

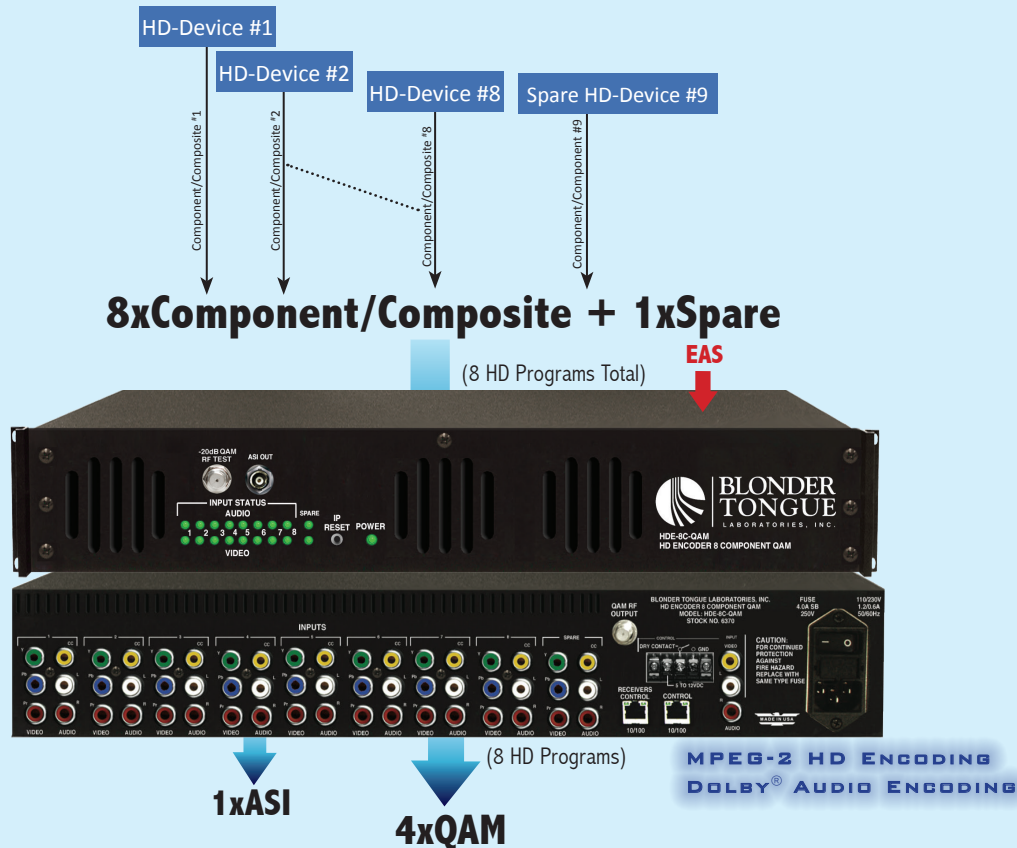


HDE-8C-QAM (MPEG-2 HD Encoder – 8xComponent/Composite – 4xQAM) accepts up to eight (8) analog programs from any of the following inputs: 8xComponent and 8xComposite. The encoder is equipped with a spare input (9th input) to replace any one (1) of the primary eight (8) inputs in the event of a failure.

The encoder digitizes, MPEG-2 encodes each input into a high-definition stream, multiplexes the resulting eight (8) streams, and then modulates them onto four (4) adjacent QAM channels in the 54-1002 MHz range (CATV 2-158). Any one (1) of the four (4) QAM outputs is also available in ASI format. The encoder supports Dolby® Digital audio encoding, and Closed Captioning (EIA-608). It is also equipped with an Emergency Alert System (EAS) interface. 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.

HDE-8C-QAM with Option 1 (Stock # 6370-1) enables the encoder to (i) accept eight (8) analog programs from Dish Network's ViP211k satellite receivers, (ii) automatically switch over to any of the primary eight (8) receivers in the event of failure to maintain the program stream, and (iii) provide remote monitoring and control of up to nine (9) Dish Network's ViP211K satellite receivers through UPnP protocol using a standard Web browser via a rear-panel 10/100Base-T Ethernet connection.



FEATURES

- Accepts up to 8 programs from any of the following inputs: 8xComponent and 8xComposite
- Supports additional 1 spare input to replace the failed input
- Digitizes, MPEG-2 encodes, and multiplexes up to 8 inputs into 4 QAM output channels (2 programs per QAM channel)
- Provides any 1 of the 4 QAM output streams in ASI format
- Compatible with ITU Annex A and B digital QAM formats
- 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)
- 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
HDE-8C-QAM	6370	MPEG-2 HD Encoder; 8xComponent + 8xComposite + 1xSpare inputs; 4xQAM + 1xASI outputs; EAS compatible
	6370-1	OPTION-1 MPEG-2 HD Encoder for Dish Network's ViP211k Satellite Receivers

SPECIFICATIONS

INPUT

Component	Primary Connectors: 8 sets each 3x RCA for Video (Y, Pb, Pr) 8 sets each 2x RCA for Analog Audio (L, R) Spare 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
Composite Video	Primary Connectors: 8 sets each 1x RCA for Video (Y) 8 sets each 2x RCA for Analog Audio (L,R) (shared with component connectors) Spare Connectors: 1x RCA for Video (Y) 2x RCA for Analog Audio (L,R) (shared with component connectors) 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 HD 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 Bit Rate: Variable (user-selectable) Video Pre-filter: Variable (user-selectable)
Audio	Output Format: Dolby® Digital Sampling rate: 48 kHz Bit rate: Variable; 128-320 Kbps (user-selectable)
Closed Captioning	Component: EIA-608; 1x RCA (CC) Composite: EIA-608

GENERAL

Dimensions (W x D x H):	19.0 x 19.5 x 3.5 inches (483 x 495 x 89 mm)
Power:	110 - 230 VAC, 50/60 Hz (Fuse: 4.0A, 250 VDC, Slo Blo)
Power Dissipation:	~60 W (max)
Weight:	~15 lbs (6.8 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

RELATED PRODUCTS

Model	Description
HD264-2S-IP	H.264 HD Encoder; 2xHD-SDI + 2xHDMI + 2xComponent inputs; 2xIP + 4xASI outputs; 1RU
HDE-2H/2S-QAM	MPEG-2 HD Encoder; 2xHDMI + 2xHD-SDI + 4xComponent inputs; 4xQAM + 4xASI + 4xGigE outputs; EAS compatible; 1RU
HDE-4S-QAM	MPEG-2 HD Encoder; 4xHD-SDI + 4xComponent inputs; 4xQAM + 4xASI + 4xGigE outputs; EAS compatible; 1RU
HDE-CHV-QAM	MPEG-2 HD Encoder; 1xComponent/HDMI/VGA/Composite inputs; 1xQAM+1xASI+1xIP outputs
HDE-CSV-QAM	MPEG-2 HD Encoder; 1xComponent/HD-SDI/HDMI/VGA/Composite inputs; 1xQAM+1xASI+1xIP outputs

OUTPUT

QAM	Connector: 1x "F" Female (rear panel; up to 4x RF QAM ch. combined) 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) Channel Bandwidth: 24 MHz (4x Adjacent 6 MHz) RF Level: +40 dBmV ± 1 dB (4 channels combined) RF Level Adjustment Range: +35 to +45 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: 39 dB typical I/Q Phase Error: Less than 1 degree I/Q Amplitude Imbalance: Less than 1%
ASI	Connector: 1x BNC (front-panel) Output Assignment: Any 1 of 4 QAM output streams Format: DVB-ASI Standard: ETSI EN 50083-9

ALARMS/MONITORING/CONTROL

Local Monitoring:	16x Input Status LEDs (Video 1-8; Audio 1-8) 2x Spare LEDs (Video & Audio) 1x Power LED
Local Control:	1x "F" Female RF Test Port 1x IP Reset button
Remote Monitoring/Control:	GUI-based menu via Web browser (1x RJ45 connector; 10/100Base-T)