



# Encoder/Modulator

MPEG2 & MPEG4 HD & SD 4:2:2/4:2:0 L-band DVB-S/S2

## EMB-242-2-SH-E

Temix EMB-242-2-SH-E MPEG2/MPEG4 SD/HD 4:2:0/4:2:2 DVB-S/S2/DSNG Encoder/Modulator is a high quality, professional, flexible and really cost-effective solution for DSNG.



This Encoder/Modulator is a state of the art evolutionary product which is the best performing & fully programmed high-end encoding with the highest video quality and lowest latency. Relevant features are:

- Component, Composite, HDMI, HD/SD-SDI video inputs
- Ultra low latency as 150ms
- Full HD up to 1080P supported
- Support 4:2:0 (8 bit), 4:2:2 (10 bit)
- Digital, Analog and SDI embedded audio (8 channel) inputs.
- 5.1 channel Dolby Digital (AC-3) encoding support
- 7.1 channel SPDIF audio optical input (pass through).
- Additional 1x ASI input for supporting of insertion of externally generated PSIP into the transport stream.
- Provides internally generated PSI, PSIP and SI.
- Selectable MPEG-2 HD or MPEG-4 H.264/AVC HD real-time video encoding.
- Dolby Digital (AC-3), MPEG-1 Layer II, AAC-LC, HE-AAC audio encoding.
- CEA-608 input source is converted to 708.
- Internally generated TVCT, CVCT, SDT, NIT
- Control and monitoring via web browser, front panel or SNMP.
- 4 channels AES/EBU Digital Audio
- 4 stereo (8 channels) analog input with D-sub type
- Integrated Advanced Scaler function: Control of Frame rate, Image enhance, Phase Noise, Correction of Color, Control of Gamma
- L-Band Output 950 to 2150 MHz
- DVB-S/S2/DSNG Modulation
- BISS mode-1, BISS mode-E, BISS mode-0
- Operating on either the C, Ku or Ka-bands
- Symbol Rate: 1 Mbaud - 50 Mbaud

Video Input		Audio Input	
Analog Input	Component , Composite up to 1080i	Analog Input	4 stereo
Level	1 Vp-p	Freq. Range	20Hz - 20KHz
Digital Input	HDMI , HD-SDI	Impedance	600 Ohm
Level	1000 mVp-p (HDMI) 800mVp-p (HD-SDI)	Connector	D-SUB 15pin x 2
Resolutions	480i29.97, 576i25, 720p50/59.94	Digital Input	4x AES-EBU, Embedded SDI/ HDMI (4 Stereo, 8 Channels)
	1080i25/29.97	Sampling Rate	32, 44,1, 48 KHz
	1080p25/29.97	Connector	BNC (75Ohm) / HDMI-19PIN
SD Aspect Ratio	4:3, 16:9	Optical Input	SPDIF (7.1 Channel) (pass through)

### Main Features:

- Ultra Low Latency 150ms
- Chroma Format 4:2:0 & 4:2:2
- Full HD Resolutions up to 1080p
- DVB-S/S2 Modulation
- BISS mode-1/E/0
- Option: Video Confidence Monitoring

\*The Information included in this data sheet may be changed without advise. rev\_01/18

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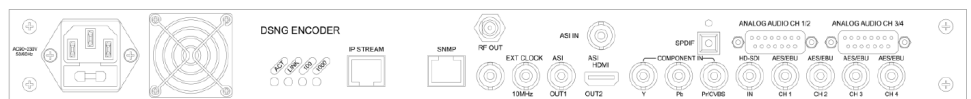
## MPEG2 & MPEG4 HD & SD 4:2:2/4:2:0 L-band DVB-S/S2 EMB-242-2-SH-E



Video Encoder			
Encoding	MPEG-2 HP@HL, MP@HL, MP@ML, H.264 HP@L4, MP@L3	Encoding Rate	MPEG-2: 1.6-50 Mbps H.264: 0.6-50 Mbps
Chroma Format	4:2:0 (8bit), 4:2:2 (10bit)	PSNR	38dB
Bit Rate Mode	CBR,VBR	Latency	150ms typical
Audio Encoder			
Encoding	MPEG-1 Layer II (2ch) AAC LC (2ch, 5.1ch)	AC-3 (2ch) HE-AAC v1 (5.1ch)	AC-3 Pro (2ch, 5.1ch) HE-AAC v2 (2ch)
Bit rate AC-3	128, 192, 256, 384 KHz	AC-3 Pro	96, 112, 128, 160, 192, 224, 256, 320, 384KHz
Bit rate MPEG1	64, 96, 112, 128, 160, 192, 224, 256, 320, 384KHz	AAC LC	32,48,56,64,80,96,112, 128,160,192, 224, 256, 320, 384KHz
Bit rate HE AAC v2	32, 48, 56, 64, 80, 96KHz	AC-3 Pro 5.1	224, 256, 320, 384, 448, 576, 640KHz
Bit rate AAC LC 5.1	96, 112, 128, 160, 192, 224, 256, 320, 384KHz	HE AAC v1 5.1	96, 112, 128, 160, 192, 224, 256KHz
Delay	100 - 400 ms	Dolby E-Pass Through	*Under the audio input source of Dolby-E only
TS Input			
Transport Stream	DVB-ASI 1 Port	Connector	BNC (75 Ohm)
Packet Format	188 Byte	Input Level	800mVp-p
TS Output			
Transport Stream	ASI 2 port	Connector	BNC (75 Ohm)
TS Bit Rate	MPEG-2: 2.5-60 Mbps H.264: 2.5-60 Mbps	Packet Format	188 Byte
Modulation			
DVB-S		DVB-S2	
Mode code	QPSK, 8PSK, 16QAM	Mode code	QPSK, 8PSK, 16APSK, 32APSK
Roll-Off	0.05 - 0.35 (+0.05)	Roll-Off	0.05 - 0.35 (+0.05)
BISS	Mode (1, E Injected, E Buried and 0)	BISS	Mode (1, E Injected, E Buried and 0)
Symbol Rate	1 - 50Mbauds	Symbol Rate	1 - 50Mbauds
Pilot Insertion, Operating Mode CCM only, Frame Type Normal/Short			
RF	Reverse Spectrum, Tilt Correction, Carrier Modulator		
Output Level	-30 to +5 dBm, 0.1dB Step	L-Band	950 - 2150 MHz
General			
Power Requirements		AC 90~230V, 50/60Hz, max 120 W	
Weight & Dimensions		4.7 kg, 19" x 1RU x 400 mm (W x H x D)	
Operating Temper.		0-50°C	

- Reduce the cost of transmission as supporting wide range of bit-rate control and advanced video coding techniques.
- Designed for Teleports, Digital Satellite News Gathering (Flyaways, Terminals & Vehicles) either C, Ku, DBS or Ka-bands

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