



CORNET SWITCHING SYSTEMS

Intelligent VDO[®] CompactA HD/SD

Single/Dual Channel SD, HD-SDI, & VGA Encoder



The iVDO CompactA HD/SD is an advanced single or optional dual channel HD-SDI, VGA, and Composite video/audio H.264 encoder. Its compact size, light weight, and standards conformance make it ideal for manned/unmanned air, sea, and ground surveillance requiring multi-stream video/audio encoders that support metadata. The iVDO CompactA HD/SD is available in board only or chassis versions. Both versions perform KLV synchronous and asynchronous metadata multiplexing. For operation in moist or dirty environments, the iVDO CompactA HD/SD board can be conformal coated. Management of the iVDO CompactA HD/SD is handled via an easy-to-use web browser.

Key Features

- Single or Dual Channel HD/SD H.264 IP-based Encoder
- HD SDI, VGA, and Composite Inputs
- Stereo Audio Encoding - single or dual channel
- Metadata multiplexed with video and audio elementary streams into a STANAG 4609 MPEG-2 transport stream
- Management via web browser
- Conformal Coating optional

Specifications

Video

Inputs:	HD-SDI, VGA or Analog video
Conformance:	HD-SDI: SMPTE 292M, SMPTE 274M SMPTE 296M NTSC: EIA-170/EIA-170A color or B/W PAL: CCIR 624 color or B/W
Format:	8 bits YCbCr; 4:2:0; Progressive and Interlaced
Encoding:	H.264 MPEG-4 Part 10 AVC, ISO/IEC 14496-10
Profile:	Base, Main, or High compliant
Level:	4.2
H.264:	Quarter Pel Motion Estimator Intra Prediction; CAVLC
Resolutions:	
HD-SDI:	HDTV: 720p (1280x720p50/60), 1080i 50/60, 1080p 30 (1920x1080)
Composite:	Analog NTSC: 720x480 DI
Analog	PAL: 720x576 DI
VGA:	800 x 600/60 SVGA/PC Graphics 1024x768/60 XGA/PC Graphics 1280x720/60 WXGA/PC Graphics/ HDTV 1280x768/60 WXGA/PC Graphics 1280x800/60 WXGA/PC Graphics 1280x1024/60 SXGA/PC Graphics 1400x1050/60 SXGA+/PC Graphic 1600x1200/60 UXGA PC Graphics 1680x1050/60 WSGA+/PC Graphics 1920x1080/60 HD 1080/PC Graphics/HDTV 1920x1200/60 WUXGA/PC Graphics

Frame Rate: 1, 5, 10, 15, 20, 25, 30, and 60 frames/second

Scaling: Both SD and HD up-scaling and down-scaling

GOP Structure: I, IP
I to P Ratio: 1, 5, 10, 15, 20, 25, 30, 40, 50, 60, 100, 250, 500, and 1,000

Encode Rate: Composite, Analog: 512 Kbps to 20 Mbps (1 Kbps steps)
HD SDI: 512 Kbps to 20 Mbps (1 Kbps steps)

Stream Type: Elementary: Conforms to RFC 3984 governs 264 RTP stream
Transport: Conforms to RFC 2250 governs MPEG-2 (TS) per ISO/IEC 13818-1:2000
Containing video and audio ES. Metadata present as a user stream in TS

Latency: <100 ms, Typ. 50 to 80 msec.

Rate Control: Constant, Variable or Constant Skip Frame

Audio AAC compression, Stereo or Mono input
Bit rate: 64 Kbps or 192 Kbps
Sampling rate: 32 KHz or 64 KHz

KLV Metadata

Multiplexing: Ingestion of KLV metadata from external sources Input via Ethernet interface and ancillary SDI Synchronous and Asynchronous Metadata

Network

TTL: 1 to 128, user definable
Protocols: RTP, UDP, TCP/IP, HTTP, IGMP V1/V2, ICMP
IP Packets: Unicast and Multicast (IGMP V2)

Serial Port Specifications

- One RS-232 asynchronous port
- Simple bidirectional pass through port
Menu driven console port for configuration and management
Standard data rates from 300 bps to 115200 bps
- Stop bits 1 and 2 bits; Data bits 6, 7, 8; Parity: none, even, odd

Other Functions

IP socket to Encoder serial port
Web-based management
LED: Power, heartbeat, link status, Com_Tx, Com_Rx, No Video

Connectors

Input Video: BNC (f), 75 Ohm unbal -- Analog NTSC or PAL
BNC (f), 75 Ohm unbal -- HD-SDI
HD-15 (f), 15-pin VGA
Ethernet: One RJ-45, built-in TX/RX LEDs; 100/1000-BaseT, auto, half/full duplex
Audio: DB-9 (f) Stereo Ch 1: pins 1&6; Stereo Ch 2: pins 8&9; Ground: Pin 4
Serial: DB-9 (f) pins 2, 3, and 5

Physical

Dimension: 4.2" w x 7.6" d x 1.5" h
Weight: 16 oz. (450 grams)
Coating: Conformal PCB, optional

Electrical

Power: 13 W approx.
Input Voltage: +4.5 VDC to +24 VDC
+12 VDC is norm
DC power cable with Ault #3 connector

Environmental

Operating: -40 C to +60° C
Storage: -40° C to +80° C
Humidity: 10% - 95% non-condensing