

openGear BBG1000



**OPENGEAR®**

MODULAR CARD FRAME SYSTEM

**BBG-1000**

DESKTOP STANDALONE SYSTEMS

COBALT



# 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. 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. Our innovative products feature 24/7 service and support and come with a five-year warranty, vital in today's broadcast industry.

COBALT



## THE INDUSTRY STANDARD

*The openGear® platform is the award-winning, industry standard, modular terminal gear system and it continues to be adopted by end users across a diverse range of markets.*

Cobalt Digital is proud to have been a founding partner of this customer-centric, open-architecture platform, that allows users to select the best solution for their needs from multiple openGear® manufacturing partners all while maintaining a standardized rack frame form factor and software GUI.

The openGear® system is comprised of a 2RU, 20-Slot “card cage” that supports high-capacity redundant power supplies, dual genlock inputs and Gigabit Ethernet frame controller for use with the DashBoard™ (see page 8) remote control and monitoring software.

The frame controller resides in a dedicated 21st card slot which leaves 20 slots available and does not detract from the extreme densities that are achievable with Cobalt Digital's award-winning processing and distribution cards.

### PRODUCT FAMILIES

Audio Processing  
Color Correction  
Conversion  
Distribution Amplifiers  
Embedders and De-Embedders  
Fiber Optic Transport  
Frame Synchronizers  
IP / DTV / Compression  
Keying & Branding  
Metadata Management  
Multiviewers and Monitoring  
Signal Routing  
Test and Reference  
Text-to-Speech / EAS Automation





## OGCP-9000

### REMOTE CONTROL PANEL

Communication with the openGear™ frame occurs over an optimized high-speed openGear Ethernet control protocol, allowing lightning-fast access. The OGCP-9000 offers instantaneous, real-time adjustments, so operators can manipulate on-air signals with confidence and precision.



An easy to use keypad enables intuitive access with minimal submenus. A given card uses only one level of submenus to access all of its functions.

The control panel is optimized for both bright and low light environments. Two large format, super-bright, wide-angle color LCD screens show sharp and clear text; operators can select either a white or black background. Other features include a fully backlit keypad and user-adjustable LED back light.

Station engineers can configure the panel to restrict availability of specific cards and parameters for operation. Configuration is done through a simple web interface, where configurations can be exported, backed up, and re-imported easily. The OGCP-9000 works seamlessly with DashBoard™ control software. Any changes made with either system are instantly reflected on the other.

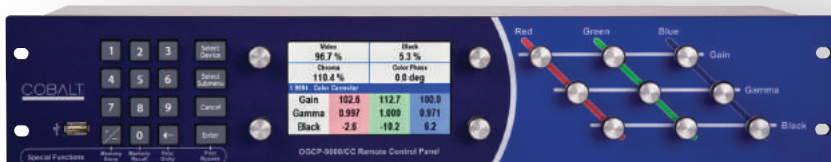
## OGCP-9000/CC

### COLOR CORRECTOR REMOTE CONTROL PANEL

The OGCP-9000/CC is a remote control panel designed with a special emphasis for the Color Corrector models, and models equipped with +COLOR option.

Communication with the openGear™ frame occurs over the optimized high-speed Ethernet control protocol, allowing lightning-fast access. The OGCP-9000/CC offers instantaneous, real-time adjustments, so operators can manipulate on-air signals with confidence and precision.

Rotary controls allow direct access to gain, gamma and black for each of the RGB channels, in addition to YCbCr proc controls. An easy to use keypad enables intuitive access with minimal submenus. Cards use only one level of submenus to access all of its functions.



The control panel is optimized for both bright and low light environments. A large format, super-bright, wide-angle color LCD screen shows sharp and clear text; operators can select either a white or black background. Other features include a fully backlit keypad and user-adjustable LED back light.

Station engineers can configure the panel to restrict availability of specific cards and parameters for operation. Configuration is done through a simple web interface, where configurations can be exported, backed up, and re-imported easily.

The OGCP-9000/CC works seamlessly with DashBoard™ control software. Any changes made with either system are instantly reflected on the other.



#### WinOGCP

Providing the same simplified and instantly available remote control offered by our OGCP-9000 Remote Control Panels, WinOGCP is available as a convenient PC application.



*Cobalt Options add processing versatility without the expense, complexity, space usage, or accumulated processing latency of multiple cards.*

For information about any option listed and its applicability for specific products, please visit the options page at [CobaltDigital.com](http://CobaltDigital.com).

## OPTIONAL FEATURE LICENSES

*CAN BE INSTALLED AT TIME OF PURCHASE OR IN THE FIELD*

### VIDEO OPTIONS

**+COLOR** RGB Color Corrector Software License

**+DLY** Expanded A/V Delay License

**+KEYER** Key/Fill Input License

**+WINGS** Side Bar "Wings" Insertion License

**+LOGO** Logo Storage & Insertion License

**+T-SLATE** Smart Trouble Slide Insertion

### BROADCAST COMPLIANCE OPTIONS

**+EAS** Emergency Alert System Crawl Generator License (EAS)

**+TTS** Text-To-Speech Voice-Over Generator License (21CVAA)

**+DSP-RTLL** Dolby Real-Time Loudness-Leveling License (CALM)

**+QC** Broadcast Audio / Video / Metadata Monitoring with Alarm Notification & Auto-Preset Recall License

### AUDIO OPTIONS

**+DSP-ENCD** Dolby AC-3 & E-AC-3 Encoder License

**+DSP-ENCE** Dolby E Encoder License

**+DSP-RTLL** Dolby Real-Time Loudness-Leveling License

**+DSP-DEC** Dolby E / AC-3 / E-AC-3 Decoder License

**+DSP-UM-LA** Linear Acoustic UPMAX™ 2.0 to 5.1 Upmixer License

**+LM** Audio Loudness Metering License

### METADATA PROCESSING OPTIONS

**+ANC** Ancillary Data Insertion / Extraction & Processing License

**+DT VANC/HANC** Data Transceiver License

**+LTC** Longitudinal Timecode Embed / De-Embed & Processing License

**+SCTE104** SCTE 104 Authoring & Insertion License

**+SCTE104-FAST** Frame-Accurate SCTE 104 Insertion License



## HPF-9000

### HIGH POWER 20-SLOT OPENGear® FRAME

The HPF-9000 is a 2RU high-density openGear® compatible modular frame offering 360 Watts of net (user) available power in a high-capacity 20-slot format. It uses the same form factor and DashBoard™ remote control as previous 20-slot frames but offers significantly more available user power. This makes the HPF-9000 perfectly suited for high-density utilization.

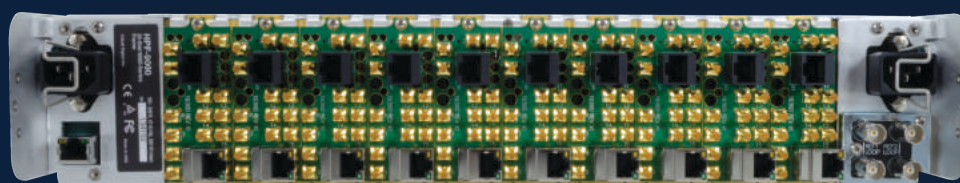
The HPF-9000 uses the same rear I/O modules as previous 20-slot frames and the OG3-FR. These rear modules offer a broad selection for a flexible and wide array of interfaces such as DIN, HD-BNC, Ethernet, Terminal Blocks, and Fiber Connectors. Special high-density, high-ventilation rear I/O modules offer even greater packaging density when used with compatible Cobalt® cards.

The HPF-9000 can accommodate two front-loaded PSU-9000 power supply modules. Adding a second hot-swappable supply (optional) gives the frame full power redundancy. Each power supply contains an independent cooling fan, status LED, and a front-mounted power switch. A Network Controller Card (furnished as standard on the HPF-9000 frame) allows Ethernet connectivity for monitoring and control via free DashBoard™ software. Optional SNMP support is also available.

#### KEY FEATURES

- Our highest available power frame (360 Watts net) - 3x the available power of previous 20-slot frames
- Front fan door mounted LCD display for IP Address, Frame Name and Fault Identification
- Two independent looping references internally routed to all user card slots
- Power supply is hot-swappable for 24/7 operation, and separate power cords to each power supply for power redundancy
- Network Controller Card enables multiple copies of DashBoard™ for seamless remote setup, monitoring, and control. SNMP option can further be added

Frame Accessories can  
be found on page 10



## OG3-FR

### 20-SLOT OPENGear® FRAME

The OG3-FR is the next-generation openGear 2RU high-density modular frame offering enhanced Gigabit Ethernet control/monitoring in a high-capacity 20-slot format.

The frame's lightweight construction and removable, heavy-duty hinged front door is designed for maximum durability. Long term reliability is assured with the front mounted cooling fans and optional redundant power supply.



#### KEY FEATURES

- Standard 300 Watt (user net) power supply with integral cooling
- Gigabit Ethernet offers faster access to cards, with support for future platform enhancements
- Two independent looping references internally routed to all user card slots
- Separate power cords to each supply for power feed redundancy
- Network Controller Card enables multiple copies of DashBoard™ for seamless remote setup, monitoring, and control
- Optional SNMP control and monitoring



Frame Accessories can  
be found on page 10



## DASHBOARD™

### CONTROL AND MONITORING APPLICATION FOR OPENGear®

DashBoard™ is a control and monitoring application for the openGear® platform. It is available at no cost, and works with Windows®, Mac®, or Linux®.

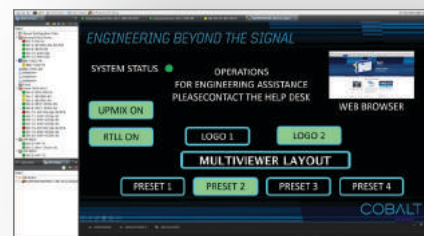
DashBoard™ allows users to view all frames on a network with control and monitoring for all populated slots inside a frame. This simplifies the setup of numerous modules in a large installation and offers the ability to centralize monitoring. Cards define their controllable parameters to DashBoard™, so the control interface is always up to date.

In addition to extensive control and monitoring capabilities with its intuitive GUI, DashBoard™ allows for easily performed card software updates. Software update files can be downloaded from the Support section of the Cobalt Digital website and then uploaded through DashBoard™.

To communicate with multiple copies of DashBoard™ or Cobalt remote control panels via Ethernet and TCP/IP, the optional MFC-8320-N network controller card is required.

#### KEY FEATURES

- Free application can be downloaded at [cobaltdigital.com/dashboard](http://cobaltdigital.com/dashboard)
- Java based and runs on Windows, Mac and Linux
- Multiple frames can be connected to multiple control and monitoring stations
- Automatic discovery of cards
- Software and firmware updates via ethernet
- Customizable Control Panel (see below)



*Take control of all openGear frames and cards on your network with a consistent, easy-to-use graphical interface.*

**DashBoard™**





# BBG4000

## BBG-1000 SERIES DESKTOP STANDALONE UNITS

Compact and convenient, the BBG-1000 Series of desktop standalone systems offer the same industry-leading performance as Cobalt Digital's 3rd generation openGear® cards but in a portable and easy to deploy package.

BBG-1000 units ship with optional rubber feet for standalone applications and three BBG-1000s systems can be racked together in 1RU using the optional BBG-1000-TRAY accessory.

An integrated LCD front control panel provides local control while remote monitoring and control options include an intuitive HTML5 Web-GUI and/or the DashBoard management system.

Products available in the BBG-1000 Series include Multiviewers, Auto Change-Overs, Clean and Quiet Routers, Up/Down/Cross Converters, Dual Frame Syncs, Color Correctors, Test Generators, MPEG Codecs, and Ancillary Data Management and Monitoring.

### BBG-1000 PRODUCT FAMILIES

Audio Processing

Color Correction

Conversion

Distribution Amplifiers

Embedders and De-Embedders

Frame Synchronizers

IP / DTV / Compression

Keying & Branding

Metadata Management

Multiviewers and Monitoring

Signal Routing

Test and Reference

Text-to-Speech / EAS Automation

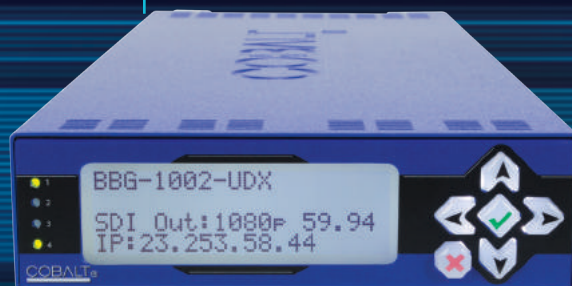
BBG-1000-Tray Accessory  
can be found on page 11

# BBG4000



### KEY FEATURES

- Control options include front panel, DashBoard™, and integrated Web-GUI
- Built-in Ethernet port for control and monitoring
- Up to 3 units are rack mountable in 1RU tray
- Primary and redundant external DC power inputs
- Supports DashBoard Connect
- Includes rubber feet for desktop operation



## FRAME ACCESSORIES

### FOR OUR HPF-9000 AND OG3-FR OPENGear® FRAMES

The openGear® system is designed to be deployed in demanding applications such as Fly Packs and Outside Broadcast trucks. The frame door keeps cards positively seated and latches keep the power cords connected to the dual load-sharing power supplies and rear support rail accessories are available. With no single point of failure and the ability to replace any component without powering the frame down makes the openGear® platform the Industry Standard.



#### HPF-9000-Door

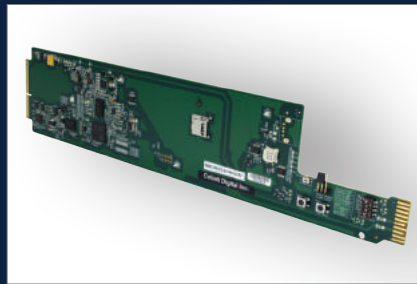
New LCD equipped Fan Door now ship standard and are available for existing HPF-9000 units

### HPF-9000 ACCESSORIES



#### PSU-9000

Extra (redundant) HPF-9000 frame power supply



#### HPF-FC

Network Controller Card



#### 9000-FSB

Frame support bracket kit (supports rear of frame to rear frame rails)

### OG3-FR ACCESSORIES



#### PS-OG3

Redundant or Spare Power Supply



#### MFC-OG3-N

Advanced GigE Network Controller Card



#### FSB-OG3

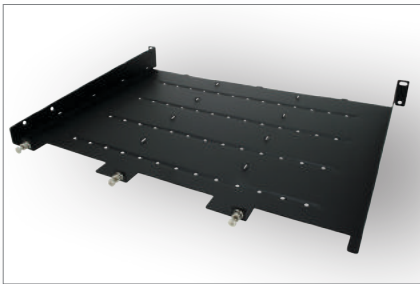
Rear Support Bars and Brackets

## STANDALONE ACCESSORIES

### FOR OUR BBG-1000 SERIES STANDALONE

With over 30 products available in the BBG-1000 form factor you will most likely find what you need for your application. To help with system design and integration, multiple mounting accessories and power options are available.

### BBG-1000 ACCESSORIES



**BBG-1000 Tray**  
Rack Mounting Surface



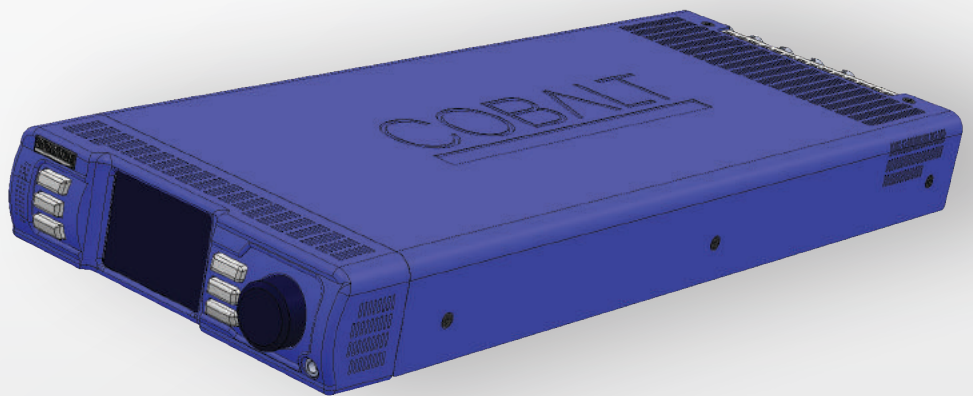
**BBG-1000-PS**  
BBG-1000 Power Supply

## BBG-1200-FR

### STANDALONE MULTI-FRAME SYSTEM

*Available IBC 2018*

The BBG-1200-FR is a user configurable, openGear™ compatible standalone multi-frame system. It supports standard openGear™ cards and rear-modules.





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.

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