

## MOT 15000 MULTICAST LIQUID COOLED

The digital TV transmitter **MOT 15000 MULTICAST LIQUID COOLED** can be used as an analog and digital transmitter. This device has an analog output power of 15KW rms, a digital output power of 7.5KW rms in DVB-T/T2 and ISDBT, and 9KW rms in ATSC. It can be configured with different input interfaces and it is suitable for DVB-T/H, DVB-T2, ISDB-T/TB and ATSC standards, in addition to PAL and NTSC. It includes 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 grants the minimum size of amplifier modules with air cooling systems and a greatly reduced size of the cooling system itself.

### GENERAL CHARACTERISTICS

|   |                               |
|---|-------------------------------|
| <b>ANALOG OUTPUT POWER</b>  | 15KW ps                       |
| <b>DIGITAL OUTPUT POWER</b>   | 7.5KW rms                     |
| <b>DVB-T/T2, ISDBT-TB</b>   |                               |
| <b>DIGITAL OUTPUT POWER ATSC</b>  | 9KW rms                       |
| <b>FREQUENCY AGILE</b>  | Bands IV-V                    |
| <b>OUTPUT CONNECTOR</b>   | EIA 3+1/8"                    |
| <b>COOLING</b>  | Air/liquid                    |
| <b>SHOULDERS (@Fo 4.3mHz DVB or @Fo 3.3mHz ISDB-T or @Fo 3.5mHz ATSC)</b> | -39                           |
| <b>DIMENSIONS</b>   | 45 standard rack units of 19" |
| <b>NUMBER OF MODULES</b>  | Six                           |

## 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,<br>2xRJ45 TSoIP 10/100/1000<br>Seamless switching between ASI inputs.<br>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<br>Block Short or Normal (DVB-T2)<br>DVB-T: Reed-Solomon (204, 188)<br>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).<br>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,<br>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,<br>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<br>4 SDI BNC (F) 75 Ohm  |
| <b>COLOUR SYSTEM</b>           | PAL, NTSC   |

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## 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<br>-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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