20
CELEBRATING
20 YEARS
OF INNOVATION

ENGINEERING BEYOND THE SIGNAL

2017-2018 PRODUCT BRIEF

COBALT

20
**CELEBRATING
20 YEARS
OF INNOVATION**

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 specific challenges. Our innovative products feature 24/7 service and support and 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 celebrate 20 years of innovation and service, we reflect on how far the industry has come, and look forward to the next 20 years of engineering products for tomorrow's broadcast.

COBALT®

FAST//STREAM OTT

FRAME ACCURATE SCTE 104 TRIGGER INSERTION AND ENHANCED HLS SCTE 35 STREAMING PLATFORM
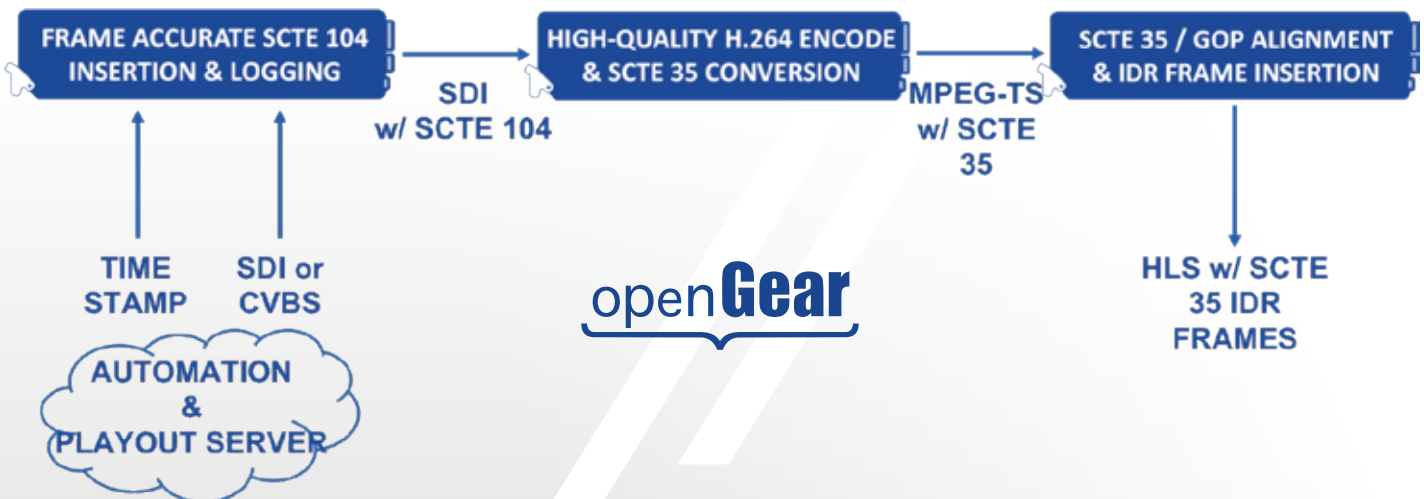
NEW
— FOR —
2017

The SCTE-104/35/30 set of standards have been around for many years in traditional ad insertion systems. In these systems, SCTE-104/35 is used to delimit the ads, and SCTE-30 is used to control a splicer. Nowadays, however, these systems are being used to create VOD (Video On Demand) assets, enforce DRM (Digital Rights Management) restrictions and even trigger DVR recordings, among other applications. Now the same infrastructure is moving into the OTT (Over-The-Top) world, with the SCTE-35 messages being mapped into protocols such as HLS (HTTP Live Streaming) and DASH (Dynamic Adaptive Streaming over HTTP) using SCTE-67, and with new protocols such as VAST (Video Ad Serving Template), to achieve the ultimate goal of individual ads inserted at the server level or the user device. As new and innovative applications of these standards evolve, system designers and operators are challenged with ensuring that all assets are individually identifiable and decorated with the pertinent metadata at all stages, frame-accurately.

KEY FEATURES

- Frame Accurate SCTE 104 Insertion to baseband SDI

- High-Quality H.264 HLS Encode

- IDR Frames (Instantaneous Decoder Refresh) and GOP (Group of Pictures) alignment

- SCTE 35 placed in HLS Manifest File

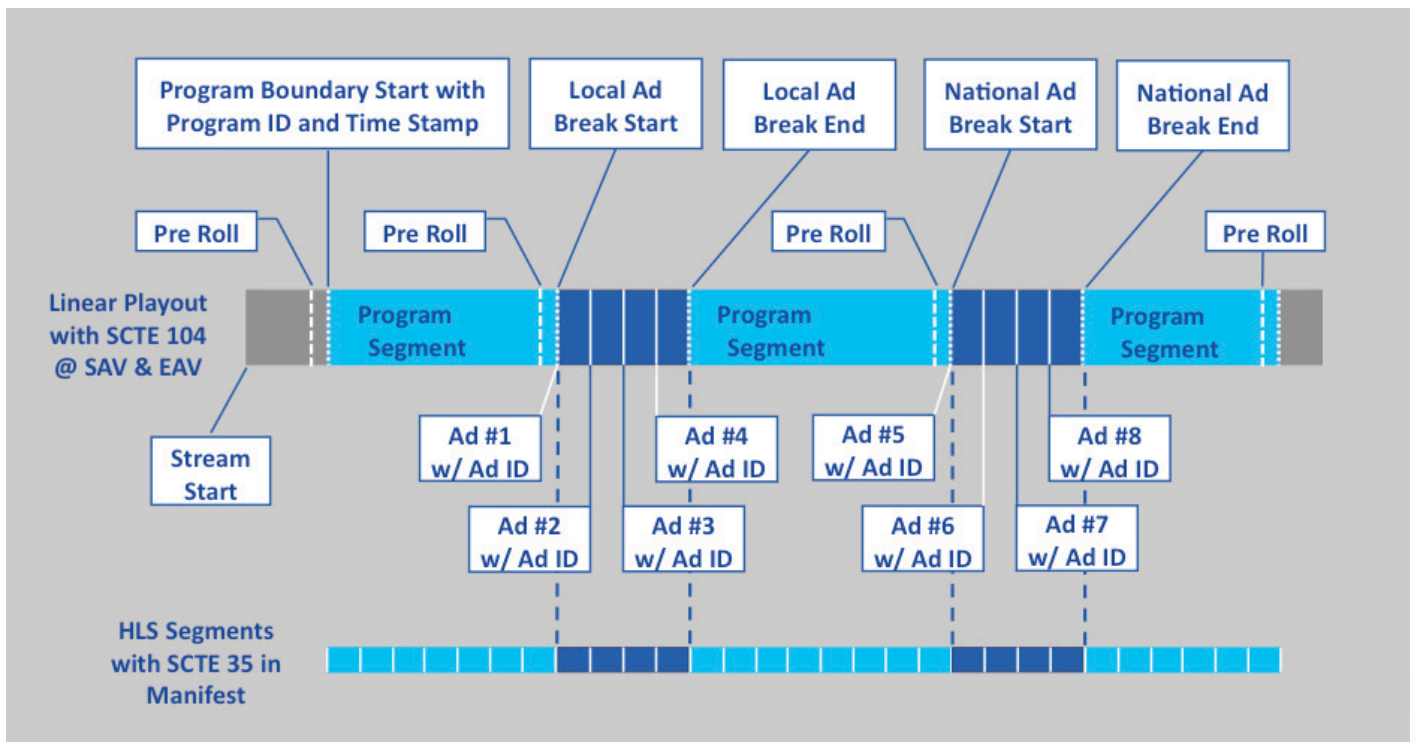- Highly scalable and flexible system design

FRAME ACCURATE SCTE 104 INSERTION & LOGGING → SDI w/ SCTE 104 → HIGH-QUALITY H.264 ENCODE & SCTE 35 CONVERSION → MPEG-TS w/ SCTE 35 → SCTE 35 / GOP ALIGNMENT & IDR FRAME INSERTION → HLS w/ SCTE 35 IDR FRAMES

TIME STAMP   SDI or CVBS

AUTOMATION & PLAYOUT SERVER
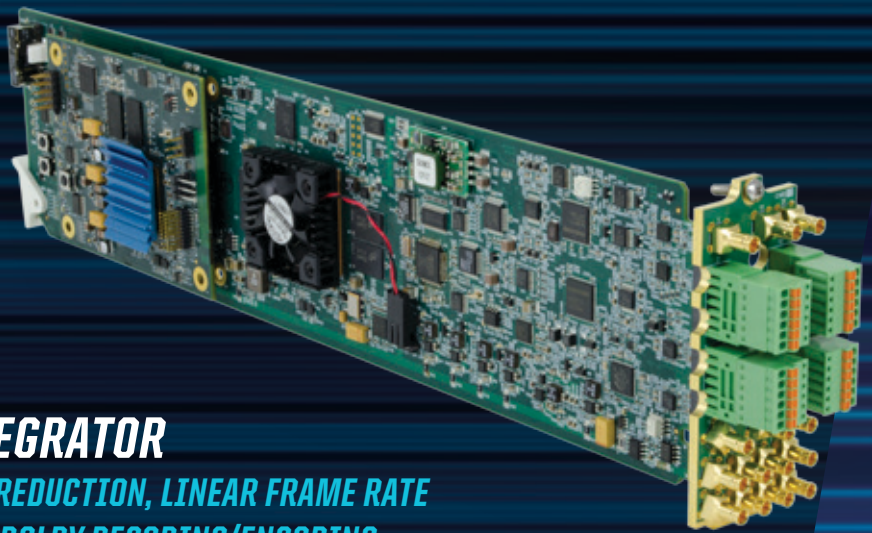
open**Gear**

FAST//STREAM OTT

FRAME ACCURATE SCTE 104 TRIGGER INSERTION AND ENHANCED HLS SCTE 35 STREAMING PLATFORM

In response to this critical requirement, Cobalt Digital has developed the FAST-STREAM OTT Frame Accurate SCTE Trigger insertion and enhanced H.264 OTT Streaming platform. This comprehensive linear playout to OTT solution is the result of a co-development effort between the Cobalt development team and a key Cobalt customer who knows that delivering perfectly timed segments based on the first and last frame is a competitive advantage in the VOD and OTT market.

The FAST-STREAM OTT platform is housed in the 2RU Cobalt HPF-9000 or OG3-FR openGear® frame and is controlled via the DashBoard™ control system or via SNMP. The system is available in single- or dual-channel configurations and one 2RU openGear® frame will support 6 FAST-STREAM channels. For added flexibility the system is available with a X86 computer module that is housed in the 2RU frame alongside the FAST-STREAM OTT modules and takes advantage of the dual load-sharing power supplies and high-performance cooling. This PC can be used to host the DashBoard™ control GUI, middleware, local content, and destination folders as examples.

openGear

CHANNEL INTEGRATOR

9902-UDX-DSP-CI CHANNEL INTEGRATOR
3G/HD/SD-SDI/CVBS UDX/FRAME SYNC, NOISE REDUCTION, LINEAR FRAME RATE CONVERSION, COLOR CORRECTION, UPMIXING, DOLBY DECODING/ENCODING & REAL-TIME LOUDNESS LEVELING

As content delivery platforms evolve and multiply, signal conversion and processing systems need to be as comprehensive and cost effective as possible. Signal transmission engineers are tasked with receiving various signal types and standards and formatting them to the exact video, audio and metadata configuration needed on a per-channel basis. Content providers and aggregators need an easy to deploy means of integrating and optimizing the components that make up a modern broadcast or OTT channel.

Designed to address these evolving needs in the densest footprint possible, the 9902-UDX-DSP-CI Channel Integrator provides the signal conversion and processing tool set needed to conform analog and digital audio and video signals and their associated metadata to meet sophisticated channel delivery requirements.
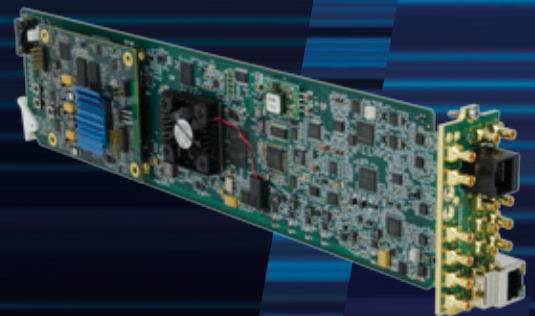
The Channel Integrator is offered with a wide range of rear I/O options including DIN and HDBNC and can be configured with a SFP I/O port option which adds support for either HDMI, fiber optic, or IP In or Out. (SMPTE 2110 or 2022-6).

Audio features include analog and AES audio embedding and de-embedding with multiple mixers and per-channel delay. Optional Linear Acoustic UPMAX UpMixing, Dolby decoding and encoding (E, AC-3, E-AC-3) and RTLL Real-Time Loudness Leveling make the Channel Integrator a single point of command and control for your toughest audio processing jobs.

Advanced video processing includes broadcast quality Up/Down/Cross conversion with Noise Reduction and Detail Enhancement. Linear Frame Rate Conversion between 50Hz and 59.94/60Hz based video standards makes the 9902-UDX-DSP-CI perfect for rentals and international signal aggregators and distributors in the OTA, Cable, DBS, and OTT markets.
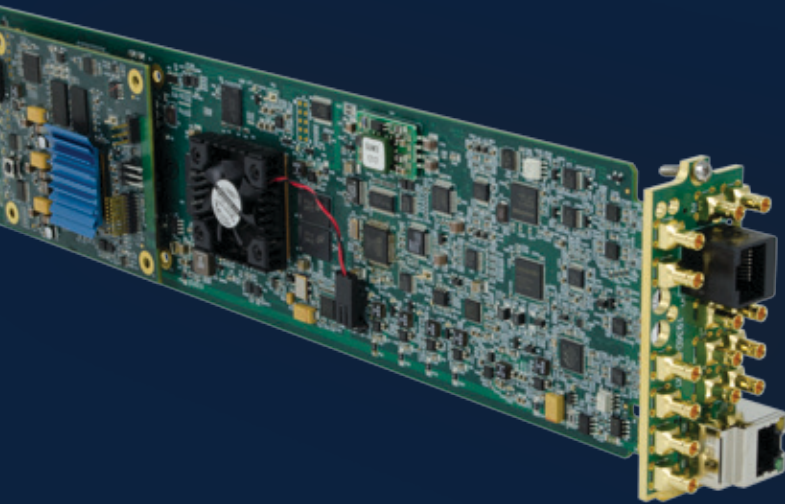
KEY FEATURES

- Broadcast Quality Up/Down/Cross Conversion

- Audio & Video AtoD and DtoA

- Linear Frame Rate Standards Conversion

- Noise Reduction

- Detail Enhancement

- Dolby E, AC-3, E-AC-3 Decoding & Encoding

- Dolby Real-Time Loudness Leveling

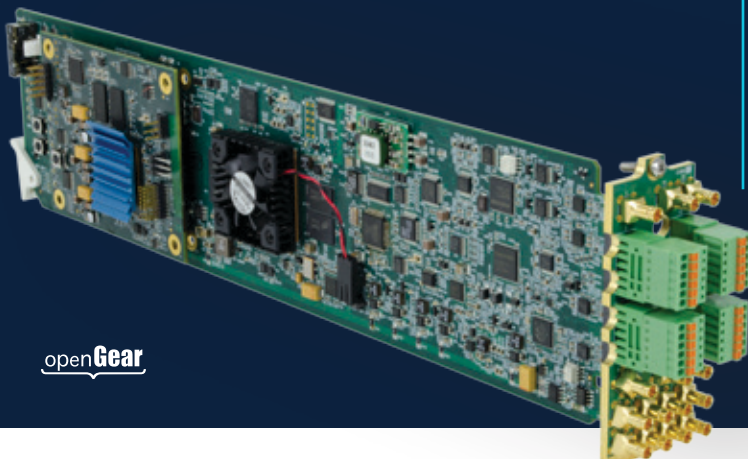- Optional SFP I/O for HDMI, Fiber and ST 2110 or ST 2022-6

9934-AUD-PRO
3G/HD/SD-SDI ADVANCED AUDIO PROCESSOR WITH UPMIXING, DOLBY DECODING/ENCODING & REAL-TIME LOUDNESS LEVELING
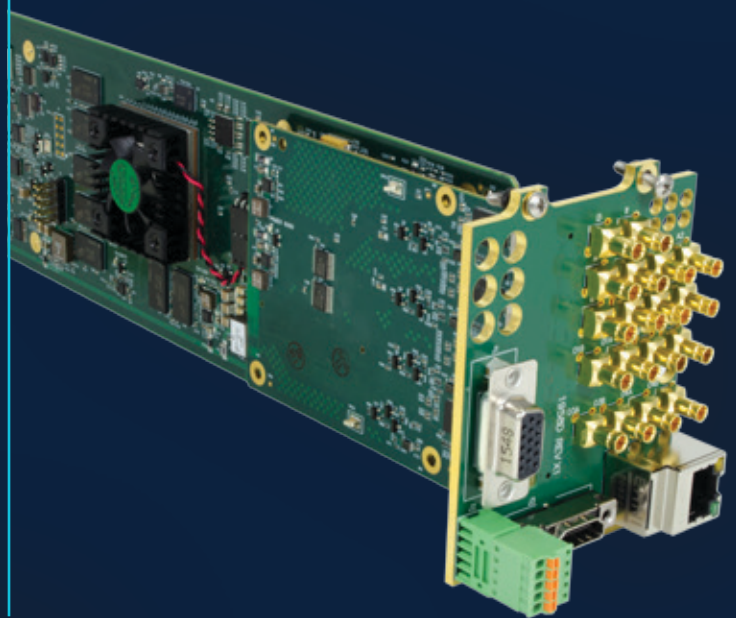
9904-UDX-4K
UHD 12G/3G/HD/SD-SDI UP/DOWN/ CROSS CONVERTER

The 9904-UDX-4K is Cobalt's next generation of advanced scalers and image processors. The unit converts 3G/HD/SD-SDI to UHD1 3840x2160 Square Division and 2SI (Two Sample Interleave) Quad 3G-SDI based formats and has optional ST 2082 12G-SDI I/O capabilities. The unit can also perform the reverse in downconverter mode and has 2 HDMI 2.0 outputs for monitoring.

The UDX-4K can be optioned with dual 10GE Ethernet ports to future protect your investment and provide support for the emerging uncompressed video and audio over IP standards.
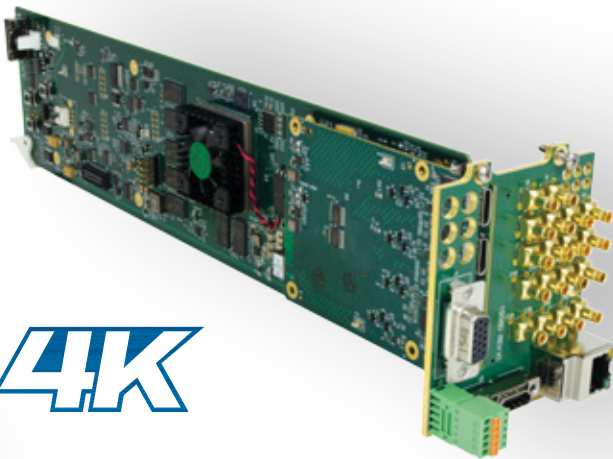
The AUD-PRO represents the ultimate in integrated audio processing and encoding and is built on Cobalt's award-winning and widely deployed 3G/HD/SD-SDI Analog and AES Audio Embedder / De-Embedder.

The hardware supports multiple DSP accelerated features that can be added in the field including Linear Acoustic UPMAX UpMixing and Dolby E, AC-3, and E-AC-3 decoding and encoding. Adding Dolby RTLL Real-Time Loudness Leveling makes the AUD-PRO a single point of conversion, control, and monitoring for your advanced audio delivery requirements.

BBG000 Standalone BBG-1004-UDX-4K Available

BBG000 Standalone BBG-1034-AUD-PRO Available

openGear

9971-MV6-4K
UHD HYBRID HDMI 2.0 AND 12G/3G/HD/SD-SDI INPUT AND OUTPUT MULTIVIEWER

Available for openGear and the BBG-1000 Series stand-alone form factors, the new MV6-4K multiviewer platform represents the state of the art in both hardware design and image processing techniques. The 3840x2160 UHD output is provided concurrently via multiple 12G-SDI and HDMI 2.0 connections making the MV6-4K a cost effective means to drive professional evaluation grade monitors and to leverage the widely available prosumer/consumer grade 4K monitors to provide more pixel space to your source signals and maintain as much original picture information as possible.
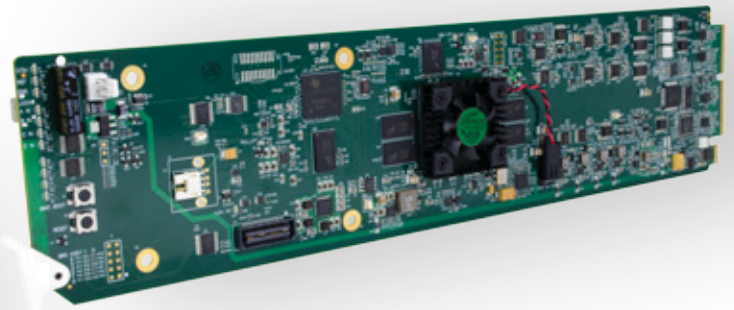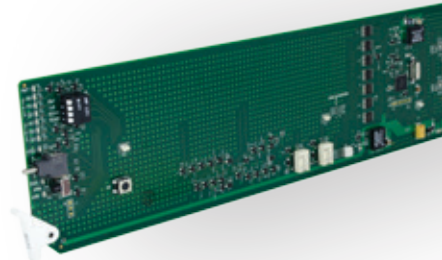

The input stage accepts six 3G-SDI signals with an option to upgrade to 12G-SDI. Hardware expansion options are available and can add either twelve additional SDI inputs or four HDMI 2.0 inputs to the mix. The new MV6-4K is compatible with the popular QS Series of multiviewer modules and are cascadable which means the system can be optimally scaled for small to large 4K productions and broadcast operations. Additionally the multiviewer can be optioned with dual 10GE Ethernet ports to future protect your investment and provide support for the emerging uncompressed video and audio over IP standards.

BBG1000   Standalone BBG-1071-MV6-4K Available

9911DA-8-BPX
DUAL-INPUT 3G/HD/SD-SDI / ASI 1X8 DISTRIBUTION AMPLIFIER AND BYPASS PROTECTION SWITCH

The 9911DA-8-BOX provides 1x8 distribution of 3G/HD/SD-SDI and ASI signals with a passive relay path to provide a failover output in case of loss of power. All outputs are non-inverting and usable for ASI. Either of two inputs can be routed to the eight card DA outputs. Inputs are Equalized and Reclocked.

9923-DSK-LG
3G/HD/SD-SDI DUAL LAYER DOWN STREAM KEYER & LOGO INSERTER

The 9922-DSK 9922-DSK-3G 3G/HD/SD-SDI Downstream Keyer with Dual Key/Fill Paths and Logo Insertion card provides two flexible and independent paths of SDI downstream keying. Each path has two independent key/fill engines with separate key/fill inputs. The openGear® form factor card can also store up to eight logo graphic files which can be flexibly inserted into either key/fill path. Two key/fill paths can be outputted simultaneously, with each path using uniquely different key/fill and logo insertions as desired.

BBG1000   Standalone BBG-1023-DSK-LG Available

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

Bob.McAlpine @ cobaltdigital.com
Chief Executive Officer

Jesse.Foster @ cobaltdigital.com
Director of Products & Business Development

Suzana.Brady @ cobaltdigital.com
Vice President of North & South America Sales

Cris.Garcia @ cobaltdigital.com
Western Sales Manager

Jacob.Kinsey @ cobaltdigital.com
Director of Business Affairs & Central Sales Manager

Anthony.Klick @ cobaltdigital.com
Eastern Sales Manager

Bob.Nicholas @ cobaltdigital.com
Vice President of International Sales

Toll Free	**800 669 1691** (US Only)
Direct	**+1 217 344 1243**
Email	**sales@cobaltdigital.com**
Web	**www.cobaltdigital.com**

*TO LEARN MORE, PLEASE VISIT **COBALTDIGITAL.COM***