

<p>1080p60</p>	<ul style="list-style-type: none"> <li>• 700-1200 ms</li> <li>• 70-125 ms (LL)</li> </ul>	
<ul style="list-style-type: none"> <li>• H-4SDI-DVBT-IP</li> <li>• H-4SDI-DVBT-IP</li> </ul>	 <p>4x HD-SDI 1080p60</p>	<ul style="list-style-type: none"> <li>• 700-1200 ms</li> <li>• 70-125 ms (LL)</li> </ul>



Data Sheet:

H-1/4SDI-DVBT-IP



User's Manual:

H-1/4SDI-DVBT-IP

### Thor Broadcast SDI-DVBT-IP & SDI-DVBT-IPLL Product Lines

Thor HD-SDI to DVB-T modulators are combination devices that bundle real time HD hardware encoders with a managed program stream multiplexer and agile RF QPSK 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 DVB-T carrier outputs. In addition to the encoded programs, the unit can also modulate programs encoded

externally via an ASI input. This platform is most commonly used by large organizations or broadcasters that own SDI matrix routers. This platform is ideal for corporate MATV systems or in house HD video distribution from SDI sources. This platform is not recommend for broadcast headend signal origination due to lack of 708 closed captioning support. For broadcasters requiring government mandated 708 captioning and Dolby AC/3 audio please contact a sales representative.



## Digital Video Broadcast: Terrestrial DVB-T Modulation Standard

The DVB-T standard is the worlds most widely adopted radio frequency modulation standard for digital video broadcast over terrestrial systems. This standard is used throughout the world for both cable and over the air digital video broadcast systems. The standard was first used in the United Kingdom, and has since gained in acceptance in over 90 worldwide countries. This standard supports the original DVB-T modulation protocols for both QPSK and QAM16/64. This chassis outputs either 2 or 4 adjacent RF carriers and can distribute programing anywhere between those channels. The unit also supports ingestion of externally encoded programing via the ASI input. The ASI input can be parsed for up to 120 Mbps of incoming programing based on model hardware and software selection.

## SDI-DVBT-IP: Modulator Chassis with HD-SDI Encoder Cards

HD-SDI uncompressed digital video is commonly used in broadcasting and professional AV systems due to its convenience. Serial Digital video can be carried over single conductor coax cables and typically employ common BNC connectors. HD-SDI carries the same digital video data as HDMI, but without all complicated digital content protection (DCP) and HDCP trouble. Thor multichannel encoder modulator chassis systems support encoder card input configurations from 1 to 4 channels. These cards are available in both standard and low latency versions. These cards convert HD-SDI inputs to DVB-T compatible program streams.

## **DVBT-IPLL: Low Latency Encoding Option**

Unit model numbers that include "LL" indicate that model includes Thor's low latency encoding option. This new feature reduces the time delay between video input and encoded program output by more than 10 times. Standard model encoder modulator chassis systems typically have an encoding latency of 700-1200 ms depending on encoding parameters and output configurations. For many applications, adding approximately 1 second latency doesn't make a difference. For other applications, such as live events; 1 second delay is very noticeable and prevents modulation from being used in distribution systems. The solution to live video broadcast applications is the Low Latency upgrade option for the encoders. IPLL models typically have an encoding latency of approximately 70-110ms, making them suitable for distribution of live video events. Contact a Thor sales representative today for more information on encoding latency.

## **Encoder Card Compatibility between Modulator Chassis**

Thor HDMI-DVBT-IP line of encoder modulators are designed for high quality distribution of broadcast quality video over coax cable. These systems are available in many configurations for a wide range of applications. This page covers models for a specific input video type combined with a modulator chassis programmed for a specific output format. It is important to note that encoder card types can usually be combined with encoder cards for other video types. For custom model configurations please contact Thor directly for pricing and availability. While most firmware for Thor modulator chassis is inter-compatible; not all hardware will work with all software. Thor representatives are available for free design and consultation service. If you have any questions or concerns about a Thor system, contact a representative directly at 1-800-521-8467.

## **Product Features**

- Integrates fully independent encoders with a multiplexer and modulator
- Modulates up to 4 adjacent QPSK, QAM-16/64 carriers with up to 28 Mbps each
- Supports full HD 1080p60 input & encoding from any HDMI digital video source

- Each encoder independently configured: supports all standard HDTV resolutions
- IPTV output on second network port in UDP IGMP Multicast or Unicast format
- DVB-ASI output on mirrored BNC terminals for use in broadcasting systems
- Fully network managed device with all settings configurable through web browser

Product Specifications	
*All Specifications Subject to Change Without Notice	
<p>1.pdf</p> 	<p>2.pdf</p> 
SDI Inputs	<p>4 Independent BNC's for :</p> <p>4 SD , HD or 3G SDI's</p> <p>75Ohm BNC Inputs</p>
Supported Resolutions	<p>1280x720P 60 / 59.94 / 50 Hz</p> <p>1920x1080I 60 / 59.94 / 50 Hz</p> <p><b>H.264 Codec ONLY</b></p> <p>1920x1080P 60 / 59.94 / 50 Hz</p> <p>MPEG-2 HD 1.5-19.5 Mbps</p>

Video Codecs	H.264 HD 0.8-19.5 Mbps
	MPEG-1 Layer II
Audio Codecs	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	QPSK, QAM1664
RF Frequency Range	30-960 MHz 1 KHz Step
RF Power Level	15-43 dBmV Adjustable
DVB-ASI Output	BNC Connector: 1-60 Mbps
	BNC Connector: 1-120 Mbps
DVB-ASI Input	Programs Selected by PID
	Programs Muxed to all Outputs
IPTV Output	MPTS MPEG-TS over UDP, RTP/RTSP
	Unicast and Multicast Supported
Power Input	100-240 VAC Auto Switching
	~ 20 W
Dimensions	482 x 300 x 44 mm
Weight	4.5 kg
Operating Temperature	0 - 45 C

