OEM Modulator
The quickest way to be at the DVB-T2 RendezVous!

Address the DVB-T2 markets with ENENSYS OEM reference design

Selected by major European broadcasters as the DVB-T2 reference, NetMod-DVB-T2 full in-house solution is now available as OEM, allowing a fast time-to-market to this new efficient standard.

NetMod-DVB-T2 is the only product on the market that can be easily and quickly customized on demand. As for UK national DVB-T2 deployment, many customers already put their trust in ENENSYS, showing their confidence in the most advanced DVB-T2 modulator on the market.

NetMod-DVB-T2 modulator provides a cost effective and high quality solution for live DVB-T2 broadcast. This modulator is the state-of-the-art HW design, benefitting from ENENSYS’s years of experience in the digital broadcast network solutions design. Available either as an OEM board or complete OEM 19” chassis, NetMod-DVB-T2 modulator has been developed to be easily and quickly integrated in any kind of platform, as well as designed to fully support the DVB-T2 standard (Mono & Multi-PLP, MISO, PAPR reduction, T2-MI, Digital Pre Corrections, etc...).

Applications
• Rebranded standalone modulator
• Transmitter exciter
• Combined digital equipment requiring a RF transmission (Repeater, Gap-filler)

Key Points
• Full in-house solution including IP Core
• Performant and future proof platform
• Fully compliant with DVB-T2 standard (active participation to DVB forum and test-fests)
• Field test proven (Ofcom pilot)
• Selected by chipset and STB manufacturers
• Platform evolution through firmware upgrades
• High grade IF or RF outputs
• Outstanding MER, phase noise and stability
• Intuitive and customizable Graphical User Interface
• SFN adaptation (T2-MI)
• Support of Multi-PLP MISO, PAPR Reduction, etc...
• Linear and Non-Linear Digital Pre-Corrections (DPC)
• High quality internal clock

www.enensys.com

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T2-MI or TS inputs (ASI)
T2-MI over IP
10 MHz external clock
1PPS external clock

**Output characteristics**

<table>
<thead>
<tr>
<th>RF Outputs</th>
<th>Main RF output</th>
<th>Monitoring RF output</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 MHz - 870 MHz (step 1 Hz)</td>
<td>20 MHz - 85 MHz (step 1 Hz)</td>
<td>0 to -40 dBm (step 0.1dB)</td>
</tr>
<tr>
<td>MER</td>
<td>Over 42 dB in the whole band</td>
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<td>Shoulders</td>
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<td>0 to -40 dBm (step 0.1dB)</td>
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</tr>
<tr>
<td>MER</td>
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</tr>
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<td>Shoulders</td>
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</tr>
</tbody>
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**Modulation**

- **PLP Constellations**: QPSK, 16QAM, 64QAM, 256QAM
- **L1 post constellations**: BPSK, QPSK, 16QAM, 64QAM
- **Constellation rotation**: Normal, Rotated
- **Channel bandwidth**: 1.7, 5, 6, 7 or 8 MHz
- **Guard Interval**: 1/128, 1/32, 1/16, 19/256, 1/8, 19/128, 1/4
- **FFT mode**: 1k, 2k, 4k, 8k, 16k, 32k (normal and extended)
- **Code rate**: 1/2, 3/5, 2/3, 3/4, 4/5, 5/6
- **FEC**: Short (16k), Normal (64k)
- **Pilot pattern**: from PP1 to PP8
- **Network type**: MFN and SFN
- **Test mode**: Single tone, PRBS & MPEG generator, Central carrier cancellation
- **Multi-standard**: Available in DVB-T/H and DTMB

**Input interfaces**

- **T2-MI or TS inputs (ASI)**
- **T2-MI over IP**
- **10 MHz external clock**
- **1PPS external clock**

**Characteristics**

- **Height/Width/Depth (mm)**: 25/150/250 mm
- **Power supply**: +12v DC
- **Output interfaces**
  - IF or RF Outputs: 2 x SMA 50 Ω
  - 10 MHz external clock: 1 x MCX 50 Ω
  - 1PPS external clock: 1 x MCX 50 Ω

- **Ordering Information**
  - Modulator: NetMod-DVB-T2-RF (or IF) Board
  - Optional internal GPS: NetMod-GPS
  - NetMod-DVB-T2-RF (or IF) Board: NetMod-GPS

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**Clocks and Synchronization**

- **Inputs**: 10 Mhz, 1 PPS and optionnal built-in GPS
- **Internal clock**: OCXO (Oven Controled Oscillator)
- **Internal clock precision**: 0.5 ppb (over one day)
- **Internal clock stability**: 2.10-8 per year

**Control & management**

- **Web (HTTP)**
- **System Administration**: Full SNMP v2, RS232 (board)

**Output interfaces**

- **Board**: 2 x SMA 50 Ω
- **19" chassis**: 2 x SMA 50 Ω

**Input interfaces**

- **T2-MI over IP**: 1 x Gigabit ethernet
- **10 MHz external clock**: 1 x BNC 50 Ω
- **1PPS external clock**: 1 x BNC 50 Ω

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Also available in ENENSYS DVB-T2 portfolio:
- NN6 T2-Gateway: DVB-T2 encapsulator / SFN adaptor
- DiviCatch RF T2: DVB-T2 pocket analyzer
- DiviCatch T2-MI: T2 Modulator Interface analyzer
- CastXplorer RF T2: DVB-T2 network probe
- Discovery DVB-T2 bundle (Modulator, T2 Gateway, receiver)