

HDE-2S-IP

MPEG-2 HD/SD Encoder/Multiplexer 2 HD-SDI or 8 SD-SDI/NTSC to 1 IP/2 ASI

HDE-2S-IP (MPEG-2 HD/SD Encoder Multiplexer - 2xHD-SDI or 8xSD-SDI/NTSC to IP/2xASI) accepts two (2) high definition (HD) programs from HD-SDI inputs or up to eight (8) standard definition (SD) programs across the SDI and/or NTSC inputs. MPEG-2 encoded outputs are multiplexed into one Multi Program Transport Stream (MPTS), which is available in the following formats simultaneously: 1xIP (100/1000 BaseT) and 2xASI.

The encoder supports Dolby® Digital audio encoding for (16) analog stereo audio pairs (L+R) which in addition to primary and secondary audio programs also provide a third pair for the Audio Descriptor Service, an additional narration track for blind and visually impaired, as mandated by the Twenty-First Century Communications and Video Accessibility Act of 2010 (CVAA).

Ad insertion SCTE 35 compliant queuing messages are detected for each program from either the multiple audio Cue Tone inputs or an insertion contact closure (operator selectable).

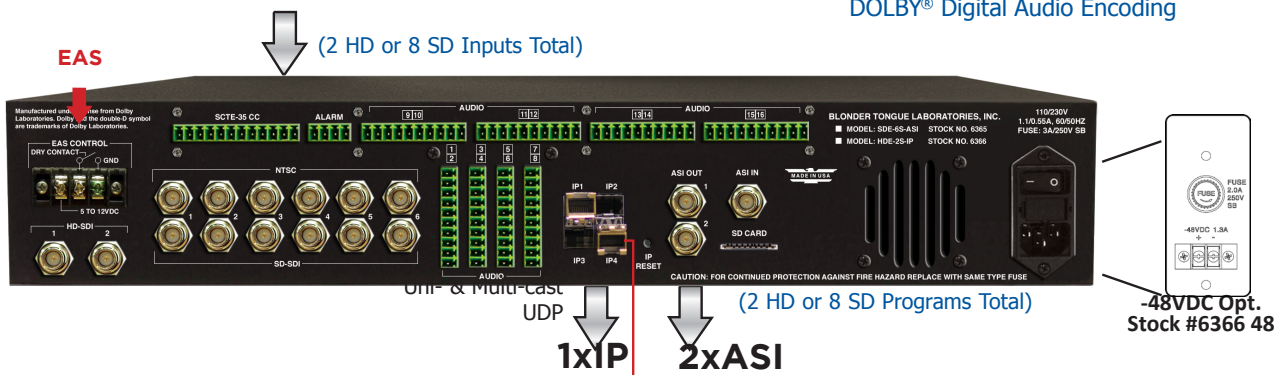
A baseband audio analog encoding capability table is provided on the following page for easy reference. In addition to the baseband audio analog encoding capability audio programs that are already encoded and present on the SDI inputs may be multiplexed with the respective output (pass-through) without utilizing the baseband audio analog encoding resource.

The encoder also supports Closed Captioning (EIA-608, and EIA-708), and Emergency Alert System (EAS). A front-panel DVI port is available for real-time monitoring of active programs during operation.

Comprehensive remote monitoring and control is accomplished using any standard Web browser via a rear-panel SFP port (10/100BaseT).

2xHD-SDI or 8xSD-SDI/NTSC

MPEG-2 HD/SD Encoding
DOLBY® Digital Audio Encoding



NOTE: Shown with 2 (supplied) SFP modules installed for control and data output

Features

- Accepts up to (2) HD or (8) SD programs from the following inputs: 2xHD-SDI, 6xSD-SDI, and/or 6xNTSC.
- Simultaneously delivers the following outputs: 2xASI (mirrored) and 1xIP (100/1000 BaseT)
- Provides comprehensive GUI-based monitoring and control using standard web browsers via 10/100 BaseT SFP module (included)
- Provides audio encoding for Primary Audio, SAP (Secondary Audio Program), & Audio Descriptor Service
- Provides user-selectable audio level adjustment of +/- 6 dB in 0.5 dB increments on all analog audio inputs through GUI interface
- Detects ad messaging via SCTE 35 activated by either multiple Cue Tone Audio inputs or upon contact closures (user selectable)
- Supports Closed Captioning EIA-608 and EIA-708
- Supports Real-time Dolby® Digital audio encoding
- Supports Emergency Alert System (EAS)
- Supports user-defined static PSIP configuration
- Supports compressed digital audio pass through for all SDI inputs
- Supports fixed VBR and Stat-Mux video encoding

Ordering Information

Model	Stock #	Description
HDE-2S-IP	6366	MPEG-2 HD/SD Encoder/Multiplexer (2 HD-SDI or 8 SD-SDI inputs), 110-230VAC
	6366 48	MPEG 2 HD/SD Encoder with -48VDC Power

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MPEG-2 HD/SD Encoder/Multiplexer 2 HD-SDI or 8 SD-SDI/NTSC to 1 IP/2 ASI

Specifications

Input

HD-SDI	Connectors: 2x BNC Standard: SMPTE 292M Video Resolution: 480i, 720p, & 1080i Audio: Embedded PCM and pass-thru Dolby® Digital Analog Stereo Balanced Audio (SD-SDI)
SD-SDI	Connectors: 6x BNC Standard: SMPTE 259M Video Resolution: 480i Audio: Embedded PCM and pass-through Dolby® Digital Analog Stereo Balanced Audio
NTSC	Connectors: 6x BNC for Analog Video 8x terminal strips for Analog Audio Standard: Analog Video Video Resolution: 525 lines per frame Audio: Analog Stereo Balanced Audio
EAS (Emergency Alert System)	Connectors BNC: Video (User-selectable NTSC 1 to 6) Terminal: Audio (User-selectable Audio 1 to 16) Standard: Analog Audio/Video Trigger Mechanism: 5-12 VDC & Dry Contact Closure (Terminal Strip)

Encoding Profile	
Video	Output Format: MPEG-2 MP@ML, ISO 13818-2 Chroma: 4:2:0 Resolution: 480i, 720p & 1080i Frame rate: 29.97 fps (480i); 29.97 fps (1080i); 59.97 fps (720p) Aspect Ratio: 4:3, 16:9 GOP Structure: I & P frames (user-selectable) Transport Rate: Variable (user-selectable) Video Rate: Variable (user-selectable) Video Pre-filter: Variable (user-selectable) Color Space: YCbCr
Audio	Output Format: Dolby® Digital Sampling rate: 48 kHz Bit rate: Variable; 96-448 Kbps (user-selectable) Level Adjustment: ± 6 dB, 1 dB increment (user-selectable)
Digital Program Insertion (DPI)	Connectors: Terminal strip for Cue Tone Audio Standard: SCTE 35
Closed Captioning	HD/SD -SDI: EIA-608, EIA 708; (Embedded in input) NTSC: EIA-608 (Embedded in input)

Output

ASI	Connector: 2x BNC (Rear-panel) Format: DVB-ASI Standard: ETSI EN 50083-9
IP	Connector: 1x SFP (Rear-panel - SFP module included) Standard: IEEE 802.3 100/1000 Base-T Ethernet Network Protocols: UDP, RTP, multicast, unicast, MPTS output

Baseband Analog Audio Encoding Capability

SD-SDI or NTSC Video Input #	1	2	3	4	5	6
Primary Audio	Y	Y	Y	Y	Y	Y
Secondary Audio	Y	Y	Y	Y	Y	Y
Video Descriptor Audio	Y	Y	Y	Y	Note 1	Note 1
Cue Tone Audio	Note 2	Note 2	Note 2	Note 2	Note 2	Note 2
Cue Tone via Contact Closure	Note 3	Note 3	Note 3	Note 3	Note 3	Note 3

There are a total of sixteen (16) stereo analog audio encoding engines in the unit. The table above illustrates one example of how this resource may be utilized. In this example all the audio programs are provided as stereo baseband analog inputs. In this example none are provided by digital audio present on the SD-SDI inputs.

Note 1: In the example above, a third discrete Audio Encoder input will not be available for video inputs 5 and 6. However, the Secondary Audio for 5 and 6 can be used to provide the Video Descriptor Service instead of being used for a second language input.

Note 2: Detects ad insertion messages generated per SCTE 35 from multiple Cue Tone Audio inputs (user selectable).

Note 3: Detects ad insertion messages in a preset sequence per SCTE 35 activated by a contact closure (user selectable).

General

Dimensions (W x D x H):	19.0 x 16.0 x 3.5 inches (483 x 406 x 89 mm); 2RU
Power:	
Stock #6366:	110-230VAC, 60/50Hz (Fuse: 3.0A, 250V, SloBlo)
Stock #6366 48:	-48VDC (Fuse: 2.0A, 250V SloBlo)
Power Dissipation:	100W (MAX)
Weight:	17 lbs (3.6 kg)
Operating Temperature:	32 to 122 °F (0 to 50 °C)
Storage Temperature:	-13 to 158 °F (-25 to 70 °C)

Alarms/Monitoring/Control

Local Monitoring:	1x Input and 1x Status LEDs 1x Power LED
Local Control:	1x DVI Port 1x IP Reset button
Remote Monitoring/Control:	GUI-based menu via Web browser (1x SFP rear-panel port; 10/100Base-T) (SFP module included) SD card based S/W upgrade (future option)