COBALT

BBG-1190-ENC-H264-IP • HD/SD-SDI/CVBS H.264 Standalone Encoder (Single-Channel)
with Streaming IP Output with Advanced Protocol Support including UDP Single/Multicast, HLS, and RTMP

The **BBG-1190-ENC-H264-IP** encoder provides a compact form-factor standalone unit for distribution of MPEG-4 encoding. The encoder is **designed specifically for distribution**, with cost savings of offering only streaming IP instead of IP and DVB-ASI which is not needed for distribution. The BBG-1190-ENC-H264-IP is perfectly suited for IP video distribution over the Internet or over a dedicated IP link. Utilizing the openGear® open-architecture platform, the BBG-1190-ENC-H264-IP offers easy-to-use DashBoard™ setup and control operator interface. The advanced front panel display/user interface also allows initial and basic configuration setup without needing a computer or connection to remote control. Low-profile packaging fits 1 RU installations.

The BBG-1190-ENC-H264-IP offers the latest advances in video compression that delivers excellent video quality at very low bit rates. Unique encoding designs allow delivery of multiple HD and SD video services simultaneously. In addition to HD/SD-SDI inputs, the BBG-1190-ENC-H264-IP provides the flexibility of supporting SD analog composite video and an analog audio stereo pair per input channel. The BBG-1190-ENC-H264-IP provides two Ethernet outputs, supporting full-duplex 100 Mb/s and 1 Gb/s operation. Input video auto-detect mode allows encoding to automatically configure an output that correspond to the input, with resolution and frame rate same as input, and scaling set to same as input or other applicable choices. SMPTE-2038 processing allows inserting generic ancillary data packets in the transport stream, with frame accuracy. Up to four DID/SDID pairs can be supported. Using HTTP Live Streaming, the BBG-1190-ENC-H264-IP can transmit broadcast-quality video to mobile phones (Apple and Android 4.0 supported) and tablets. Full user remote monitor/control allows full card status and control access across a standard Ethernet network.

FEATURES

Compact self-contained form with built-in AC power supply. Up to 3 units can be installed in a 1RU tray.

Input video auto-detect mode automatically configures output to correspond to input frame rate and scaling or convert formats using built-in UDX scaler

Built-in video/audio ADC and embedder allows direct use with SD composite video and audio analog sources

Full support of CEA-608 and CEA-708 closed captioning. Closed-captioning filtering allows filtering to allow and use only SMPTE-334M and/or CEA-708 closed captioning.

SCTE 104 to SCTE 35 conversion

Support for inserting generic ancillary data packets in the transport stream using SMPTE-2038, with frame accuracy. Up to four DID/SDID pairs can be supported.
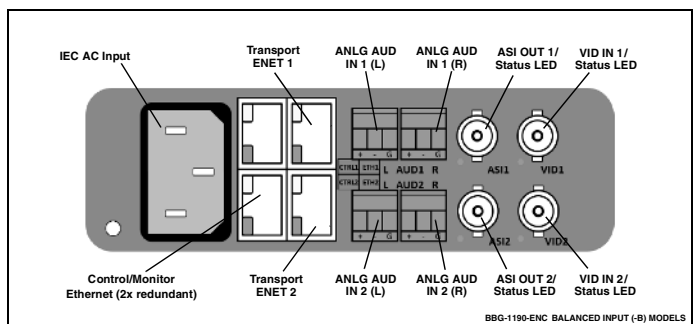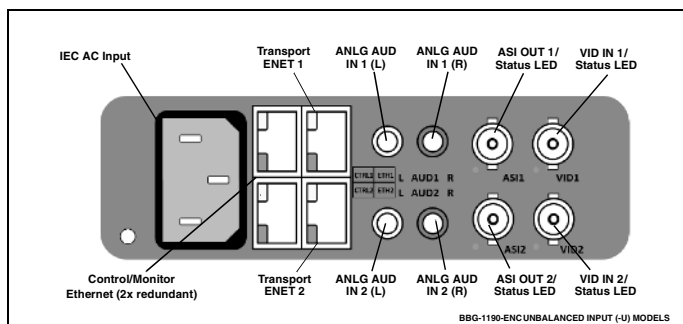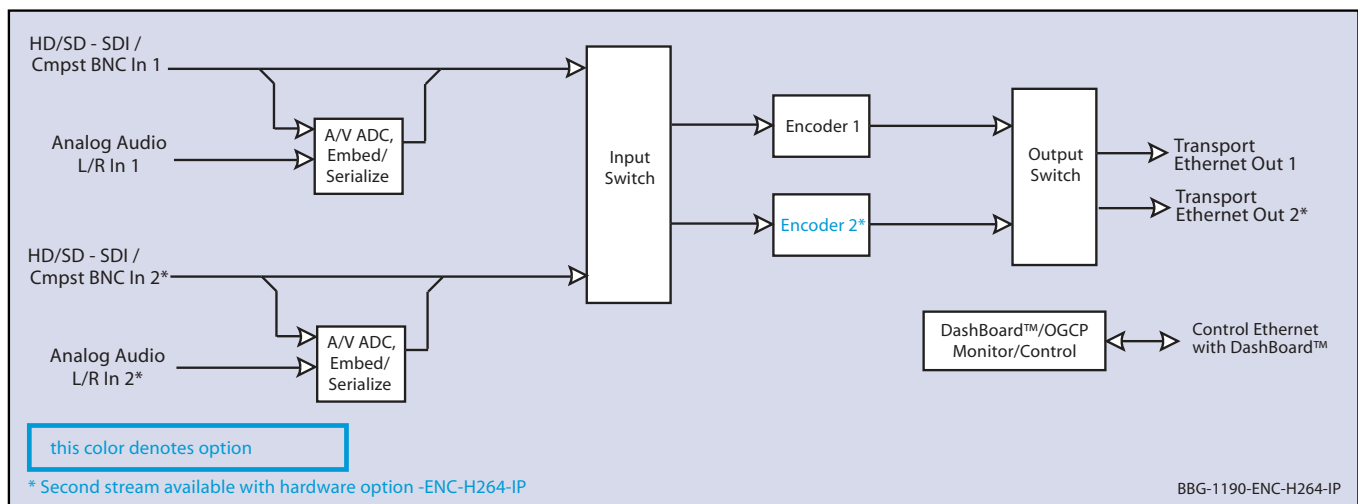
HTTP Live Streaming protocol allows viewing by Apple® and Android™ 3.0 (or higher) devices

RTMP support for publishing to Adobe® Media Server, availing SDI content to Internet viewers. Streams to CDNs, Akamai, Ustream, YouTube, Wowza Cloud service and many others.

Remote control/monitoring via DashBoard™ software. Initial and basic setup without connection to external network or remote control via front panel UI.

Dual-redundant internal power supplies

Five year warranty

Block diagram:
- HD/SD - SDI / Cmpst BNC In 1
- Analog Audio L/R In 1
- A/V ADC, Embed/Serialize
- HD/SD - SDI / Cmpst BNC In 2*
- Analog Audio L/R In 2*
- A/V ADC, Embed/Serialize
- Input Switch
- Encoder 1
- Encoder 2*
- Output Switch
- Transport Ethernet Out 1
- Transport Ethernet Out 2*
- DashBoard™/OGCP Monitor/Control
- Control Ethernet with DashBoard™

this color denotes option

* Second stream available with hardware option -ENC-H264-IP

BBG-1190-ENC-H264-IP

BBG-1190-ENC UNBALANCED INPUT (-U) MODELS

BBG-1190-ENC BALANCED INPUT (-B) MODELS

DashBoard

SPECIFICATIONS

Electrical
Power: 100-250 VAC, 47-63 Hz, 14W

Processing Channels
(1) channel
(Second additional channel available with option -ENC-H264-IP)

HD/SD-SDI Input
(1) input/channel; each configurable as:
HD-SDI (SMPTE 292M)
SD-SDI (SMPTE 259M) with EDH
Composite analog video (PAL/NTSC)

Audio Inputs Supported
Embedded SDI (1 pair/channel)
Unbalanced or balanced stereo audio pair (see Ordering Information)

Audio Encoding
MPEG-4 AAC-LC
Lip sync adjustment

Video Encoding
MPEG-4 AVC High profile at level 4.2 (HP@L4.2)
MPEG-4 AVC High profile at level 4.0 (HP@L4.0)
CBR & VBR
2Mbps to 12Mbps (configurable)
SD Video:
MPEG-4 AVC Main profile at level 3.0 (MP@L3.0)
CBR & VBR
1.5Mbps to 10 Mbps (configurable)

Video Resolution Supported
HD: 1920 x 1080p 60/50/30/29.97/25
1080 x 1920/1440i 30/29.97/25
1280 x 720/960/640p 59.94/50/30/29.97/25
SD: 576 x 720/528i 29.97fps
576 x 720/528i 25fps

Video Pre-Processing
Closed Captions CEA 608B and CEA-708C
WSS/AFD

Management and Control
10/100Base-T Ethernet
Configuration Import/Export
Audible/visual fault warning
In-band and out-of-band control
SNMP v1, v2
Datasafe automated card configuration
Accurate bit rate control
Startup to streaming in seconds

Ethernet Outputs
Number of outputs: (2) 100/1000Base-T RJ-45 ports, auto-negotiate or fixed speed
IPv4, IPv6, UDP

Regulatory Compliance
CE: CE marked in accordance with 89/336/EEC, 72/23/EEC and 1999/5/EEC Directive
UL: UL approval
US FCC: Part 15
EMC: EN55022, EN55024, EN6100-3-2
Safety: IEC60950
RoHS: 2011/65/EU
WEEE: 2012/19/EU

Physical
Dimensions (WxDxH): 5.8 x 14 x 1.7 in (14.6 x 35.6 x 4.4 cm) (including component projection)
Operating Temperature/Humidity: 32°F to 122°F (0°C to 50°C); 5% to 95% non-condensing

ORDERING INFORMATION

BBG-1190-ENC-H264-IP-B HD/SD-SDI/CVBS H.264 Standalone Encoder (Single-Channel) with Streaming IP Output with Advanced Protocol Support including UDP Single/Multicast, HLS, and RTMP - Balanced Analog Audio Input

BBG-1190-ENC-H264-IP-U HD/SD-SDI/CVBS H.264 Standalone Encoder (Single-Channel) with Streaming IP Output with Advanced Protocol Support including UDP Single/Multicast, HLS, and RTMP - Unbalanced Analog Audio Input

Note:
· Options denoted as "+" are software-based options which are available on new product when ordered or can be customer field-installed as a software upload upgrade.
· Options or ordering line items denoted as "-" are hardware-based options/items. These options are available as factory-installed only on new product, or product returned to Cobalt for factory installation.

Options (Software-Based)

+IP-TO-BROADCAST-P-SA Upgrade a BBG-1190-ENC-H264-IP (single-channel model) to single-channel model BBG-1190-ENC-HD-P plus one +AAC license

+IP-TO-BROADCAST-I-SA Upgrade a BBG-1190-ENC-H264-IP (single-channel model) to single-channel model BBG-1190-ENC-HD-I plus one +AAC license

+IP-TO-BROADCAST-Dual-P-SA Upgrade a BBG-1190-ENC2-H264-IP (dual-channel model) to dual-channel model BBG-1190-ENC2-HD-P plus two +AAC licenses

+IP-TO-BROADCAST-Dual-I-SA Upgrade a BBG-1190-ENC2-H264-IP (dual-channel model) to dual-channel model BBG-1190-ENC2-HD-I plus two +AAC licenses

Options (Hardware-Based and Accessories):

-ENC-H264-IP Add Encoder Second Channel Option (applicable for single-channel model BBG-1190-ENC-H264-IP)

BBG-1100-TRAY 1 RU Rack Mount Tray (supports up to 3 BBG-1100 series units)