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Blonder Tongue

SDE-4AV-QAM
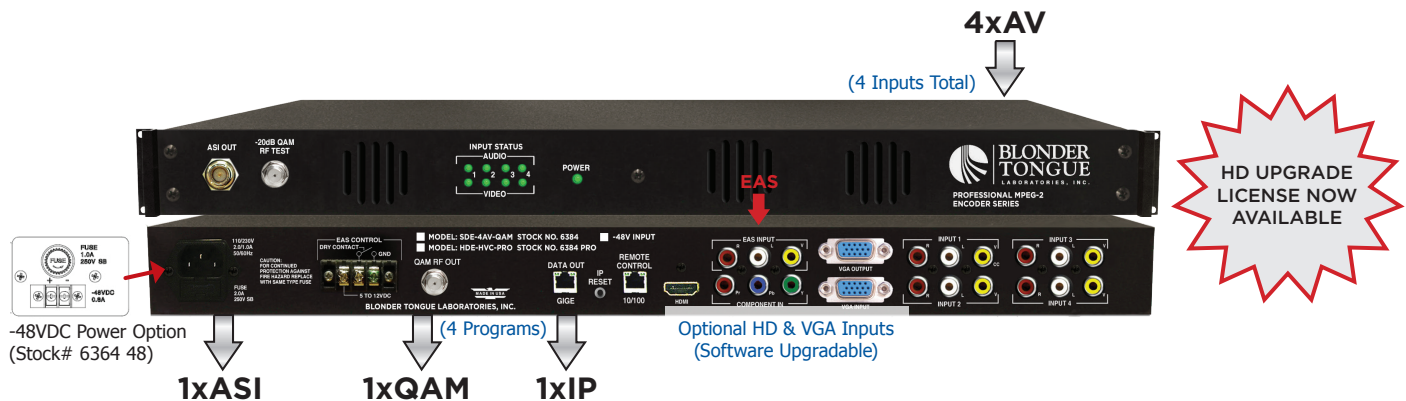## MPEG-2 Enhanced SD Encoder 4-AV to 1-QAM/ASI/IP

SDE-4AV-QAM (MPEG-2 Enhanced SD Encoder) provides superior Standard Definition (SD) encoding allowing the operator to use low video bit rates freeing up valuable bandwidth, while preserving video quality.

The unit accepts up to four (4) standard-definition (SD) input programs in NTSC baseband Audio/Video format. Each input program is digitized, MPEG-2 encoded, and then multiplexed into one Multi-Program Transport Stream (MPTS). The output is available in the following formats simultaneously: 1xQAM, 1xASI, and 1xIP (GigE; MPTS).

The encoder supports Dolby® Digital audio encoding, and Closed Captioning (EIA-608). It is also equipped with an Emergency Alert System (EAS) interface, accepting NTSC video and baseband L/R audio for EAS signal inputs. A front-panel RF test point allows for monitoring/testing of the QAM output without service interruption.

Comprehensive remote monitoring and control is accomplished using any standard Web browser via a rear-panel 10/100Base-T Ethernet connection.

Easy HD migration can be achieved with the optional HD-PRO software upgrade (6364 LIC). This field installable option enables the unit to be configured in either HD or SD mode via its web interface. When operating in HD mode (with the HD-PRO software upgrade), the encoder accepts one (1) program from any one of the following inputs: 1xHDMI (unencrypted), 1xVGA or 1xComponent.

4xAV
(4 Inputs Total)

HD UPGRADE LICENSE NOW AVAILABLE

-48VDC Power Option (Stock# 6364 48)

1xASI   **1xQAM**   (4 Programs)   **1xIP**

Optional HD & VGA Inputs (Software Upgradable)

Features

- Enhanced SD performance for low video bit rates
- Accepts up to four (4) programs in NTSC baseband A/V format
- Digitizes, MPEG-2 encodes, & multiplexes up to four programs into one MPTS
- Simultaneously delivers the following outputs: 1xQAM, 1xASI, and 1xIP (GigE; MPTS)
- Supports optional HD software upgrade to accept one program from any of the following inputs: 1xHDMI (unencrypted), 1xVGA, or 1xComponent
- Provides comprehensive GUI-based monitoring and control via standard Web browsers
- Provides a front-panel RF test point (at 20 dB below primary QAM output)
- Configurable to ITU-T J.83 Annex A and B digital QAM formats
- Equipped with EAS interface (Analog Video + L/R Audio)
- Supports Real-time Dolby® Digital audio encoding
- Supports Closed Captioning EIA-608
- Supports user-defined PSIP configuration

Ordering Information

Model	Stock #	Description
SDE-4AV-QAM	6364	MPEG-2 SD Encoder; 4AV inputs; 1xQAM + 1xASI + 1xIP outputs; EAS compatible
	6364 48	MPEG-2 SD Encoder; -48 VDC Power
SDE-4AV-HD-LIC	6364 LIC	HD-PRO software upgrade for SDE-4AV-QAM. After upgrading, the unit becomes a HDE-HVC-PRO. See Related Products on reverse side.

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SDE-4AV-QAM

MPEG-2 Enhanced SD Encoder 4-AV to 1-QAM/ASI/IP

Specifications

Input

NTSC

Connectors:	4x RCA for Analog Video 4 sets each 2x RCA for Analog Audio (L, R)
Video Resolution:	480i

EAS (Emergency Alert System)

Connectors:	3x RCA (Video, Audio L & R)
Trigger Mechanism:	5-12 VDC & Dry Contact Closure (Terminal Strip)

Encoding Profile

Video

Output Format:	MPEG-2 SD MP@ML; ISO 13818-2
Chroma:	4:2:0
Resolution:	480i
Frame rate:	29.97 fps (480i)
Aspect Ratio:	4:3
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 and RGB

Audio

Output Format:	Dolby® Digital
Sampling rate:	48 kHz
Bit rate:	Variable; 128-320 Kbps (user-selectable)

Closed Captioning

NTSC:	EIA-608; Embedded in NTSC input

Optional Inputs (Requires HD-PRO Software Upgrade)

HDMI

Connectors:	1x HDMI
Video Resolution:	480i, 720p, & 1080i
HDCP Encryption:	Not supported
Audio:	Embedded PCM & pass-through Dolby® Digital only

VGA

Connectors:	2x Female VGA (Input + Loop-through Output)
Video Resolution:	640x480 @ 60 fps 800x600 @ 60 fps 1024x768 @ 60 fps
Audio:	2x RCA for Analog Audio (L, R)

Component

Connectors:	3x RCA for Video (Y, Pb, Pr) 2x RCA for Analog Audio (L, R)
Video Resolution:	480i, 720p, & 1080i
Video Aspect Ratio:	4:3 & 16:9

Output

QAM

Connector:	1x "F" Female (Rear-panel)
Modulation:	QAM 16, 32, 64, 128, and 256
Standards:	ITU-T J.83; Annex A and B
DVB Symbol Rate:	Variable; up to 7 MSymbol/sec (MBaud)
Frequency Range:	54 to 1002 MHz
Tuning:	CATV Channel Selectable (Ch. 2 to 158)
Channels' Bandwidth:	6 MHz
RF Level:	+40 dBmV
RF Level Adjustment:	+32 to +42 dBmV, 1 dB increment
Frequency Tolerance:	± 0.5 kHz @ 77 °F (25 °C)
Frequency Stability:	± 5 kHz over 32 to 122 °F (0 to 50 °C)
Amplitude Flatness:	± 0.25 dB (over 6 MHz channel)
Phase Noise:	-98 dBc (@ 10 kHz)
Spurious:	-60 dBc
Broadband Noise:	-70 dBc (@ +40 dBmV output level, 5.5 MHz bandwidth)
Impedance:	75 Ω
Spectral Inversion:	Auto Recognition
Carrier Suppression:	45 dB
Return Loss:	14 dB typical
Signal-to-Noise Ratio (SNR):	40 dB typical
MER:	40 dB typical
I/Q Phase Error:	Less than 1 degree
I/Q Amplitude Imbalance:	Less than 1%

ASI

Connectors:	1x BNC (Front-panel)
Format:	DVB-ASI
Standard:	ETSI EN 50083-9

GigE

Connector:	1x RJ45 (Rear-panel)
Standard:	1000Base-T Ethernet
UDP/RTP:	Supported (user-selectable)

General

Dimensions (W x D x H):	19.0 x 18.125 x 1.75 inches (483 x 460 x 44 mm)
Power:	
Stock # 6364:	110-230VAC, 60/50 Hz (fuse 2.0A, 250V, SloBlo)
Stock # 6364 48:	-48 VDC (Fuse: 1.0A, 250V, SloBlo)
Power Dissipation:	~40 W (max)
Weight:	~10 lbs (4.5 kg)
Operating Temperature:	32 to 122 °F (0 to 50 °C)
Storage Temperature:	-13 to 158 °F (-25 to 70 °C)
Operating Humidity:	0 to 95% RH @ 35 °C max, non-condensing
Storage Humidity:	0 to 95% RH @ 35 °C max, non-condensing

Alarms/Monitoring/Control

Local Monitoring:	8x Input Status LEDs (Video 1-4; Audio 1-4) 1x Power LED 1x "F" Female RF Test Port
Local Control:	1x IP Reset button
Remote Monitoring/Control:	GUI-based menu via Web browser (1x RJ45 rear-panel connector; 10/100Base-T)