

# LabMod-DVB-T2

## DVB-T2 Lab Modulator



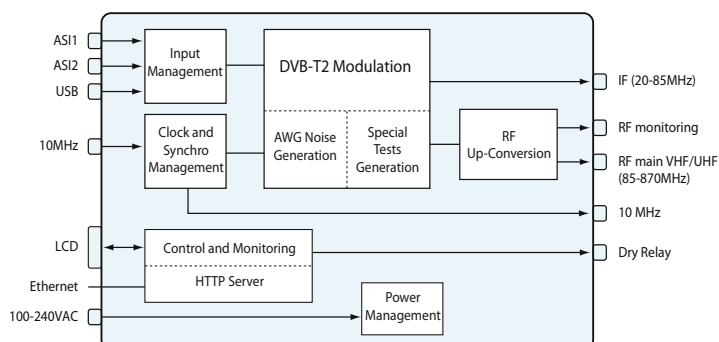
LabMod-DVB-T2: perfect modulator for discovering the DVB-T2 standard thanks to broadcast grade characteristics and a wide set of test features.



**LabMod-DVB-T2 modulator provides a high level solution for DVB-T2 TV network setup in a lab or manufacturing environment, cumulating high quality outputs, internal stream player, various test modes and optional channel simulator.**

**LabMod-DVB-T2** offers several kinds of inputs (ASI and USB) allowing to play any external or internal stream (internal stream player and stream generator natively embedded). It generates high quality RF and IF signals that will fit any situation that may occur in a lab, research and development, or manufacturing site. Last but not least, optional Channel Simulator allows to reproduce any multipath configuration wished.

Easy remote management thanks to an embedded HTTP web server, LabMod-DVB-T2 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-T2 reception validation
- DVB-T2 RF and IF transmissions
- Field test operations
- R&D or factory tests and measurements
- Demonstrations and roadshows

### Key Points

- LabMod family hardware based Robustness and reliability
- Optionnal Channel Simulator (up to 6 independent paths)
- Internal stream player and stream generator
- High grade IF and RF output quality
- Intuitive Graphical User Interface
- Special test modes for corner testing

### Characteristics

- 2 ASI inputs
- USB input with TS stream player (DiviPitch)
- Internal stream generator (PRBS and MPEG)
- Optionnal Channel Simulator
- 2 RF outputs (main+monitoring)
  - 85-870 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

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## DVB-T2 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<br>PCR restamping |

### Clock and Synchronization

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

### Control & management

|                         |                                                                                                                                                             |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Web based (HTTP)</i> | - 10/100 Base-T<br>- Intuitive rich client interface with live statistics, monitoring and easy configuration<br>- 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 $\Omega$ )<br>85 MHz - 870 MHz (step 1 Hz)<br>+2 to -60 dBm (step of 0,1dB) |
| <i>IF Output</i>                  | 1 IF output (BNC 50 $\Omega$ )<br>20 MHz - 85 MHz (step 1 Hz)<br>0 to -10 dBm (step of 0,1dB)    |
| <i>Channel simulator (option)</i> | Up to 6 paths including delay, level and phase                                                   |

### Modulation

|                               |                                                                               |
|-------------------------------|-------------------------------------------------------------------------------|
| <i>PLP Constellations</i>     | QPSK, 16QAM, 64QAM, 256QAM                                                    |
| <i>L1 post constellations</i> | BPSK, QPSK, 16QAM, 64QAM                                                      |
| <i>Constellation rotation</i> | Normal, Rotated                                                               |
| <i>Channel bandwidth</i>      | 1.7, 5, 6, 7 or 8 MHz                                                         |
| <i>Guard Interval</i>         | 1/128, 1/32, 1/16, 19/256, 1/8, 19/128, 1/4                                   |
| <i>FFT mode</i>               | 1k, 2k, 4k, 8k, 16k, 32k (normal and extended)                                |
| <i>Code rate</i>              | 1/2, 3/5, 2/3, 3/4, 4/5, 5/6                                                  |
| <i>FEC</i>                    | Short (16k), Normal (64k)                                                     |
| <i>Pilot pattern</i>          | from PP1 to PP8                                                               |
| <i>Network type</i>           | MFN                                                                           |
| <i>Test mode</i>              | Single tone, PRBS & MPEG generator, interleaver bypass, white noise generator |

### 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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