

## MOT MULTICAST LIQUID COOLED SERIES

The TV transmitters **MOT MULTICAST LIQUID COOLED** can be used as analog and digital transmitters and they can be configured with different input interfaces. They are suitable for DVB-T/H, DVB-T2, ISDB-T/TB and ATSC standards, in addition to PAL and NTSC, they also include adaptive pre-correction and a high precision GPS receiver for SFN networks.



### MAIN ADVANTAGES

- High efficiency wideband amplifiers technology.
- Embedded Re-Multiplexer/Layer Combiner/TS to BTS (188 to 204 byte) converter for ISDB-TB.
- Adaptive pre-correction.
- On-board high stability GPS receiver with battery.
- Flexible input interfaces.
- SNMP, web interface and touch screen display.
- Able to meet or exceed all the DTV International Broadcasters requirements.
- More rugged and efficient, with a special low-loss design of matching and combining system, together with extremely high efficiency power supplies (over 96% efficiency).
- Compactness: Optimized heatsink and ultracompact power supplies grant the minimum size of amplifier modules with air cooling systems and a greatly reduced size of the cooling system itself.

### GENERAL CHARACTERISTICS

<b>PRECORRECTION</b>	Lineal an non-lineal adaptive
<b>DIMENSIONS</b>	Standard rack unit of 19"
<b>CONTROL</b>	TFT touchscreen, web GUI, SNMP and GPIO
<b>OPERATING TEMPERATURE</b>	-5 to 40°C
<b>MAXIMUM RELATIVE HUMIDITY</b>	90% without condensation
<b>COOLING</b>	Liquid

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## MODELS

	DVB, ISDBT output power	ATSC output power	Analog output power	Working band	Nº modules	RF output CNC	Power supply
<b>MOT 10000 MULTICAST LIQUID</b>	5KW rms	6KW rms	10KW ps	IV-V	4	EIA 3+1/8"	Three-phase 208-400V
<b>MOT 12000 MULTICAST LIQUID</b>	6.2KW rms	7.5KW rms	12KW ps	IV-V	6	EIA 3+1/8"	Three-phase 208-400V
<b>MOT 20000 MULTICAST LIQUID</b>	10KW rms	12KW rms	20KW ps	IV-V	8	EIA 3+1/8"	Three-phase 208-400V
<b>MOT 25000 MULTICAST LÍQUIDO</b>	12.5KW rms	18KW rms	25KW ps	IV-V	12	EIA 4+1/2"	Three-phase 208-400V
<b>MOT 30000 MULTICAST LIQUID</b>	15KW rms	18KW rms	30KW ps	IV-V	12	EIA 4+1/2"	Three-phase 208-400V
<b>MOT 40000 MULTICAST LIQUID</b>	20KW rms	24KW rms	40KW ps	IV-V	16	EIA 4+1/2"	Three-phase 208-400V
<b>MOT 60000 MULTICAST LIQUID</b>	30KW rms	36KW rms	60KW ps	IV-V	24	EIA 4+1/2"	Three-phase 208-400V

*\*other powers or configurations under request.*

## MODULATOR

<b>DVB-T/-H/-T2</b>	
<b>STANDARD</b>	EN300744, EN302304, EN302755, TS101191, TS102773 (T2-MI), TS102034
<b>INPUTS</b>	4xASI BNC(F) 75 Ohm, 2xRJ45 TSoIP 10/100/1000 Seamless switching between ASI inputs. Hierarchical and not hierarchical (DVB-T)
<b>FFT</b>	1K (DVB-T2), 2K, 4K, 8K, 8K ext. (DVB-T2), 16K & 16K ext. (DVB-T2), 32K & 32K ext. (DVB-T2)
<b>CODE RATE</b>	All modalities available according to the standard Block Short o Normal (DVB-T2) DVB-T: Reed-Solomon (204, 188) DVB-T2: BCH, LDPC
<b>GUARD INTERVAL</b>	1/32, 1/16, 1/8, 1/4, 19/256 (DVB-T2), 19/128 (DVB-T2), 1/128 (DVB-T2)
<b>CONSTELLATION</b>	QPSK, 16QAM, 64QAM, 256QAM (DVB-T2). Rotated and non rotated (DVB-T2)
<b>MISO PROCESSING</b>	Supported
<b>ISDB-TB</b>	
<b>STANDARD</b>	ABNT NBR 15601, ABNT NBR 15603
<b>INPUTS</b>	4xASI TS/BTS BNC (F) 75 Ohm, 2xRJ45 TS/BTS TSoIP 10/100/1000
<b>FFT</b>	Mode 1 (2K), Mode 2 (4K), Mode 3 (8K)
<b>CODE RATE</b>	1/2, 2/3, 3/4, 5/6, 7/8
<b>GUARD INTERVAL</b>	1/4, 1/8, 1/16, 1/32

<b>HIERARCHICAL MODULATION</b>	Up to three layers
<b>CONSTELLATION</b>	QPSK, 16QAM, 64QAM
<b>TIME INTERLEAVER</b>	Fully supported
<b>PARTIAL RECEPTION</b>	Supported
<b>ATSC</b>	
<b>STANDARD</b>	A/53, A/110
<b>INPUTS</b>	4 x ASI / SMPTE-310M BNC (F) 75 Ohm, 2 x RJ45 TSoIP 10/100/1000
<b>MODULATION</b>	8-VSB
<b>INPUT BIT RATE</b>	19.39 Mbit/s
<b>BANDWIDTH</b>	6MHz
<b>MAX PROCESSING DELAY</b>	Up to 1 second (programmable)
<b>ANALOG</b>	
<b>STANDARD</b>	B, G, D, K, M, N, I
<b>INPUTS</b>	Video BNC(F), 75 Ohm, 2*audio Tini-QG "Mini XLR", 6 Pin (M), 600 Ohm 4 SDI BNC (F) 75 Ohm
<b>COLOUR SYSTEM</b>	PAL, NTSC

## GPS

<b>INPUT CONNECTOR</b>	N(F), 50 Ohm
<b>INPUT MONITOR/OUTPUT 10MHz</b>	BNC(F), 75 Ohm
<b>INPUT MONITOR/OUTPUT PPS</b>	BNC(F), 75 Ohm
<b>PHASE NOISE</b>	-140dBc/Hz @ 10kHz -150dBc/Hz @ 100kHz
<b>STABILITY</b>	1e-12/24 H with disciplined OCXO
<b>HOLD-OVER STABILITY</b>	5µs after 5 hours (optional 1µs after 24 hours)

## OPTIONS

<b>OPTION 1</b>	GPS/GLONASS integrated receiver
<b>OPTION 2</b>	26dB LNA GPS antenna kit including mounting kit and 25 metres of coaxial cable
<b>OPTION 3</b>	Additional input board, RF in
<b>OPTION 4</b>	Software upgrade for ISDB-Tb Remux/Layer Combiner/TS to BTS (188 to 204 byte) converter
<b>OPTION 5</b>	Dual-cast software option, adds DVB-T modulation
<b>OPTION 6</b>	Dual-cast software option, adds DVB-T2 modulation

<b>OPTION 7</b>	Dual-cast software option, adds ISDB-T modulation
<b>OPTION 8</b>	Dual-cast software option, adds ATSC modulation
<b>OPTION 9</b>	Dual-cast software option, adds PAL modulation
<b>OPTION 10</b>	Dual-cast software option, adds NTSC or PAL-M modulation

NOTE: These transmitters have to be operated with suitable filters at the RF output, so as to meet the standards and limits for the suppression of out of band emissions.

*\* The images and/or technical specifications are subject to change without previous notice.*

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