HDE-HVC-PRO

Professional MPEG-2 HD/SD Encoder
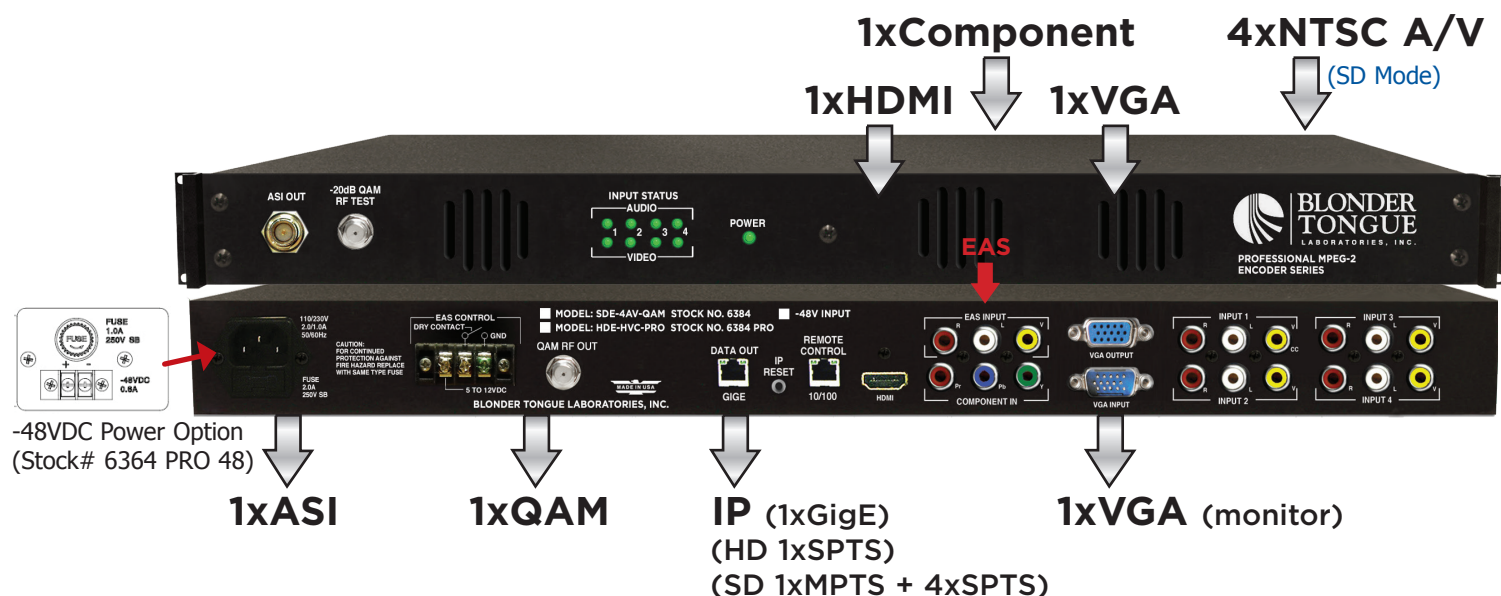### 1xHDMI/VGA/Component to 1xQAM/ASI/IP

Blonder Tongue ENCODERS

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HDE-HVC-PRO (Professional Series MPEG-2 HD/SD Encoder) is especially designed to deliver superior motion optimization for programming such as fast-paced live sporting events and is configurable in either HD or SD mode via its web interface.

When operating in HD Mode, the encoder accepts one (1) program from any one of the following inputs: 1xHDMI (unencrypted), 1xVGA or 1xComponent. In SD Mode the encoder accepts up to four (4) standard-definition (SD) input programs in NTSC baseband Audio/Video format. Each input program is digitized and MPEG-2 encoded, and the outputs (in either HD or SD Mode) are available in the following formats simultaneously: 1xQAM, 1xASI, and IP (GigE; HD 1xSPTS; SD 1xMPTS + 4xSPTS).
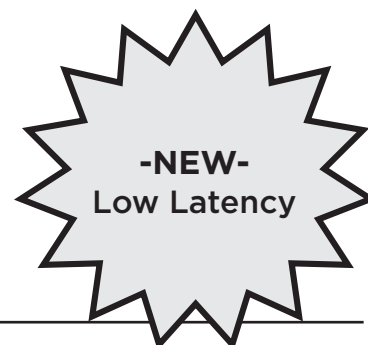
The encoder supports Dolby® Digital audio encoding, and Closed Captioning (EIA-608). It is also equipped with an Emergency Alert System (EAS) interface, accepting NTSC video and baseband L/R audio for EAS signal inputs. A front-panel RF test point allows for monitoring/testing of the QAM output without service interruption.

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

1xComponent · 4xNTSC A/V (SD Mode) · 1xHDMI · 1xVGA · EAS

-48VDC Power Option (Stock# 6364 PRO 48)

1xASI · 1xQAM · IP (1xGigE) (HD 1xSPTS) (SD 1xMPTS + 4xSPTS) · 1xVGA (monitor)

Features

- **HD Mode:** Accepts one (1) program from any of the following inputs: 1xHDMI (unencrypted), 1xVGA, 1xComponent, and 1xComposite
- **SD Mode:** Accepts up to four (4) programs in NTSC baseband A/V format
- Simultaneously delivers the following outputs: 1xQAM, 1xASI, and IP (GigE; HD 1xSPTS; SD 1xMPTS + 4xSPTS)
- 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

**-NEW-
Low Latency**

Ordering Information

Model	Stock #	Description
HDE-HVC-PRO	6364 PRO	Professional Series MPEG-2 HD Encoder; 1xHDMI/VGA/Component/Composite inputs; 1xQAM + 1xASI + IP outputs
	6364 PRO 48	Professional Series MPEG-2 HD Encoder; -48 VDC Power

Made in U.S.A.

Specifications

Input

HD Mode:

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

SD Mode:

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

HD/SD Mode:

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

Video Encoding Profile	
Output Format:	ISO/IEC 13818-2 MPEG-2 (MP@ML, MP@HL)
Chroma:	4:2:0
Aspect Ratio:	4:3; 16x9 (with HD-PRO software upgrade)
GOP Structure:	I & P frames (user-selectable)
Transport Rate:	Variable (user-selectable)
Video Pre-filter:	Variable (user-selectable)
Color Space:	YCbCr and RGB

Supporting These Formats:

Mode	Resolution	H x V	Scan	Frames Per Sec.	Recommended Video Bit Rate* (user selectable)
HD	1080i	1920 x 1080	Interlaced	29.97	10-30 Mbps
HD	720p60	1280 x 720	Progressive	59.94	10-30 Mbps
SD	480i	704 x 480	Interlaced	29.97	3-15 Mbps

The format (HD or SD), desired quality level, and most importantly the actual content (talking head, text scroll, full action sports, etc), will determine what bit rate is selected.

Audio Encoding Profile	
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

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)

Encoder Latency:	250 msec

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 PRO:	110-230VAC, 60/50 Hz (fuse 2.0A, 250V, SloBlo)
Stock # 6364 PRO 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)

Related Products

Model	Description
SDE-4AV-QAM	MPEG-2 SD Encoder; 4AV inputs; 1xQAM + 1xASI + IP outputs; EAS compatible
SDE-4AV-HD-LIC	HD-PRO Software upgrade for SDE-4AV-QAM
HDE-CSV-QAM	MPEG-2 HD Encoder; 1xComponent/HD-SDI/HDMI/VGA/Composite inputs; 1xQAM+1xASI+1xIP outputs
HDE-CHV-QAM	MPEG-2 HD Encoder; 1xComponent/HDMI/VGA/Composite inputs; 1xQAM+1xASI+1xIP outputs
HDE-4S-QAM	HD Encoder; 4xHD-SDI + 4xComponent inputs; 4xQAM + 4xASI + 4xGigE outputs; EAS compatible; 1RU
HDE-2H/2S-QAM	HD Encoder; 2xHDMI + 2xHD-SDI + 4xComponent inputs; 4xQAM + 4xASI + 4xGigE outputs; EAS compatible; 1RU