCESSOR

LEARN MORE AT COBALTDIGITAL.COM

The Multi-Path 9905-MPx 3G/HD/SD Up/Down/Cross Converter/Frame Sync/ Embed/De-Embed Audio Processor is a Cobalt next-generation advanced scaler/frame synchronizer for the openGear® platform. The 9905-MPx provides four independent signal paths of UDX / frame sync / audio embedding and de-embedding on a single open-Gear® card. For high density applications, up to 10 cards can be installed in the Cobalt HPF-MAX frame, for a total of 40 channels. The 9905-MPx represents a new level of openGear® packaging density!

Multi-Path & Multi-Function. A new level of openGear® Packaging density.

The 9905-MPx provides high-density that offers unprecedented multi-input support and flexibility. Independent up/down/cross convert scalers are specifically designed for broadcast video formats, with full ARC control suitable for conversions to or from 4:3 and 16:9 aspect ratios. Discrete AES and MADI audio embedding/routing/mixing/de-embedding to any of four processing paths is supported. Standard 3D LUTs, NBCU LUTs and color correction provide support for SDR and HDR workflows.

Card control/monitoring is available via DashBoard user interface or Cobalt's RESTful-based Reflex API. The 9905-MPx can be software-converted to a 4K Quad-Link Input SDM/2SI 4K UDX/Frame Sync card with an optional software license.

+MPx-DANTE-64x64

A LICENSE-BASED 3G-SDI BRIDGE TO DANTE AUDIO SUPPORTING 64X64 DANTE CHANNELS IN ONE OPENGEAR® CARD.

Dante®

tvtech BEST OF SHOW AT IBC2022 WINNER

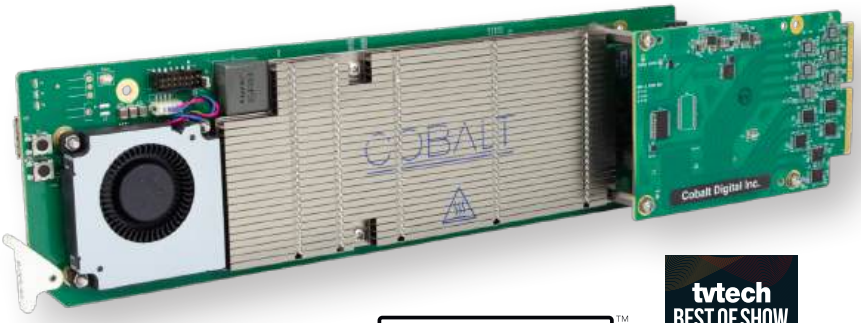
NABSHOW PRODUCT of the YEAR 2021

KEY FEATURES

- Supports INDIGO 2110-DC-01 (see page 11)
- Multi-Path design offers four independent UDX / frame sync paths (channels) per card
- Flexible AES and MADI embed/de-embed for each path
- Multi-input RP168 clean switch, with manual selection or GPI controlled input selection
- Up/Down/Cross Conversion with user ARC control. 3D-LUT is standard feature for all paths.
- Supports all popular formats: 480i, 576i, 720p, 1080i, 1080PsF, 1080p
- Independent four-path ANC bridging, including timecode and closed-captioning processing
- Noise Reduction and Detail Enhancement provide image quality optimization
- Remote control/monitoring via Dashboard™ software, OGCP-9000 remote control panels or Cobalt's RESTful-based Reflex protocol
- **Five year warranty**

openGear

INDIGO ST 2110



A POWERFUL ON AND OFF RAMP TO AND FROM IP / SDI

IPMX IP MEDIA EXPERIENCE™

tvtech BEST OF SHOW AT IBC 2024 WINNER

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INDIGO OG-2110-BIDI4-GATEWAY » SMPTE ST 2110 BIDIRECTIONAL QUAD-CHANNEL GATEWAY

The INDIGO OG-2110-BIDI4-GATEWAY has native SMPTE ST 2110 support in an openGear® format card with dual 10/25G SFP Ethernet interfaces for ST 2022-7 support. The INDIGO OG-2110-BIDI4-GATEWAY is a bidirectional quad-channel native ST 2110 interface to SDI I/O.

The transmit and receive paths of the gateway can operate simultaneously. INDIGO OG-2110-BIDI4-GATEWAY also includes support for ST 2022-7 seamless redundancy switching, as well as NMOS IS-04/IS-05 for automatic discovery and configuration.

INDIGO ST 2110 is also supported on Cobalt's 9904-UDX-4K and 9905-MPx processing cards and on the PACIFIC 9992-ENC-INDIGO encoder.

HPF-MAX is a 2RU high-density openGear® compatible modular frame in a high-capacity 20-slot format.

KEY FEATURES

- Highly integrated quad-channel ST 2110 gateway openGear® card
- One input and one output can support resolutions up to 4K. The remaining three inputs and outputs can support resolutions up to 1080p, all with ST 2022-7 seamless switching
- NMOS IS-04/IS-05 offers straightforward interface to an existing network, with auto-discovery by the network management
- High-density, compact openGear® card-based multi-channel transmit/receive solution, offering the standard features of redundant hot-swappable power supplies and hot-swappable cards
- Supports IPMX Operation
- **Five year warranty**

ORDERING INFORMATION

INDIGO OG-2110-BIDI4-GATEWAY openGear® card

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INDIGO 2110-DC-01

SMPTE ST 2110 INTEGRATED SUPPORT DAUGHTERCARD OPTION FOR 9904-UDX-4K AND 9905-MPx CARDS

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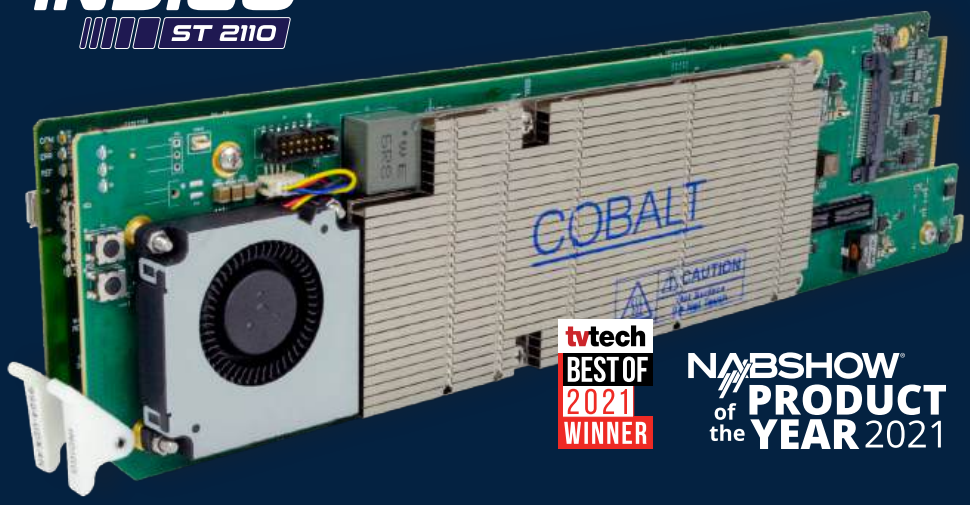
The INDIGO 2110-DC-01 is a factory add-on option to Cobalt 9904-UDX-4K and 9905-MPx models. This option adds native SMPTE ST 2110 support for these cards, with dual 25G Ethernet interfaces.

The INDIGO 2110-DC-01 avoids the cumbersome, error-prone, and expensive prior solutions of deploying multiple devices in the data path. Adding native ST 2110 interfaces to the audio/video processing elements, Cobalt is providing a cost-effective, easily manageable, integrated solution to this problem. Multiple boxes or processing elements are no longer needed in the data path, going back and forth between IP and SDI. By natively doing all the processing directly over IP, unnecessary complexity and cost is avoided.

High Density Native 2110 Solution – Native SMPTE ST 2110 Interface Option

With this option, all the advanced processing in these cards is now available with IP inputs and outputs, without the need for an external gateway. INDIGO 2110-DC-01 includes support for ST 2022-7 seamless redundancy switching, as well as NMOS IS-04/IS-05 for automatic discovery and configuration. Mated with the host card, this creates a powerful and processing-dense product that is capable of natively processing HD, 3G and 4K IP streams with no quality compromises. No other solution currently in the market can achieve the density provided by the combination of functionality offered by the INDIGO 2110-DC-01 and the 9904-UDX-4K/9905-MPx combination.

INDIGO ST 2110



tvtech BEST OF 2021 WINNER

NABSHOW of the PRODUCT YEAR 2021

KEY FEATURES

- Highly integrated ST 2110 companion for the Cobalt 9904-UDX-4K and 9905-MPx audio/video processors
- Offers dual 10G/25G Ethernet interfaces to support 4K signals without the need for any type of compression and to support ST 2022-7 seamless redundancy switching for improved network reliability
- Built-in NMOS support offers straightforward interface to an existing network, with auto-discovery by the network management
- High-density, compact openGear® card-based solution, with multiple devices able to be combined into a single frame for multi-channel operation, as well as offering the standard features of redundant hot-swappable power supplies and hot-swappable cards
- Supports "Make-before-break" stream switching with audio ramp up/down
- **Five year warranty**

openGear

PACIFIC COMPRESSION LINE

TRADITIONAL BROADCAST FEATURES WITH ADVANCED NETWORK OPTIONS

LEARN MORE AT COBALTDIGITAL.COM

Cobalt Digital has an extensive set of products with professional-grade support for compressed audio and video, suitable for almost any application. Cobalt products are unique in their blend of traditional broadcast features with advanced networking options. If you have a signal "over here" and want to send it "over there", we have you covered with support for protocols such as RIST, RTP/UDP/FEC, RTMP, RTSP and SRT, as well as sub-frame end-to-end latency with our new PACIFIC ULL decoder. Our products support MPEG-2 (H.262), AVC (H.264) and HEVC (H.265), with comprehensive audio CODEC options.

PACIFIC COMPRESSION

RIST
RELIABLE INTERNET STREAM TRANSPORT

All of our products are offered both as openGear® cards for high density, as well as standalone units if you need just a few channels and are space-constrained.

PACIFIC 9992-ENC/DEC

NABSHOW Product of the Year 2022 WINNER

Best of Show 2022 WINNER

PACIFIC ULL-DEC

tvtech BESTOFSHOW AT IBC2023 WINNER

NABSHOW Product of the YEAR 2024

BEST OF SHOW 2024 tvtech WINNER

PACIFIC 9992-ENC-INDIGO

The INDIGO 2110-DC-02 option card (factory-installed) adds ST 2110 inputs to the PACIFIC 9992-ENC. It supports up to 4 inputs at resolutions up to 1080p, or one input at resolutions up to 4K, with full NMOS support. Each encoder channel can be individually configured for SDI or ST 2110 operation.

IN ADDITION TO ENCODERS AND DECODERS, COBALT OFFERS THE FOLLOWING PRODUCTS:

9220 ASI/IP GATEWAY: Converts between ASI and IP for legacy products

9990-RTR: Unicast/Multicast IP stream conditioner and distribution amplifier

9990-TRX: 4-channel MPEG-2/H.264 transcoder with IP and ASI inputs and outputs

openGear

PACIFIC ENCODER LINE OF COMPRESSION PRODUCTS

Cobalt offers a comprehensive broadcast-grade encoder line that can address virtually any application. All of our encoders and decoders are designed for reliable 24x7x365 operation, and have extensive frame-accurate support for ancillary data, which includes EIA-608 and 708 closed captions, AFD, SCTE-104/35 for ad insertion, SMPTE 2038 for generic ANC transport, SMPTE 2108 for HDR transport and now OP-47. Additionally, the 9992-ENC includes a built-in frame sync at no additional cost. Cobalt encoders offer unparalleled flexibility, where most advanced features are enabled by field-installed license keys. This creates a pay-as-you-go structure, where there is a relatively low entry cost, and features such as audio support, HEVC, 4:2:2, can be added at a later time in an as-needed basis. On the networking side, the encoders support ASI, UDP, RTP, FEC, HLS and RTMP. The encoders also support SRT and RIST (Reliable Internet Stream Transport), both Simple Profile and Main Profile (which includes encryption and authentication).

ENCODER - VIDEO FEATURES

	MPEG-2	H.264	H.265	4:2:0	4:2:2	8-bit	10-bit	ASI	Max Resolution	Max HD Channels
9223		●		●		●		●	1080p60	2
9990-ENC		●		●		●			1080p60	2
PACIFIC 9992-ENC	●	●	●	●	●	●	●	●	4Kp60	4

ENCODER - AUDIO FEATURES

	MPEG-1 Layer II	AAC-LC Stereo	AAC-LC 5.1	HE-AAC Stereo/5.1	Dolby AC-3 Stereo/5.1	Dolby EAC-3 Stereo/5.1	LPCM	Max Stereo Channels
9223	●	●						4
9990-ENC	●	●						2
PACIFIC 9992-ENC	●	●	●	●	●	●	●	16

All Cobalt Encoders support Dolby Pass-Through.

PACIFIC DECODER LINE COMPRESSION PRODUCTS

Cobalt offers a similar broadcast-grade decoder line to match our encoders. This includes ASI input support, as well as the same set of networking protocols, including UDP, RTP, FEC, HLS, RTMP, SRT and RIST (Simple and Main Profiles). Cobalt decoders also support RTSP, which allows the signal from surveillance cameras to be ingested into your workflow in a professional manner. The decoders include independent full up/down/cross converters per channel, capable of converting any input signal to any resolution/frame rate up to 1920x1080p60 (9992-DEC) or 1920x1080i60 (9990-DEC). Cobalt is introducing the new PACIFIC ULL Decoder, capable of sub-frame latency.

DECODER - VIDEO FEATURES

	MPEG-2	H.264	H.265	4:2:0	4:2:2	8-bit	10-bit	ASI	Max Resolution	Max HD Channels
9990-DEC	●	●		●		●		●	1080i60	1
PACIFIC 9992-DEC	●	●	●	●	●	●	●	●	4Kp60	2
PACIFIC ULL-DEC	●	●	●	●	●	●	●	●	4Kp60	2

DECODER - AUDIO FEATURES

	MPEG-1 Layer II	AAC-LC Stereo/5.1	HE-AAC Stereo/5.1	Dolby AC-3 Stereo/5.1	Dolby EAC-3 Stereo/5.1	Dolby AC-4 Stereo/5.1	ST 302M LPCM	Dolby E	Max Stereo Channels
9990-DEC	●	●*	●*	●*	●*				2
PACIFIC 9992-DEC	●	●	●	●	●	●	●	●	16
PACIFIC ULL-DEC	●	●	●				●		16

*All Cobalt Decoders support Dolby Pass-Through. *5.1 down-mixed to stereo in this product.*

CYAN 9440-E00E-12G

FIBER OPTIC TRANSPORT TRANSCEIVER

LEARN MORE AT COBALTDIGITAL.COM

The CYAN 9440-E00E 12G/3G/HD/SD-SDI / ASI / MADI is a Fiber Optic Transport Transceiver which coax paths support SMPTE ST2082, ST2081, 424M, 292M, and 259M as well as ASI and MADI audio.

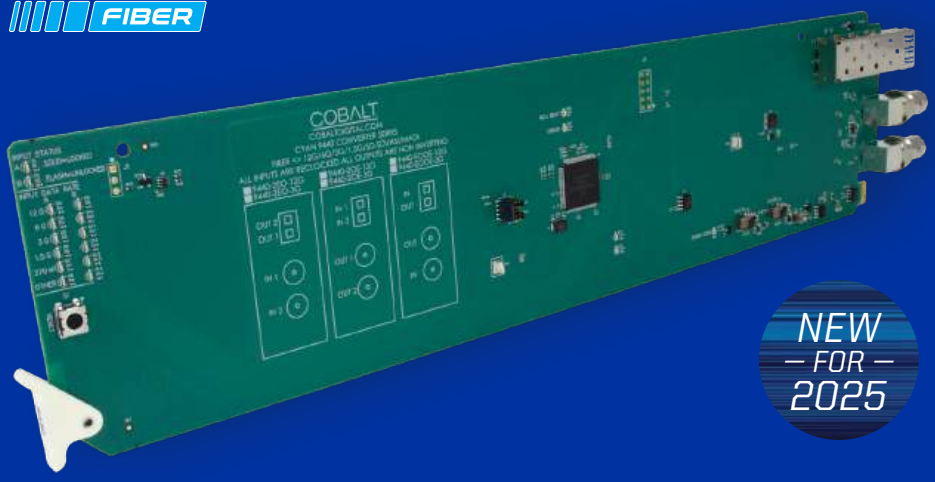
Auto-mode EQ/reclocking automatically sets to the signal type being received while allowing unrecognized formats to be safely passed without reclocking. Its wide operating range (from 125Mbps to 12Gbps) flexibly supports most professional digital serial communications.

Fully error-free pathological pattern operation is fully compatible with other professional fiber video interfaces. Excellent receive performance allows coaxial receive EQ for up to 50m/70m/150m/180m (12G/6G/3G/HD) (1694A). Full user DashBoard or Remote Control Panel remote control allows full status and control access locally or across a standard Ethernet network.

KEY FEATURES

- 1-FIBER Input, 1-FIBER Output
- 1-SDI Input, 1-SDI Output
- Full support of 125Mbps-12Gbps
- SMPTE ST 2082, ST 2081, 424M, 292M, 259M, DVB-ASI, and MADI
- Available with LC
- Error-free pathological support
- **Five year warranty**

CYAN FIBER



NEW — FOR — 2025

ALSO AVAILABLE

9440-2E0-12G 12G/6G/3G/1.5G/SD-SDI/ASI/MADI Dual Fiber Optic Transport Transmitter

9440-20E-12G 12G/6G/3G/1.5G/SD-SDI/ASI/MADI Dual Fiber Optic Transport Receiver

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ROYAL 9915DA-4X16-XPT-12G

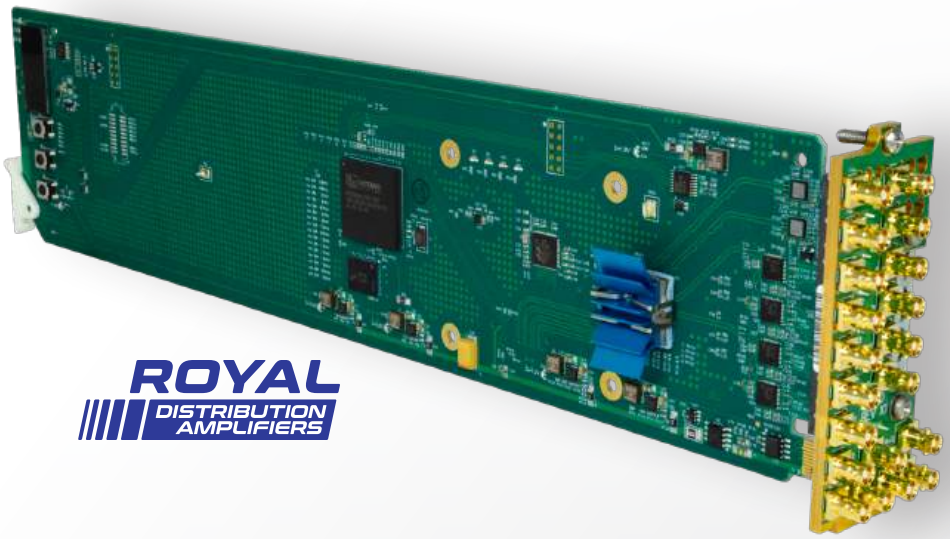
12G/6G/3G/HD/SD AND ASI/DVB QUAD-CHANNEL MULTI-RATE RECLOCKING DA WITH X4 OUTPUT CROSSPOINT

LEARN MORE AT COBALTDIGITAL.COM

The ROYAL 9915DA-4x16-XPT-12G 12G/6G/3G/HD/SD Quad-Channel Multi-Rate Reclocking DA with x4 Output Crosspoint supports four input channels which can be crosspoint-routed to up to 16 DA outputs. As demand for 4K continues to rise, distribution of 12G-SDI signals within a rackspace becomes increasingly important. The ROYAL 9915DA allows for copper runs of up to 45 meters, reaching most equipment within a rack room or truck. For longer runs, the optional optical inputs and outputs allow the 9915DA to connect distribution from zones of much greater distances.

The extremely flexible crosspoint (which is user-configurable via DashBoard™ GUI remote control) allows quad 1x4, dual 1x8, single 1x16 and other routing possibilities. Any of the four input channels can be distributed or duplicated across four groups of 1x4 DAs. The quad-input capacity provides a one-card solution for distribution of 8K quad-link content over 12G-SDI interfaces. A failover function allows going to secondary backup inputs should the primary input lose lock.

Up to 10 of the 9915DA-4x16-XPT-12G cards can be installed in a frame to provide 40 channels of input, with distribution to up to 160 outputs. Full user DashBoard™ or Remote Control Panel remote control allows full status and control access locally or across a standard Ethernet network.



KEY FEATURES

- Supports all popular formats: 480i, 576i, 720p, 1080i, 1080PsF, 1080p and 4K
- Flexible output crosspoint allows card to function as quad-channel 1x4, dual-channel 1x8, single-channel 1x16, or other numerous routings with reclocking DA
- Full support of 12G/6G/3G/HD/SD-SDI and ASI/DVB
- Input data rate auto-detection for all industry-standard data rates
- Fiber inputs/outputs can be added via optional SFPs
- One-card solution for distribution of 4K/8K content over 12G-SDI interfaces
- Failover provides backup to selected secondary inputs if primary input loses lock, available for both coax and (optional) fiber inputs
- Card display and DashBoard™ status input lock indicators
- Hot-swappable
- **Five year warranty**

ALSO AVAILABLE

ROYAL 9915DA-2X16-XPT-12G 12G/6G/3G/HD/SD Dual-Channel Multi-Rate Reclocking Distribution Amplifier with x4 Output Crosspoint

ROYAL 9915DA-1X16-12G 12G/6G/3G/HD/SD-SDI 1x16 Reclocking Distribution Amplifier

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PATH TO ATSC 3.0
WITH THE 9905-MPx AND 9904-UDX-4K

LEARN MORE AT COBALTDIGITAL.COM

9905-MPx

The simplest way to get started with ATSC 3.0 using your existing workflow is to upconvert your 1080i or 720p SDR signal to1080p HDR. The Cobalt 9905-MPx will accept a 720p or 1080i SDR input signal and convert it to 1080p HDR HLG on the output, using the NBC 3D LUTs. The NBCU LUT license is free and already pre-loaded on the product. The 9905-MPx is a 4-path device and can process four independent signals at the same time (and it has some very nice audio mixing and color correction features). If the input signal becomes 1080p HLG, the 9905-MPx will automatically and dynamically drop the processing and pass the signal through (assuming proper VPID information).

9904-UDX-4K

If 4K quality is required in the SDR to HDR conversion you can use Cobalt's 9904-UDX-4K openGear® card. The 9904-UDX-4K card offers two additional options:

Advanced HDR by technicolor

Upconvert the signal to 4K

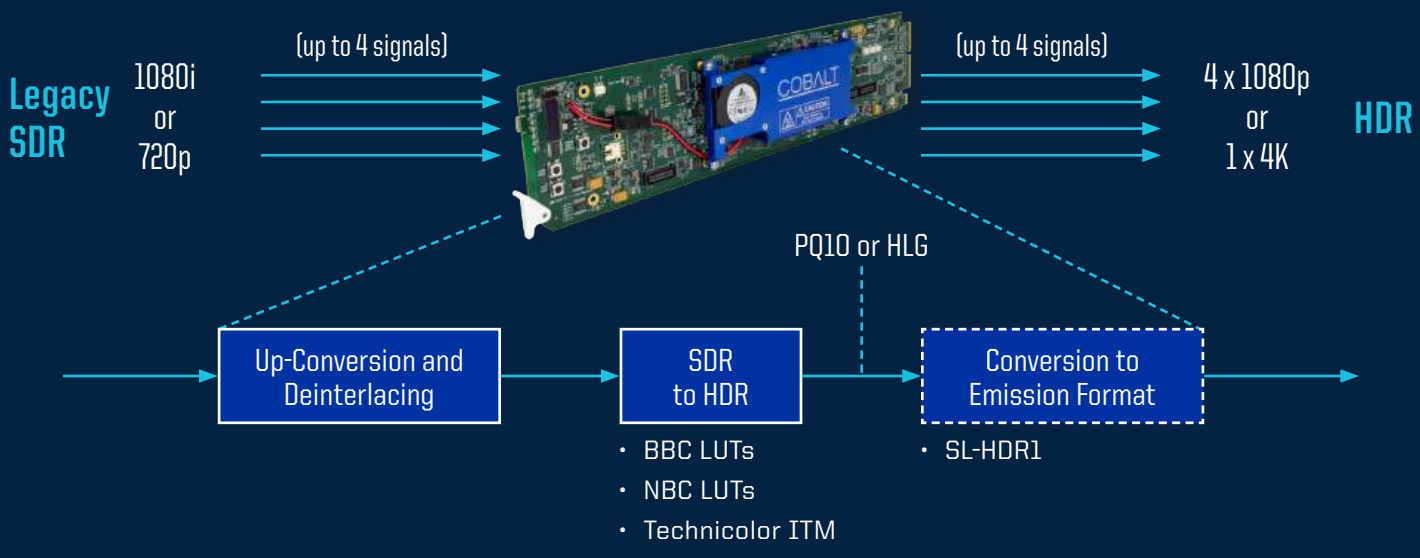
and/or

Access Advanced by Technicolor's ITM technology, which provides a dynamic (content-aware) conversion from SDR to HDR with the output in HLG, if required.

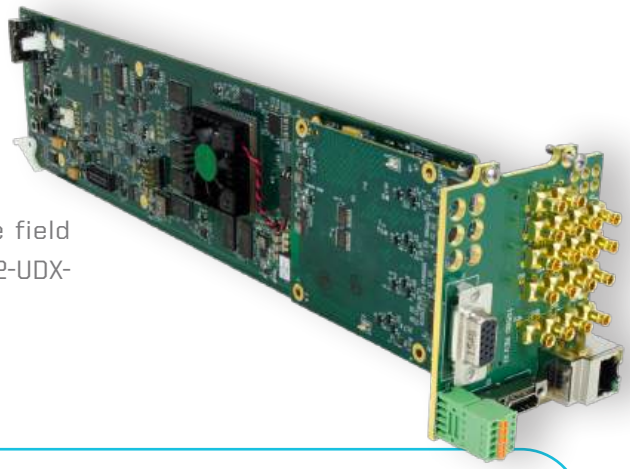
The 9904-UDX-4K can also switch the video processing in and out depending on the input signal type. It is also future-proof, as it can take in native HDR in PQ 10 format, and output signals with dynamic metadata using the SL-HDR1 and SL-HDR2 standards (which are also part of ATSC 3.0).

With the Cobalt 9905-MPx and the Cobalt 9904-UDX-4K products, broadcasters can gradually start producing ATSC 3.0 before having all the programming in HDR and 1080p.

9904-UDX-4K — 9905-MPx



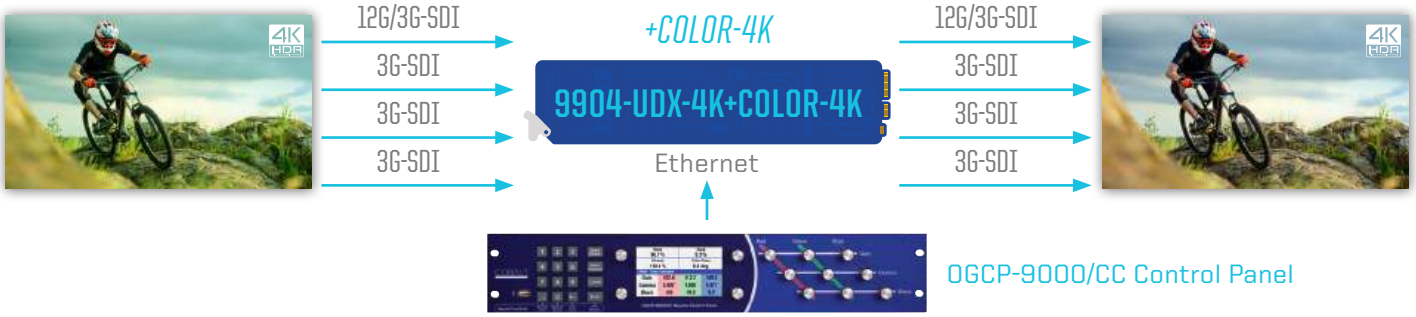
SOFTWARE DEFINED PROCESSING
FOR 2K & 4K



Cobalt products support licensable feature upgrades that are field installable – you can add functionality when you need it. The 9902-UDX-DSP-CI and 9904-UDX-4K have an extensive library of options.

LEARN MORE *AT COBALTDIGITAL.COM*

SMPTE-2110 FRAME SYNC & CONVERSION



	9902-UDX-DSP-CI	9904-UDX-4K	9904-UDX-4K-DSP
Software Defined Processing	●	●	●
4K 3840x2160		●	●
HD 1080p/1080i/720p	●	●	●
12G I/O		●	●
HDMI 2.0 I/O		●	●
HDMI 1.4 I/O	●	●	●
PAL/NTSC Composite Analog	●		
AES I/O	●	●	●
Format/Standards Conversion	●	●	●
IP Formats	●		
Advanced Audio Processing	●		●
Native SMPTE ST 2110*		●	

*With option INDIGO 2110-DC-01

SAPPHIRE BIDI-2H2S

12G/6G/3G/HD/SD BIDIRECTIONAL DUAL CHANNEL CONVERTER

LEARN MORE AT COBALTDIGITAL.COM

The SAPPHIRE BIDI-2H2S is a dual channel bidirectional HDMI to SDI and SDI to HDMI Converter. Each channel can be independently configured to have either SDI or HDMI inputs and each channel has simultaneous SDI and HDMI outputs. This provides input and output options with independent paths of true 12G/3G and HD conversions to and from all the SD-SDI, HD-SDI and 3G-SDI formats and HDMI. With both SDI and HDMI inputs and outputs (2 each), each path is equipped with frame sync as well as full input and output audio cross-points and optional per-path color correction. Input and output SDI and HDMI cross-points allow bidirectional program sourcing and distribution across the both sets of inputs and outputs.

Input and output options with independent paths of true 12G/3G and HD conversions to and from all the SD-SDI, HD-SDI and 3G-SDI formats and HDMI.

In existing openGear® installations, the bidirectional capacity can save space and lend to installation integrity. Preset save/load allows saving custom card settings and instant revert to factory settings. Layered presets allow invoking changes related only to a specific area of concern (audio routing, for example) while not changing any other processing settings or aspects. Full user DashBoard™ or Remote Control Panel remote control allows full status and control access locally or across a standard Ethernet network.

KEY FEATURES

- Supports all popular formats: 480i, 576i, 720p, 1080i, 1080p and 1080PsF
- Independent processing paths on a single card provides high capacity in openGear® environments
- Each path equipped with frame sync with configurable manual or LOS-detect insertion of frozen frame or selectable-color flat-field. Optional per-path color correction.
- Full input and output audio cross-points, including independent flex mix, stereo downmixers, and audio delay functions
- Up/Down/Cross conversion per-path software option (+SCALER)
- EDID Capture and Management
- Remote control/monitoring via DashBoard™ software or OGCP-9000 Remote Control Panel
- Hot-swappable
- Make SAPPHIRE BIDI-2H2S a standalone unit with our BBG-1300-FR 1RU Enclosure for openGear® Cards
- **Five year warranty**

SAPPHIRE CONVERTERS ALSO AVAILABLE IN OPENGEAR®

SAPPHIRE 9926-2HtoS 12G/6G/3G/HD/SD Dual-Channel openGear® HDMI-to-SDI Converter with Per-Channel Frame Sync

SAPPHIRE 9926-4HtoS 3G/HD/SD Quad-Channel openGear® HDMI-to-SDI Converter with Per-Channel Frame Sync

SAPPHIRE 9927-2StoH 12G/6G/3G/HD/SD Dual-Channel openGear® SDI-to-HDMI Converter with Per-Channel Frame Sync

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BBG-1300-FR

1RU ENCLOSURE FOR OPENGEAR® CARDS

LEARN MORE AT COBALTDIGITAL.COM

The Cobalt BBG-1300-FR is a 1/3 rack width 1RU openGear® compatible frame capable of housing two cards in a split width or 1 card in a standard width rear I/O module. A built in network card allows any openGear® capable card to show up and be controlled or monitored in DashBoard™. Looping reference on the unit provides black burst or tri-level timing to both cards slots within the chassis.

The BBG-1300-FR 1RU Enclosure Holds up to Two openGear® Cards with Standard Size Rear I/O Modules, a Built In Network Card and 60 W of Available Power.

Any card within the Cobalt Product lineup (or any third-party openGear® card) with a compatible I/O panel can be housed in the BBG-1300-FR, with a total available power of 60 W. Three BBG-1300-FR units can fit onto a single 1 RU tray for maximum density when a 2RU frame is not feasible. The unit can also be employed in remote locations where a full size 2RU 20 slot openGear® frame is not required.

A front control panel makes status monitoring and network connectivity straightforward with an LCD display screen. The front rotary knob makes navigation simple and easy to use. SNMP control available.

KEY FEATURES

- High power for 4K and IP solutions
- Full openGear® compatibility supporting openGear-compatible cards as well as latest and legacy openGear® rear modules
- One looping reference internally routed to all user card slots
- Two power supplies for power redundancy
- Network Controller Card enables DashBoard™ for seamless remote setup, monitoring, and control.
- Front display with rotary knob and buttons for simple and quick control
- Pull-away front door panel allows quick, easy card insertion
- Optional Frame Support Bracket kit provides frame rear support for mobile applications
- Remote control/monitoring via DashBoard™ or SNMP
- Built-in Gigabit Ethernet backplane
- **Five year warranty**

ACCESSORIES FOR THE BBG-1300-FR

BBG-1300 TRAY Rack Mounting Surface for Mounting three BBG-1300-FR units

BBG-TRAY-RSB Rear Support Bars and Brackets

Cobalt Digital Inc. designs and manufactures award-winning IP, ST 2110, and 12G/6G/3G/HD/SD conversion, throwdown, and multiviewer technology for the production and broadcast television environment. As a founding member in the openGear® initiative, Cobalt offers a full range of openGear-compliant solutions as well as video and audio processing products for closed caption compliance, production trucks, master control, HD news, signal transport, audio loudness processing, and color correction. Cobalt's Blue Box Group™ line of interface converter throwdown boxes streamlines and simplifies a wide range of IP and 12G/6G/3G/HD/SD conversion and processing tasks. In addition, the company's multi-image display processors enable multiviewer capabilities in the most demanding studio and remote production/broadcasting environments. Cobalt Digital products are distributed through a worldwide network of dealers, system integrators, and other partnerships.

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