

H-12SDI-QAM-IPLL & H-4SDI-QAM-IPLL

12 HD/SD-3G SDI with 608/708CC (Closed Captioning) CATV RF MODULATOR



CATV Digital Modulator with 12 SDI Input + 8-VSB/QAM RF INPUT, IPTV TS INPUT and CATV RF COAX Output + IPTV TS output + ASI output - LOW LATENCY - UP to 1080p/60

12 SDI to CATV RF Modulator and IP Video Encoder - Thor Broadcast new high density HD encoder RF modulator has an all new platform for modulation for up to 12 SDI Inputs in SD/HD/3G-SDI sources while simultaneously being able to output IP Transport Streams from those sources. This multi-function device is a professional headend in a box with massive functionality which includes encoding, multiplexing, scrambling and modulation.

Easily combine multiple programs on a single RF Frequency. Depending of the video bit-rate, you can put several TV programs on one frequency(6mhz step). On QAM 256QAM, each 6Mhz channel contains 38Mbps data. So, if the encoding bit rate is 9Mbps, we can fit 4 videos on one physical channel, for this means we can create 4 programs in one RF channel eg: 7.1, 7.2, 7.3, 7.4, also by using VCT -Virtual channel setting, we can assign any static channel a more friendly number in which will be displayed on the TV's.

Features

- 12 HD-SDI inputs with MPEG2 & MPEG4 AVC/H.264 Encoding
- 1 RF tuner input for re-mux The tuner - base model support 8-VSB but QAM or DVB-T or ISDB-T tuner could be requested
- 256 IP(DATA1 port only) input over UDP and RTP protocol
- MPEG1 Layer II, MPEG2-AAC, MPEG4-AAC, Dolby Digital AC3 (2.0) encoding AC3 (2.0/5.1) passthrough
- 16 groups multiplexing /Scrambling/ QAM or 8-VSB modulating
- 8 groups multiplexing / DVB-T modulating---Optional
- 16 MPTS IP (DATA2 port only) output over UDP, RTP/RTSP
- 8 MPTS IP (DATA2 port only) output over UDP, RTP/RTSP--only for DVB-T RF out
- PID remapping/ accurate PCR adjusting/PSI/SI editing and inserting
- Control via web management
- Lowest cost per channel, breakthrough price

Thor Broadcast HD-SDI to QAM modulators are combination devices that bundle real time HD hardware encoders with a managed program stream multiplexer and agile RF QAM modulator. Each chassis can encode up to 4 channels of HD-SDI video to MPEG-2 or H.264 and modulate the programs on up to 4 QAM carrier outputs. These are individual encoding channels that can be setup and operated in individual settings; inputs 1 & 2 can be setup in Mpeg2 and have 720i resolution while inputs 3&4 can be setup in H.264 and output 1080p.

In addition to the encoded programs, the unit can also modulate programs encoded externally via an ASI input. Most notably Thor Broadcast utilizes some of the fastest encoding speeds in Mpeg2. When you're trying to broadcast SDI video over IP or RF, professionals in all backgrounds choose Thor for their paramount applications. Pro-DVB integration personnel's first choice in live video applications like the NFL, NBA, NHL, NASCAR circuits, and even F1 tracks around the globe all rely on Thor Broadcast's fastest encoding speeds to ensure their viewers and fans all see the race as close to the real thing as possible. Reliability is our foremost concern, these encoder/modulators have stood the test of time globally in performing arts centers, governments, military installations, and high end security applications mean that you'll have an excellent product for years to come.

Features

- Any SDI Input up to 3G-SDI @1080p60
- ASI Input SPTS or MPTS up to 120 Mbps
- Fully Network Managed through browser
- QAM-256/64 RF Output up to 4 Adjacent
- IPTV Output Unicast or Multicast IGMP UDP,RTP/RTSP
- ASI Output with multiplexer cherry picking
- #1 Warranty on the market - 5 years all inclusive
- Free Live Tech Support from Los Angeles, CA

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Specifications

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Input	12 HD-SDI inputs with CC 1 x 8-VSB or (QAM optional)Tuner for re-mux, F type interface 256 IP input over UDP and RTP, DATA1, RJ45			
Video	Resolution	Input	1920*1080_60p, 1920*1080_50p, 1920*1080_60i, 1920*1080_50i, 1280*720_60p, 1280*720_50P, 720*480_60i, 720*576_50i	
		Output	1920*1080_60p, 1920*1080_50p, 1920*1080_60i, 1920*1080_50i, 1440*1080_60i, 1440*1080_50i, 1280*720_60p, 1280*720_50P, 720*576_50p, 720*576_25p, 720*480_60p, 720*480_30p, 720*480_25p, 320*240_60p, 320*240_50p, 320*240_30p, 320*240_25p, 320*180_60p, 320*180_50p, 320*180_30p, 320*180_25p, 960*540_50i, 704*576_50i, 704*480_60i, 640*576_50i, 640*480_60i, 544*576_50i, 544*480_60i,	
	Encoding	MPEG2 & MPEG4 AVC/H.264		
	Bit-rate	0.8-19Mbps for H.264 encoding 1-19Mbps for MPEG-2 encoding		
	Rate Control	CBR/VBR		
	GOP Structure	GOP B Frame: 0-3, GOP P Frame: 0-6		
	Advanced Pretreatment	De-interlacing, noise reduction		
Audio	Encoding	MPEG1 Layer II, MPEG2-AAC, MPEG4-AAC, Dolby Digital AC3 (2.0) encoding, AC3 (2.0/5.1) pass through		
	Sampling rate	48KHz		
	Resolution	24-bit		
	Bit-rate	64Kbps-320kbps each channel		
Multiplexing	Maximum PID Remapping	256 input per channel		
	Function	PID remapping (automatically or manually)		
		Accurate PCR adjusting Generate PSI/ SI table automatically		
Scrambling	Maximum simulcrypt CA	4		
	Standard	EN300 429/ITU-T J.83A/B		
	Connection	Local/remote connection		
Modulation	QAM	QAM Channel: 16 non-adjacent carriers output (maximum bandwidth 192MHz) Standard: EN300 429/ITU-T J.83A/B MER: >40db RF frequency: 50-960MHz, 1KHz step RF output level: -20--+10dbm (27-47 dbmV), 0.1db step Symbol Rate: 5.0Mps-7.0Mps, 1kps stepping Constellation: 16/32/64/128/256QAM		
			J.83A	J.83B
		Constellation	16/32/64/128/256QAM	64/256 QAM
		Bandwidth	8M	6M
		Standard	EN300744	
	DVB-T	FFT mode	2K, 4K, 8K	
		Bandwidth	6M, 7M, 8M	
		Constellation	QPSK, 16QAM, 64QAM	
		Guard Interval	1/4, 1/8, 1/16, 1/32	
		FEC	1/2, 2/3, 3/4, 5/6, 7/8	
		MER	>42 dB	
		RF frequency	50-960MHz, 1KHz step	
		RF out	8*RF COFDM DVB-T out (8 carriers combined output)	
RF output level	-20--+10 dBm (17-37 dbmV), 0.1db step			
Stream output	RF output (F type interface)			
	16 MPTS output over UDP and RTP/RTSP as mirror of 16 QAM carriers, 8 MPTS output over UDP and RTP/RTSP as mirror of 8 DVB-T carriers(model dependent) 1*1000M Base-T Ethernet interface			
	Network management (WEB)			
System function	English language			
	Ethernet software upgrade			
Miscellaneous	Dimension (WxLxH)	482mmx440mmx44mm 1RU Rackmount		
	Approx weight	8kg		
	Environment	0-45°C(work); -20-80°C (Storage)		
	Power requirements	AC 110V± 10%, 50/60Hz, AC 220 ± 10%, 50/60Hz		
	Power consumption	20W		

Specifications

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*All Specifications Subject to Change Without Notice	
Input	3G-SDI, HD-SDI: BNC- 50 Ohm
Supported Resolutions	1280x720P 60 / 59.94 / 50 Hz 1920x1080I 60 / 59.94 / 50 Hz 1920x1080P 60 / 59.94 / 50 Hz
Video Codecs	MPEG-2 HD 1.5-19.5 Mbps H.264 HD 0.8-19.5 Mbps
Audio Codecs	MPEG-1 Layer II MPEG-2 AAC MPEG-4 AAC
Audio Sample Rate	48 kHz
Audio Bit Rates	64 kbps, 96 kbps, 128 kbps, 192 kbps, 256 kbps, 320 kbps
Modulation Standard	QAM - J.83A, J.83B, J.83C
RF Frequency Range	30-960 MHz 1 KHz Step
RF Power Level	15-43 dBmV Adjustable
DVB-ASI Output	BNC Connector: 1-60 Mbps
DVB-ASI Input	BNC Connector: 1-120 Mbps Programs Selected by PID Programs Muxed to all Outputs
IPTV Output	MPEG-TS MPTS over UDP,RTP/RTSP Unicast and Multicast Supported
Power Input	100-240 VAC Auto Switching ~ 20 W
Cables Included	1 to 4 HD-SDI BNC cables, power cords
Dimensions	19 x 12 x 2 Inches
Weight	9 Pounds
Operating Temperature	32-110 °F