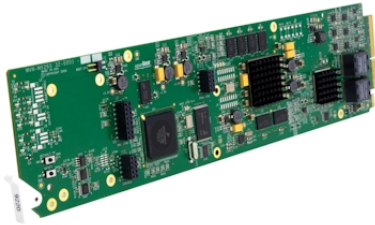


# 9990-DEC-MPEG-SDI2 • MPEG4 AVC and MPEG2 Decoder with ASI and IP Inputs and 2x SDI Outputs



The Cobalt® **9990-DEC-MPEG-SDI2 MPEG4 AVC and MPEG2 Decoder** with ASI and IP Inputs and 2x SDI Outputs provides a high performance real-time MPEG-2 and MPEG-4 SD and HD video decoding openGear® solution. Its design is practically future-proof and decodes traditional video formats such as UDP and RTP (MPEG Transport Stream) as well as Internet and Mobile formats such as RTMP (Adobe® Flash) and HLS (Apple® HTTP Live Streaming).

The 9990-DEC-MPEG-SDI2 supports newer cameras that output RTMP and security cameras that output RTSP. Its high-density, low power design saves on operating expenses, with up to 10 cards installed in a 20-slot openGear® frame. IP and DVB-ASI input streams are supported, with outputs as ASI, DVB-ASI, SDI (2x DA), and CVBS (for SD streams) using MPEG4 AVC or MPEG2 decoding. The 9990-DEC-MPEG-SDI2 can decode from several audio codecs and provides Dolby® pass-thru. SMPTE-2038 processing allows de-embedding SMPTE-2038 generic ancillary data packets. Full user DashBoard™ remote control allows full status and control access locally or across a standard Ethernet network. A complete SNMP MIB is also included.

## FEATURES

- Comprehensive MPEG decoding solution - MPEG4 AVC and MPEG2 to ASI, SDI, and CVBS with built-in audio codecs. 2x DA SDI BNC outputs. Convenience IP output also.
- IP reception of unicast or multicast
- DVB-ASI Turnaround to IP and ASI with SPTS Splitting
- Supports RTMP and RTSP sources
- MPEG-1 Layer II, AAC -LC, AAC-HE, E-AC-3 and AC-3 audio codecs standard (Dolby pass-thru; Dolby decode option available)

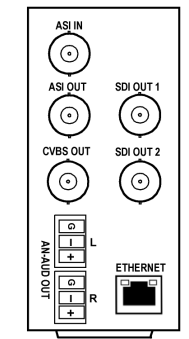
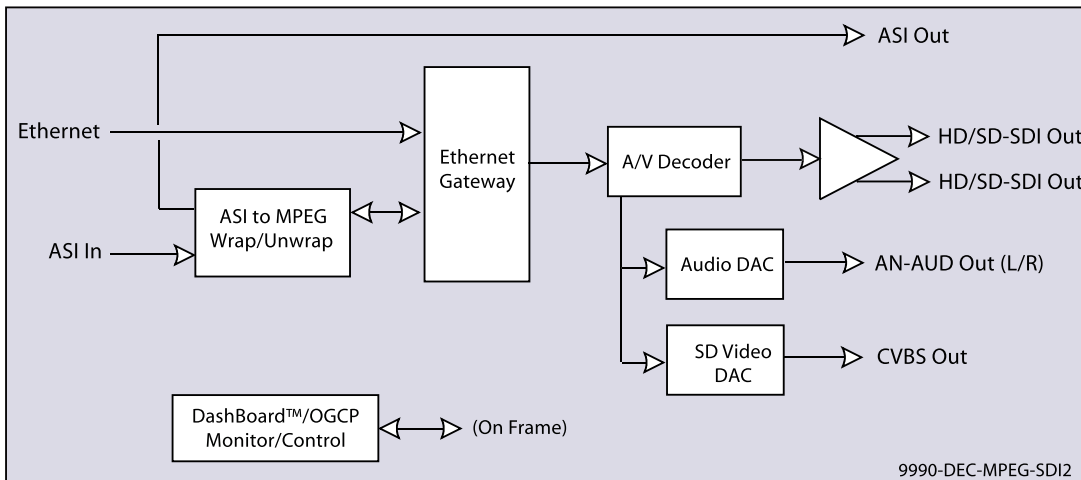
- SMPTE-2038 processing allows de-embedding of SMPTE-2038 generic ancillary data packets
- SCTE-35 to SCTE-104 conversion
- Support for RTP/ARQ interoperability with **+RTP/ARQ** Cobalt Encoder option. (Decoder **+ARQ** license included standard.)
- Support for selecting desired video PID in multi-angle streams
- Several options available for scalable configuring

- SNMP MIB included
- Low-power/high-density design - less than 14 Watts per card
- Remote control/monitoring via Dashboard™ software
- Five year warranty

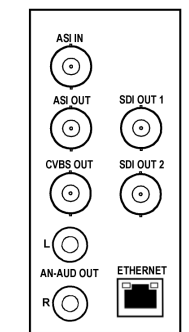
## OPTIONS

- Dolby® Decode License (+DEC-DDEC) - Allows Dolby audio to be decoded as SDI embedded PCM audio or analog audio output
- SMPTE 2022 Forward Error Correction License (+FEC)
- Automatic Repeat Request, Error Correction Assigned For Live Video Over IP / Internet Based on the Reliable Internet Streaming Transport (RIST) Standard.(+RIST/ARQ-DEC)
- IP IN License (+IP-IN) - Enables IP Port and IP Protocols for IP-to-SDI conversion

- Monitoring License (+TSMON)
- Genlock License (+GENLOCK)
- RTMP Server License (+DEC-RTMP-SVR)
- IP Out License (+IP-OUT) - ASI-to-IP conversion option (If host card has +FEC license, card will also be able to generate FEC on the output stream)



**RM20-9990DEC-D**



**RM20-9990DEC-E**



# 9990-DEC-MPEG-SDI2 • MPEG4 AVC and MPEG2 Decoder with ASI and IP Inputs and 2x SDI Outputs

## SPECIFICATIONS

Note: Inputs/outputs are a function in some cases of rear I/O module used.

### Power

< 8 Watts

### Inputs

- (1) DVB-ASI 75Ω BNC
- (1) IP; 1000Base-T RJ-45
- Gen lock (from frame ref 1/2)

### Outputs

- (2; 1x2 DA) HD/SD-SDI 75Ω BNCs (4:2:2 10-bit)
- (1) CVBS 75Ω BNC
- (1) DVB-ASI 75Ω BNC
- (2) Analog Audio Out L/R (balanced 3-pin terminals or unbal RCA depending on rear module used)

### Network Transport Protocols

- UDP (Unicast or Multicast)
- RTP (Unicast or Multicast)
- RTMP Client or Server (Adobe Flash)
- RTSP (Security Camera)
- SMPTE 2022 Pro-MPEG-FEC
- ARQ
- HTTP Live Streaming (HLS) client

### Video Resolution

- 3G:  
1920 x 1080p - 50/59.94/60
- HD:  
1920 x 1080i - 50/59.94/60
- 720 x 1280p - 50/59.94
- SD:  
480 x 720 - 29.97
- 576 x 720 - 25

### Video Codec Supported

- MPEG-2
- H.264 4:2:0 High Profile

### Audio Codec Supported/Processing

- MPEG-1 Layer 2 (mp2)
- AAC-LC
- HE-AAC
- AC-3, E-AC-3 (Dolby® pass-thru)

## ORDERING INFORMATION

**9990-DEC-MPEG-SDI2** MPEG4 AVC and MPEG2 Decoder with ASI and IP Inputs and 2x SDI Outputs

**RM20-9990DEC-D** 20-Slot Frame Rear I/O Module (Standard Width) (1) RJ-45 Ethernet connector, (1) ASI Input BNC, (1) ASI Output BNC, (2) 3G/HD/SD-SDI Output BNC, (1) CVBS Output BNC, (2) Balanced Analog Audio Outputs

**RM20-9990DEC-E** 20-Slot Frame Rear I/O Module (Standard Width) (1) RJ-45 Ethernet connector, (1) ASI Input BNC, (1) ASI Output BNC, (2) 3G/HD/SD-SDI Output BNC, (1) CVBS Output BNC, (2) Unbalanced Analog Audio Outputs (RCA)

**+DEC-DDEC** Dolby® Decode License Option

**+FEC** SMPTE 2022 Forward Error Correction License Option

**+GENLOCK** Genlock License Option

**+DEC-RTMP-SVR** RTMP Server License Option

**+IP-IN** IP In License Option

**+IP-OUT** ASI-to-IP Conversion License Option

**+TSMON** Monitoring License Option

**+ DEC-RTMP-SVR** RTMP Server License Option

**+RIST/ARQ-DEC** Automatic Repeat Request License, Error Correction Assigned For Live Video Over IP / Internet Based on the Reliable Internet Streaming Transport (RIST) Standard