

# BBG-1190-ENC2-H264-IP • HD/SD-SDI/CVBS H.264 Standalone Encoder (Dual-Channel) with Streaming IP Outputs with Advanced Protocol Support including UDP Single/Multicast, HLS, and RTMP



The **BBG-1190-ENC2-H264-IP** encoder provides a compact form-factor standalone unit for distribution of MPEG-4 encoding. These 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-ENC2-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-ENC2-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-ENC2-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. The BBG-1190-ENC2-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-ENC2-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.

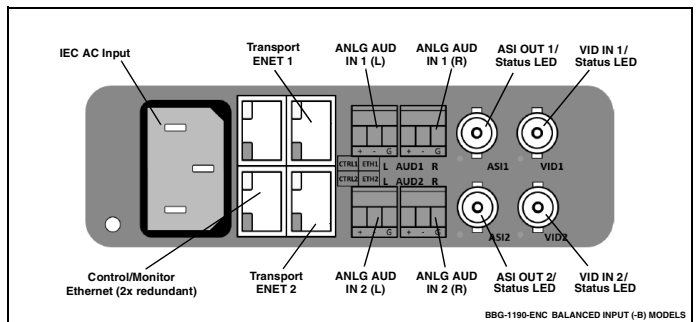
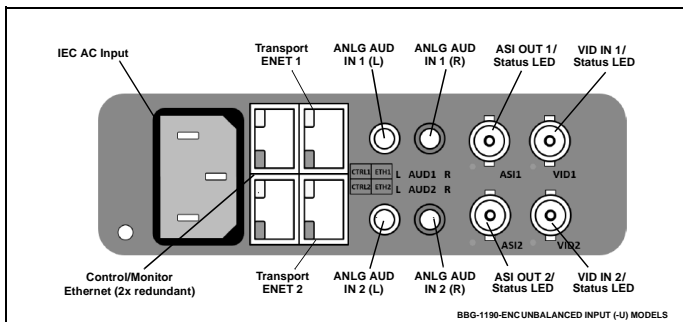
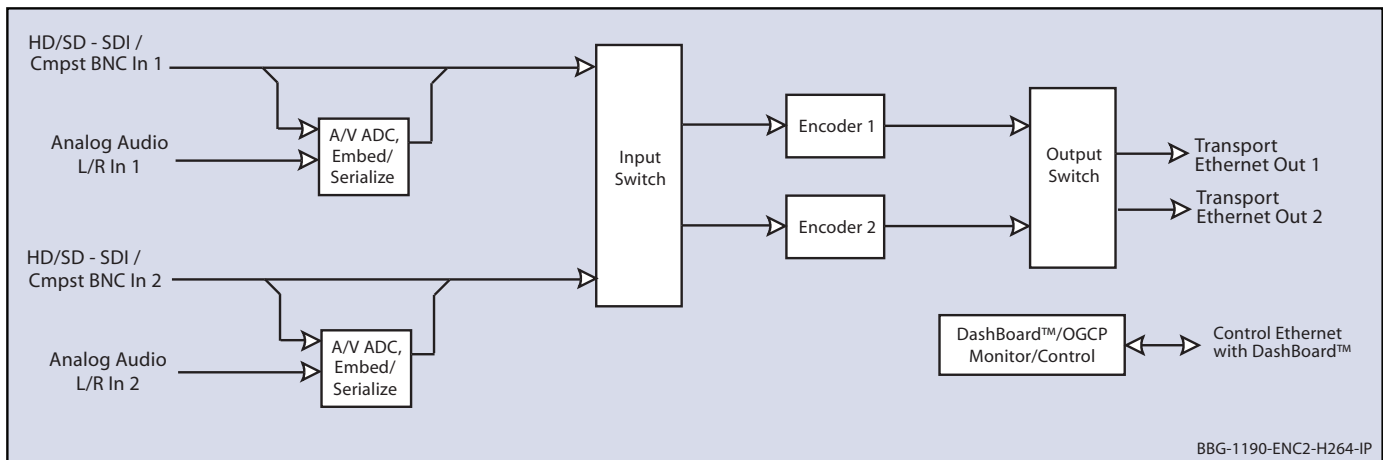
HTTP Live Streaming protocol allows viewing by Apple® and Android™ 3.0 (or higher) devices

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



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## SPECIFICATIONS

### Electrical

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

### Processing Channels

(2) channels

### 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 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 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 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-ENC2-H264-IP-B** HD/SD-SDI/CVBS H.264 Standalone Encoder (Dual-Channel) with Streaming IP Output with Advanced Protocol Support including UDP Single/Multicast, HLS, and RTMP – Balanced Analog Audio Input

**BBG-1190-ENC2-H264-IP-U** HD/SD-SDI/CVBS H.264 Standalone Encoder (Dual-Channel) with Streaming IP Outputs 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-Dual-SA** Upgrade a BBG-1190-ENC2-H264-IP (dual-channel model) to dual-channel model BBG-1190-ENC2-HD-P plus two +AAC licenses

### Options (Accessories):

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