

EGATEL[®] MTE8000 Series

DVB-T/H/T2 UHF Microtransmitters



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The MTE8000 series has been designed to provide a best-of class performance and a cost-effective solution for low power broadcast stations where also the lack of space is a key fact. Each channel is composed of one single module and up to seven channels (MTE8010/8050) can be delivered in a standard 19" - 6U height to ease their installation in confined spaces, while the outstanding low power consumption of MTD8000 devices allow broadcasters to significantly reduce OPEX.

The modules are ready to work with DVB-T2 standard so broadcasters can now take advantage of all its advanced features in their low power sites. They can operate as a modulator or optionally as a re-transmitter, managing several input interfaces depending on the mode of operation: ASI or TSoIP (modulator) plus an RF input (re-transmitter). They can operate in SFN networks guarantying full compliance with timing constraints.

They are fully frequency agile within the UHF output band and all the units can be easily controlled through a powerful WEB GUI in a local or remote way. Also, a Control Unit can monitor the overall performance as well as perform quality measurements of all transmitted channels and provide remote control via Dry contacts, SNMP and WEB GUI.

- Compact design in a single module.
- Up to 7 modules in a 19"- 6U frame .
- Output power, up to 38 dBm before filter.
- Seamless switch between inputs.
- Input interfaces according to operation mode: ASI, TSoIP or RF .
- Linear and Non-linear digital Precorrection.
- Non - Linear adaptive digital Precorrection (MTE8050).
- Multi-standard transmitter: DVB-T/T2.
- Easily channel change.
- Quality measurement of output signal (QoS) optional.
- "Output channel" and "Impulse channel response" show via web server.
- GNSS receiver (GPS & Glonass) on board, optional.
- Local operation via external display or friendly Web Server.
- Remote control via Control Unit (SNMP or Web Server, Dry-contacts) available.
- Remote software upgrade of all boards.
- DC voltage supply (+24V).
- N+1 redundancy ready.

TECHNICAL SPECIFICATIONS

MICROTRANSMITTER (MTE8010/MTE8050)

Inputs	
ASI Inputs	2xASI BNC (F), 75 ohm.
TSolP	1x10/100/1000 base-T - RJ45.
RF (retransmitter mode)	1xRF BNC (H), 50 ohm / Input level: -80...0 dBm. BIII IV y V.
Switching between inputs	Manual / Automatic (seamless switching).
Modulation	
Standard	EN300744, EN302304, EN302755, TS102831, TS102773 (T2-MI).
FFT size	1K (DVB-T2), 2K, 4K, 8K, 16K (DVB-T2), 32K (DVB-T2).
Code rate	1/2, 2/3, 3/4, 5/6, 3/5 (DVB-T2), 4/5 (DVB-T2).
Guard interval	1/32, 1/16, 1/8, 1/4, 19/256 (DVB-T2), 19/128 (DVB-T2), 1/128 (DVB-T2).
Constellation	QPSK, 16QAM, 64QAM, 256QAM (DVB-T2). Rotated and non rotated (DVB-T2).
Channel bandwidth	6, 7, 8, 10 MHz.
Transmission modes	MFN, SFN-SISO, SFN-MISO (DVB-T2).
SFN configurable delay	± 500 ms.
Clock and synchronization	
Internal clock	40 MHz.
External reference	10 MHz SMB (M). Impedance = 50 ohm / high (selectable). Level: -10 a +10 dBm.
1pps external reference	SMB (M). Impedance = 50 ohm / high (selectable). Minimum pulse width: 1µs.
SFN synch. resolution	± 100 ns.
RF output	
Signal type	One DVB-T/H or DVB-T2 channel.
Frequency range	470 ... 862 MHz.
Resolution	1 Hz.
Output power (before filter)	
- MTE8010	31 dBm.
- MTE8050	38 dBm.
Output power stability	< ± 0.2 dB.
Shoulders	≥ 38 dB.
Connector	N (F) 50 ohm.
Return losses	> 18 dB.
Local and remote control	
LCD Display	Local operation via external display.
Front RJ-45	Local operation through Web GUI (Graphical User Interface).
Rear RJ-45	Remote Network management interface (Web GUI and/or SNMP Agent).
General	
Temperature	1 ... 45°C.
Relative Humidity	95% máx. (non-condensing).
Supply voltage	24 Vdc.
Cooling	Convection / Forced air.
Dimensions (H x D x W)	262 x 259 x 45 mm.
Weight	3 Kg approx.

CONTROL UNIT CCU7000 (optional)

General	
RF Inputs	2x BNC (F).
QoS measurement	BER, MER, PER. Level: -10 to +5dBm.
Remote control	Contactos / GSM / SNMP / Web GUI.
Power supply	24 Vdc.
Dimensions (H x D x W)	262 x 242 x 38 mm.
Weight	0,9 Kg approx.

FRAME

Power supply(PS2410/2420 /2440)	
P.S. Units	1 (2 opt.).
Input / Output voltages	90 - 264 VAC / 24 Vdc.
Max. power per unit (PS2410/2420/2440)	240 W / 480 W / 960 W.
General	
Dimensions	19" - 6U / 10U.
Configuration	Wall mounting, outdoor cabinet, 19" rack cabinet .

Remark: To comply with the out-of-band emissions regulations and with the required shoulder attenuation, the RF output of the microtransmitters must be connected to an appropriate filter