

INGRON7001EM DVB-S/S2 MPEG-2/H.264 HD Encoder Modulator



Features

- Integrated with video/audio encoding and modulation modules in one unit
- Video compression: MPEG-2 & MPEG-4 AVC/H.264 SD/HD
- Standard of modulation in DVB-S/S2(EN302 307, EN300 421) mode
- Output with frequency range in 950~2150MHz (RF) and 50~200 MHz(IF) for option
- Multiple video(HDMI, SDI, YPbPr, CVBS, S-Video) and audio inputs for option
- Additional ASI input available
- LCN insertable, PID and PSI/SI editable
- BISS scrambling function configured
- 24V power coupling output supported(RF item)
- GPS 10MHz reference clock embedded
- Swappable design modules (except 2*YPbPr + 2*CVBS +2*S-Video item)
- Low latency function
- Easy-operation by LCD and keyboard on front panel
- Network upgrading by NMS and http web network management supported

Specifications

Video Compression

SDI Input	Video Compression	MPEG-2, MPEG-4 AVC/H.264
	Video Input	SDI
	Resolution	1920*1080_60P, 1920*1080_50P, (for MPEG4 AVC/H.264 only); 1920*1080_60i, 1920*1080_50i, 1280*720_60P, 1280*720_50P; 720*480_60i, 720*576_50i
HDMI Input (optional)	Video Compression	MPEG-2, MPEG-4 AVC/H.264
	Video Input	HDMI
	Resolution	1920*1080_60P, 1920*1080_50P, (for MPEG4 AVC/H.264 only); 1920*1080_60i, 1920*1080_50i, 1280*720_60P, 1280*720_50P; 720*480_60i, 720*576_50i
YPbPr/CVBS/S-Video Input (optional)	Video Compression	MPEG-2, MPEG-4 AVC/H.264
	Video Input	YPbPr, CVBS, S-Video
	Resolution	CVBS: (PAL) 720*576_50i; (NTSC) 720*480_60i; YPbPr: 1920*1080_60i, 1920*1080_50i, 1280*720_60P, 1280*720_50P

Audio Compression

SDI Input	Audio Compression	MPEG-1 Layer II; MPEG-2-AAC, MPEG-4-AAC, AC3 for option
	Audio Input	SDI
	Sample Rate	48 KHz
	Bit Rate	64, 96, 128, 192, 256, 320 Kbps
HDMI Input (optional)	Audio Compression	MPEG-1 Layer II, MPEG-2-AAC, MPEG-4-AAC
	Audio Input	HDMI
	Sample Rate	48 KHz
	Bit Rate	64, 96, 128, 192, 256, 320 Kbps

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Analog Audio Input (optional)	Audio Compression	MPEG-1 Layer II, MPEG-2-AAC, MPEG-4-AAC
	Audio Input	RCA, 1*stereo/2*mono, unbalanced
	Sample Rate	48 KHz
	Bit Rate	64, 96, 128, 192, 256, 320 Kbps

Input

Video Input	1*SDI; 1*HDMI/1*CVBS/1*YPbPr+1*HDMI+1*CVBS/2*CVBS/2*YPbPr+2*CVBS+2*S-Video optional	
Audio Input	1* SDI; 1*HDMI/unbalanced 1*stereo or 2*mono/ unbalanced 2*stereo or 4*mono optional	
ASI Input	Number	1*ASI+1*ASI(backup)
	Connector Type	BNC interface, 75Ω

DVB-S/S2 Modulation

Standard	DVB-S2, EN302 307, EN300 421	
Constellation	(DVB-S) QPSK	
	(DVB-S2) QPSK, 8PSK	
Frequency Range	950~2150 MHz(RF), by 10 KHz stepping 50~200 MHz(IF)	
FEC	(DVB-S/QPSK) 1/2, 2/3, 3/4, 5/6, 7/8; (DVB-S2/QPSK) 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10; (DVB-S2 8PSK) 3/5, 2/3, 3/4, 5/6, 8/9, 9/10	
Output Level	-10 ~ -41.5 dB	
Symbol Rate	0.05~20.0 Msps	
Roll-off Factor	0.35, 0.25, 0.2	

Output

RF/IF Output	Number	1*RF Output
	Frequency Range	950~2150 MHz, successionaly adjustable, in 10KHz stepping; 50~200MHz
	Connector Type	50Ω, N interface
ASI Output	Number	1*ASI
	Connector Type	75Ω, BNC interface

Other Functions & Configurations

24V power coupling output supported(for RF out version)	
BISS scrambling configured	
Low latency mode: normal, Mode 1, Mode 2	
GPS 10MHz reference clock embedded	
Logo insertion from USB port optional for 1*SDI or HDMI+YPbPr+CVBS input versions	

Management

Remote Control	by SNMP/NMS
Local Control	LCD and keyboard on front panel
Upgrading	by network
Language	English

General

Voltage	100~240V AC, 50/60Hz
Power Consumption	25 W
Environment	0~45°C (Operation), -20~80°C (Storage)
Dimension (W*D*H)	410*460*44 mm
Gross Weight	4.5 KGS

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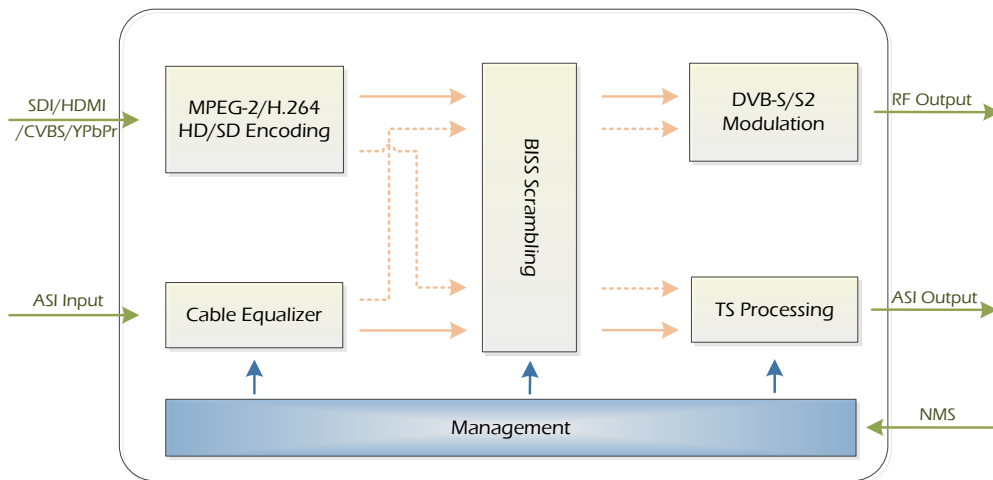
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Introductions

INGRON7001EM MPEG-2/H.264SD/ HD DVB-S/S2 Encoder Modulator offers a professional and high-integration modulator, together with encoding module and other functions. The device is able to accept several kinds of inputs, including HDMI, SDI, YPbPr, CVBS, and S-Video, and compress signals in MPEG-2 SD or MPEG-4 AVC/H.264 HD standard. Additional TS from ASI port is able to be multiplexed with the input channel(s). The device works in DVB-S/S2(QPSK, 8PSK) modulation mode, and outputs RF in 950~2150 MHz (or 50~200 MHz, IF) in excellent index. INGRON7001EM is default configured with multiple functions of BISS scrambling, GPS 10MHz reference clock, low latency, 24V power coupling output, etc.. As more applications of DVB-S/S2 system needed, this device becomes an ideal and popular choice, for its cost effectiveness, good performance and diversified functions for satellite uplink and broadcasting projects.

Diagram



Rear Panel



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Options

	INGRON7001EM -10	INGRON7001EM -20	INGRON7001EM -30	INGRON7001EM -40	INGRON7001EM -50	INGRON7001EM -60
HDMI Input	1*HDMI+ 1*HDMI(backup)	/	1*HDMI	/	/	/
SDI Input	/	1*SDI	/	/	/	/
YPbPr Input	/	/	1*YPbPr	/	/	2*YPbPr
CVBS Input	/	/	1*CVBS	1*CVBS	2*CVBS	2*CVBS
S-Video Input	/	/	/	/	/	2*S-Video
Logo Insertion	/	YES	/	/	/	/
Video Compression	MPEG-2, H.264			MPEG-2 / H.264	MPEG-2	MPEG-2
MPEG-2 AAC, MPEG-4 AAC	YES	(optional)	YES	/	/	/
AC3	/	(optional)	/	/	/	/
Frequency Out Range	950~2150 MHz (RF) or 50~200 MHz (IF)					
Low Latency	YES	/	YES	/	/	Optional
10MHz Output	YES	YES	YES	YES	YES	YES
24V Power Output	for 950~2150MHz (RF) only					