

# LabMod-DVB-T/H

## DVB-T/H Lab Modulator



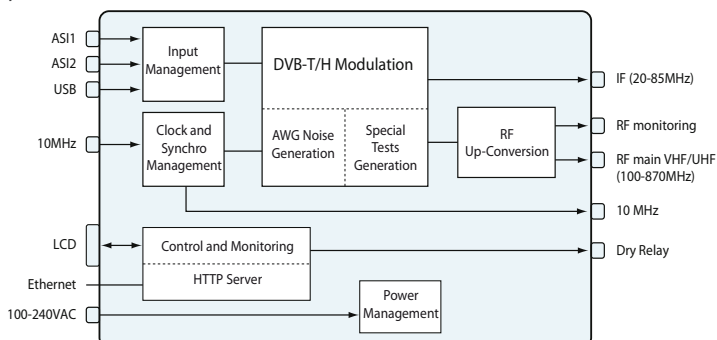
LabMod-DVB-T/H: perfect modulator for lab use thanks to rich Input/Output connectivities and wide set of test features.



**LabMod-DVB-T/H modulator provides a cost effective and complete solution for Digital TV network setup in a lab or manufacturing environment, cumulating rich inputs / outputs interfacing offer, as well as test modes and channel simulator.**

**LabMod-DVB-T/H** is fully DVB-T/H standard compliant (including hierarchical mode), and offers several kinds of inputs (ASI and USB) allowing to play any external or internal stream (internal stream player and stream generator). It generates high quality RF and IF signals that will fit any test situation that may occur in a lab, reasearch and development, or manufacturing site. Finally, optional Channel Simulator allows to reproduce any multipath configuration wished.

Easy remote management thanks to an embedded HTTP web server, LabMod-DVB-T/H modulator has a high set of features for RF and IF corner testing such as white noise generator, carriers cancellation, interleaver bypass, very large output level range, etc...



### Applications

- DVB-T/H RF and IF transmissions
- Field test operations
- R&D or factory tests and measurements
- Demonstrations and roadshows

### Key Points

- FPGA based HW for Robustness and reliability
- Optionnal Channel Simulator (up to 6 independent echos)
- Internal stream player and stream generator
- High grade IF and RF output quality
- Hierarchical mode
- Standalone unit, instant installation
- Intuitive Graphical User Interface
- Special test modes for corner testing

### Characteristics

- MER over 42dB in RF (and over 44dB in IF ) in the all band
- 2 ASI inputs
- USB input with TS stream player (DiviPitch)
- Internal stream generator (PRBS and MPEG)
- Optionnal TU6 Channel Simulator
- 2 RF outputs (main+monitoring)
  - 100-870 MHz frequency range
  - +2 to -60 dBm level dynamics
- 1 IF output
  - 20-85 MHz frequency range
  - 0 to -10 dBm level dynamics
- Noise generator and C/N control
- 10 MHz reference clock input + output
- Bitrate adaptation + PCR restamping
- Embedded HTTP server

# LabMod-DVB-T/H

## DVB-T/H Lab Modulator

### Input interfaces

<i>Transport Stream inputs</i>	2 DVB-ASI (BNC 50 $\Omega$ )
<i>USB input</i>	Coming with MPEG2 TS player
<i>Signal processing</i>	TS bit rate adaptation PCR restamping

### Clock and Synchronization

<i>Inputs</i>	10 MHz
<i>Output</i>	10 MHz
<i>Internal clock</i>	10 MHz (1 ppm typical) In 0 - 50°C temperature range

### Control & management

<i>Web based (HTTP)</i>	- 10/100 Base-T - INTuitive rich client interface with live statistics, monitoring and easy configuration - Capability to save/load settings profiles
<i>Front panel</i>	- Main values and IP settings

### Output interfaces

<i>RF Outputs</i>	2 RF outputs (BNC 50 $\Omega$ ) 100 MHz - 870 MHz (step 1 Hz) +2 to -60 dBm (step of 0,1dB)
<i>IF Output</i>	1 IF output (BNC 50 $\Omega$ ) 20 MHz - 85 MHz (step 1 Hz) 0 to -10 dBm (step of 0,1dB)
<i>Channel simulator (option)</i>	Up to 6 channels including delay, level and phase

### Modulation

<i>Performance in all band</i>	MER > 42 dB in RF mode MER > 44 dB in IF mode
<i>Constellations</i>	QPSK, 16QAM and 64QAM
<i>Channel bandwidth</i>	5, 6, 7 or 8 MHz
<i>Time Interleaver</i>	Native or In-depth
<i>Guard Interval</i>	1/4, 1/8, 1/16 or 1/32
<i>FFT mode</i>	2k, 4k or 8k
<i>Code rate (2 different code rate in hierarchical mode)</i>	1/2, 2/3, 3/4, 5/6 or 7/8
<i>Network type</i>	MFN
<i>Test mode</i>	Single tone, PRBS & MPEG generator, interleaver bypass, white noise generator, carriers cancellation

### Physical

<i>Height/Width/Depth (mm)</i>	43/440/263 mm
<i>Format</i>	1 RU, width 19"
<i>Power supply</i>	100-240VAC

### Environment

<i>Operating temperature</i>	0 to 50°C / 0 to 122 °F
<i>Storage temperature</i>	-20°C to 70°C / -4°F to 158°F
<i>Humidity</i>	0 to 95%, non condensing



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