

NetMod-DTMB

DTMB Broadcast Modulator (DMB-T/ADTB-T/DTMB standard)



NetMod-DTMB: Broadcast grade modulator designed for direct interfacing with power transmitters thanks to a wide set of features and outstanding performances.

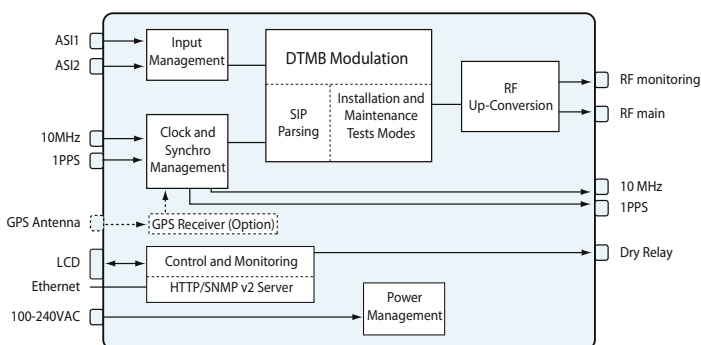


NetMod-DTMB broadcast modulator has been designed to provide a cost effective solution for Chinese broadcast network operators, as well as for system integrators facing this new efficient standard. **NetMod-DTMB** conception ease also the integration in any kind of system thanks to an intuitive Graphical User Interface and dedicated test modes.

NetMod-DTMB is fully DTMB chinese standard compliant (**GB20600-2006**), and takes benefits from years of experience of **ENENSYS** in the Digital Broadcast Network Solutions design.

NetMod-DTMB offers various high grade features such as **MFN+SFN, Digital Pre-Distortion** (optimizing overall broadcast transmission), **built-in GPS receiver** option, etc...

On top of that, **NetMod-DTMB** 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

- DTMB Digital TV Broadcast
- RF or IF Transmitter integration
- MFN or SFN synchronized transmissions

Key Points

- High grade IF or RF output quality
- Outstanding MER, phase noise and stability
- SFN adaptation thanks to SIP packet parsing
- 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 inputs (seamless switching on failover)
- RF or IF main output
- RF or IF monitoring output
- 10 MHz / 1PPS external references inputs
- 10 MHz / 1PPS clock output
- Fast Ethernet (10/100bT) management ports
- Embedded SNMP v2 server
- Embedded HTTP server
- Digital Pre Distortion capabilities
- Failover dry relay switch



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Input interfaces

<i>Transport Stream inputs</i>	2 DVB-ASI (BNC 75 Ω)
<i>Signal processing</i>	SIP Control Input Stream Monitoring PCR restamping (MFN) TS bit rate adaptation (MFN) Static delay (SFN)

Clocks and Synchronization

<i>Inputs</i>	10 MHz, 1 PPS and optionnal built-in GPS
<i>Output</i>	10 MHz, 1 PPS
<i>Internal clock</i>	10 MHz (Temperature Controlled oscillator)
<i>Internal clock precision</i>	5 ppb
<i>Internal clock stability</i>	2.10-8 per year

Control & management

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

Options

<i>Built-in GPS Receiver</i>	RF antenna input (TNC 50 Ω)
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Output interfaces

<i>RF Outputs</i>	Main RF output (SMA 50 Ω) Monitoring RF output (SMA 50 Ω) 100 MHz - 870 MHz (step 1 Hz) +2 to -20 dBm (step 0,1dB) Over 42 dB
<i>MER</i>	Over 42 dB
<i>Shoulders</i>	Over 55 dB
<i>IF Outputs</i>	Main IF output (SMA 50 Ω) Monitoring IF output (SMA 50 Ω) 20 MHz - 85 MHz (step 1 Hz) 0 to -10 dBm (step 0,1dB) Over 44 dB (from 20 to 85MHz) Over 55 dB
<i>MER</i>	Over 44 dB (from 20 to 85MHz)
<i>Shoulders</i>	Over 55 dB

Modulation

<i>DTMB modes</i>	Single- or Multi- carrier modes
<i>Constellations</i>	QPSK, 4QAM-NR, QAM16 QAM32 and QAM64
<i>Channel bandwidth</i>	8, 7 or 6 MHz
<i>Time Interleaver</i>	240 or 720 symbols depth
<i>Guard Interval</i>	PN420, PN595, PN945
<i>Outer Inner FEC</i>	BCH / LDPC
<i>Code Rate</i>	0.4, 0.6, 0.8
<i>Network type</i>	MFN and SFN capable
<i>Digital Pre Distortion</i>	Linear & non-linear pre distortion Intuitive settings via the GUI
<i>Field I & M test modes</i>	Single tone, PRBS generation, central carriers cancellation, Null symbol insertion

Physical

<i>Height/Width/Depth (mm)</i>	43/440/263 mm
<i>Format</i>	19" 1RU
<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