

NetMod-DTTV

DVB-T/H/T2 Modulator

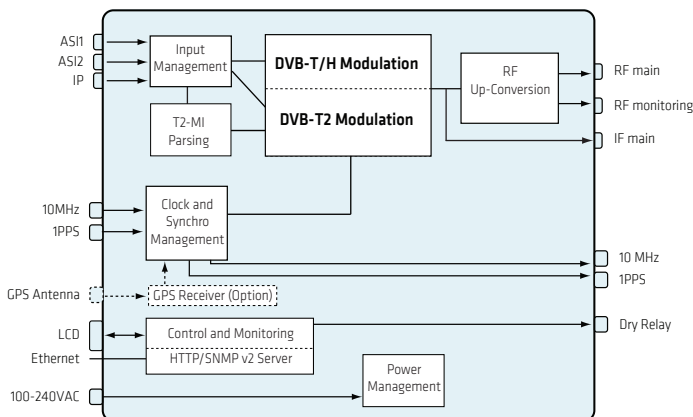


NetMod DTTV is ENENSYS' standalone modulator to broadcast digital TV services over DVB-T, DVB-H or DVB-T2 networks.

NetMod-DTTV broadcast modulator has been designed to provide a cost effective and high quality solution for broadcast network operators, system integrators and transmitter manufacturers aiming to deploy digital TV services over DVB-T, DVB-H or DVB-T2 networks in MFN or SFN environments.

The **NetMod-DTTV** offers high grade broadcast IF and RF output level (MER over 42 dB in the whole band). It includes linear and non-linear **Digital Pre-Correction** (DPC) to optimize the transmission efficiency. A built-in GPS receiver can be included to ease broadcast operation.

The **NetMod-DTTV** is fully DVB-T2 standard compliant. It supports the broadcasting in single PLP and multiple PLP. It provides **T2-Modulator Interface (T2-MI)** over ASI and IP to receive configuration and synchronization information from the DVB-T2 Gateway. It also supports **MISO** transmission to improve SFN broadcasting.



Applications

- **DVB-T2 digital TV broadcast**
 - SFN/MISO transmission
 - Single and Multi PLP broadcasting
 - Regional TV distribution
- **DVB-T digital TV broadcast**
- **DVB-H Mobile TV broadcast**
 - DTT transmitters integration
 - MFN/SFN synchronized transmissions

Benefits

- High grade output quality
- FPGA based for robustness and reliability
- First DVB-T2 modulator commercially rolled-out
- **Versatile product:** starts in DVB-T, broadcast over DVB-T2 later
- **Straight integration into DTTV transmitters:** leverage DVB-T transmitters to support complete DVB-T2 broadcasting
- Easy to use web based GUI
- Fast and simple integration in NMS

Characteristics

- 2 ASI inputs and 1 Gigabit Ethernet IP input
- RF and IF outputs
- 10 MHz / 1PPS internal and external references
- Internal GPS receiver (Option)
- Digital Pre Correction capabilities
- Installation and maintenance tests modes
- DVB-T2 modulation
 - MPEG-2 TS input
 - T2-Modulator Interface input (ASI/IP)
 - Mono-PLP / Multi-PLP / SFN / MISO
- DVB-T and DVB-H modulation

NetMod-DTTV

DVB-T/H/T2 Modulator

Inputs

T2-MI/MPEG-2 TS	2x DVB-ASI (BNC 75 Ω) 1x Gigabit Ethernet IP input (RJ45)
Control	1x Fast Ethernet for GUI and SNMP (RJ45)
GPS	1x RF input for internal GPS (TNC 50 Ω) 1x PPS and 1x 10 Mhz inputs (BNC 50 Ω)

Featuring

DVB-T2 modulation

T2-MI/MPEG-2 TS input	MPEG-2 TS input over ASI T2MI input over ASI and IP
PLP Management	From 1 to 8 PLP Type1 and type2 support
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

DVB-T/H Modulation

Constellations	QPSK, 16QAM and 64QAM
Channel bandwidth	5, 6, 7 and 8 MHz
Guard Interval	Native or In-Depth 1/4, 1/8, 1/16 and 1/32
FFT mode	2k, 4k and 8k
Code rate	1/2, 2/3, 3/4, 5/6 and 7/8

DPC Linear and non Linear DPC

Tests Modes Single tone, PRBS & MPEG generation
Central carrier cancellation

Monitoring and Supervision Easy-to-use Web based GUI
Full SNMP v2

Outputs

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

Physical

Height	44 mm / 1.7 in.
Width	444 mm / 17.48 in.
Depth	274 mm / 10.79 in.
Format	1 RU, width 19"
Power supply	100 - 240VAC / 48V DC (option) 20W

Ordering

NetMod T/H/T2 RF	DVB-T/H/T2 broadcast modulator with RF output
NetMod T/H/T2 iF	DVB-T/H/T2 broadcast modulator with iF output
NetMod T/H RF	DVB-T/H broadcast modulator with RF output
NetMod T/H iF	DVB-T/H broadcast modulator with iF output
Options	
NN6-T2 Modulation	DVB-T2 modulation for NetMod T/H
Multi-PLP-2	Management of up to 2 PLP for T2 modulation
Multi-PLP-8	Management of up to 8 PLP for T2 modulation
NetMod-DualOutputs	Dual outputs : iF and RF (for RF only mode)
NN6-GPSv2	Built-in GPS receiver
NN6In48V	48V DC input voltage



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