

EGATEL[®] Serie MTE8000

UHF Microtransmitters

Multistandard:

DVB-T/H, DVB-T2, ISDB-T/T_B, ATSC



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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 eight channels 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 the standards: DVB-T/H/T2, ATSC, ISDB-T_B, 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 centrally 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 8 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 .
- Adaptive digital precorrection allowing automatic readjustment at any channel and power change.
- Multistandard: DVB-T/H/T2, ATSC, ISDB-T_B.
- Quality measurement of output signal (QoS) optional: MER, BER, PER
- Graphic visualization of the equipment output channel through the Web Server.
- Direct and reflected power measurement.
- Local operation via external display or friendly Web Server.
- Remote control and monitoring of each module through SNMP and Web Server, and/or centralized via Control Unit option.
- Remote software update.
- DC voltage supply (+24V).
- N+1 redundancy ready.

TECHNICAL SPECIFICATIONS

DVB-T/-H/-T2	
Standard	EN300744, TS101191, TR101290, EN302304, EN302755, Ts102831, TS102773 (T2-MI).
Inputs	2xASI BNC (H), 75 ohm / 1xTSolP RJ45.
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 no rotated (DVB-T2).
Channel bandwidth	1.7, 5, 6, 7, 8, 10 MHz.
Transmission Modes	MFN, SFN, Multi PLP (DVB-T2), SISO/MISO (DVB-T2)
SFN configurable delay	± 500 ms.
ATSC	
Standard	ATSC A/53, A/64, A/153, A/110B, A/110:2011 (opc.), SMPTE-310M.
Inputs	2xSMPTE-ASI BNC (H), 75 ohm / 1xTSolP RJ45.
Symbol rate	10.76 Msymbolos/s.
Trellis coding	2/3.
Reed-Salomon encoder	207 / 187 / 10.
Constellation	8 VSB.
Channel bandwidth	6 MHz.
ISDB-T/TB	
Standard	ARIB STD-B31, TR-B14.
Inputs	2xASI BNC (H), 75 ohm / 1xTSolP RJ45.
FFT size	2K, 4K, 8K.
Code rate	1/2, 2/3, 3/4, 5/6, 7/8.
Guard interval	1/4, 1/8, 1/16, 1/32.
Interleaving	0, 1, 2, 4, 8, 16.
Channel bandwidth	6 MHz.
Clock and synchronization	
Internal clock	± 0,5 ppm.
External reference	10 MHz SMB (M). Impedance = 50 ohm / high (selectable). Nivel: -10 to +10 dBm.
1pps external reference	SMB (M). Impedance = 50 ohm / high (selectable). Minimum pulse width: 1µs
SFN synch. resolution	± 100 ns.
RF output	
Frecuency range	470 ... 800 MHz
Resolution	1 Hz
Output power (before the filter)	
- MTE8010 (1W/2W)	30 dBm + 4dB
- MTE8050 (5W)	37 dBm + 1dB
Output power stability	< ± 0.2 dB.
Shoulders	≥ 40 dB.
MER	≥ 36 dB.
RF OUT sample	N (H) 50 ohm / SMA (H) for RF frontal Test
Return losses	> 18 dB.
Local and remote	
LCD Display	Local operation via external LCD 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.

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 // Configuration	19" - 6U / 10U. // Wall, outdoor box or 19" rack.

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.