

NetMod-DVB-T2

DVB-T2 Modulator



NetMod-DVB-T2: Broadcast grade modulator designed for DVB-T2 live broadcasting. DVB-T/H compatible for network deployment flexibility.



ENENSYS DVB-T2 suite deployed in UK and other countries in Europe

NetMod-DVB-T2 broadcast modulator has been designed to provide a cost effective and high quality solution for broadcast network operators, as well as for system integrators facing this new standard. NetMod-DVB-T2 conception ease also the integration in any kind of system thanks to an intuitive Graphical User Interface and value-added features.

NetMod-DVB-T2 is fully DVB-T2 standard compliant in mono-PLP, and can handle as option the DVB-T/H standard for more network deployment flexibility.

NetMod-DVB-T2 offers various high grade features such as MFN+SFN, T2-Modulator Interface over ASI and IP, MISO, PAPR reduction, Digital Pre-Correction (optimizing overall broadcast transmission), built-in GPS receiver option, etc...

On top of that, NetMod-DVB-T2 is also featured with a set of modes that will ease installation and maintenance for network operators and broadcasters, as well as a set of configurable failover behavior to secure regular broadcast operations.

Applications

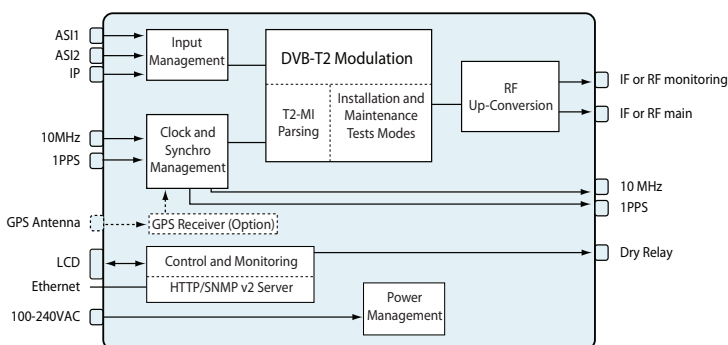
- DVB-T2 Digital TV Broadcast
- Optional DVB-T/H TV broadcast
- RF or IF entry-level to high power transmitter integration
- MFN and SFN synchronized transmissions
- MISO transmissions

Key Points

- High grade IF or RF output quality (optional IF + RF)
- Full mono-PLP compatibility (including MISO and PAPR reduction)
- SFN adaptation thanks to T2-MI packet parsing (T2-MI management over ASI or IP)
- Outstanding MER, phase noise and stability
- Linear and Non-Linear Digital Pre-Corrections (DPC)
- Smooth network integration
- User configured failover behavior
- Intuitive Graphical User Interface
- Fast and simple integration in NMS
- FPGA based HW for Robustness and reliability

Characteristics

- 2 ASI and 1 IP inputs
- T2-Modulator Interface over ASI and IP
- Full Mono-PLP / SFN / MISO / PAPR
- RF or IF main and monitoring outputs
- 10 MHz / 1PPS internal and external references
- Internal GPS receiver (Option)
- Fast Ethernet (10/100bT) management ports
- Embedded SNMP v2 server
- Embedded HTTP server
- Digital Pre Correction capabilities



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Input interfaces

| | |
|-------------------------|--|
| Transport Stream inputs | 2 DVB-ASI (BNC 50 Ω) 10/100/1000 Base T (Pro MPEG Forum CoP#3 / SMPTE 2022) |
| Signal processing | T2-MI Control Input Stream Monitoring PCR restamping (MFN) TS bit rate adaptation (MFN) |

Clocks and Synchronization

| | |
|--------------------------|---|
| Inputs | 10 MHz, 1 PPS and optional built-in GPS |
| Output | 10 MHz, 1 PPS |
| Internal clock | 10 MHz (OCXO - Oven Controlled oscillator) |
| Internal clock precision | 0.5 ppb (over one day) |
| Internal clock stability | 2.10 ⁻⁸ per year |

Control & management

| | |
|-----------------------|---|
| Web (HTTP) | 10/100 Base-T Rich client interface with live statistics, monitoring and intuitive configuration |
| System Administration | Full SNMP v2 |
| Front panel display | IP settings & alarms |

Options

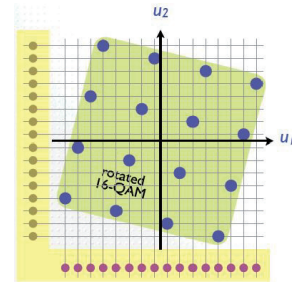
| | |
|-----------------------|----------------------------------|
| DVB-T/H Upgrade | Compliance to DVB-T/H standard |
| Built-in GPS Receiver | RF antenna input (TNC 50 Ω) |
| NetMod-Dual-Output | Dual outputs (1 x IF and 2 x RF) |

Physical

| | |
|-------------------------|---------------|
| Height/Width/Depth (mm) | 43/440/263 mm |
| Format | 19" 1RU |
| Power supply | 100-240VAC |

Environment

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



Output interfaces

| | |
|------------|---|
| RF Outputs | Main RF output (SMA 50 Ω) Monitoring RF output (SMA 50 Ω) 100 MHz - 870 MHz (step 1 Hz) +2 to -60 dBm (step 0,1dB) |
| MER | Over 42 dB in the whole band |
| Shoulders | Over 55 dB |
| IF Outputs | Main IF output (SMA 50 Ω) Monitoring IF output (SMA 50 Ω) 20 MHz - 85 MHz (step 1 Hz) 0 to -30 dBm (step 0,1dB) |
| MER | Over 45 dB in the whole band |
| Shoulders | Over 55 dB |

Modulation

| | |
|------------------------|---|
| PLP Constellations | QPSK, 16QAM, 64QAM, 256QAM |
| L1 post constellations | BPSK, QPSK, 16QAM, 64QAM |
| Constellation rotation | Normal, Rotated |
| Channel bandwidth | 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, SFN and MISO |
| Test mode | Single tone, PRBS & MPEG generator, Central carrier cancellation |



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