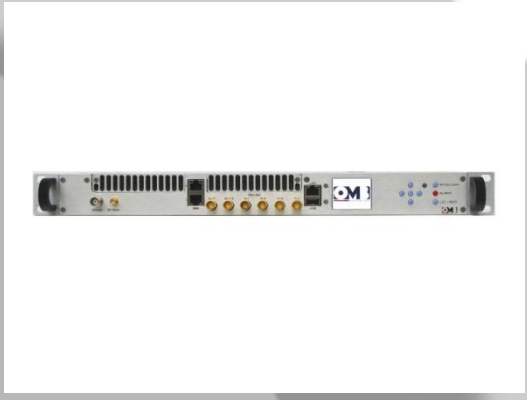
MOT 100 A

The digital TV modulator **MOT 100 A** can be used as an analog and digital transmitter. This device has an analog output power of 100W ps, a digital output power of 50W rms in DVB-T/T2 and ISDBT, and 60W 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 of PAL and NTSC on its analog version. It includes adaptive pre-correction and a high precision GPS receiver for SFN networks.



MAIN ADVANTAGES

- High efficiency wideband amplifiers technology.
- Compatible with PAL, NTSC, DVB-T/H, DVB-T2, ISDB-T/TB and ATSC modulations.
- Multiple modulations available and selectable for the user.
- With Re-Multiplexer/BTS Adapter and Layer Combiner for ISDB-TB.
- Lineal, non-lineal and adaptive pre-correction.
- On-board high stability GPS receiver.
- Flexible input interfaces.
- MFN and SFN modes.
- SNMP, web interface and LC display indicator.

GENERAL CHARACTERISTICS

ANALOG OUTPUT POWER	100W ps
DIGITAL OUTPUT POWER DVB-T/T2, ISDBT-TB	50W rms
DIGITAL OUTPUT POWER ATSC	60W rms
MER	>36dB for any output power
FREQUENCY AGILITY	Bands IV-V
FREQUENCY STABILITY	2*10-8@10MHz long period
RF OUTPUT CONNECTOR	N(F), 50 Ohm
POWER SUPPLY	Single phase 100-240V, 50/60Hz
AVERAGE CONSUMPTION	330VA
DIMENSIONS	One standard rack unit of 19”
CONTROL	Front panel, web interface, SNMP and GPIO
OPERATING TEMPERATURE	-5 to +45°C
MAXIMUM RELATIVE HUMIDITY	95% without condensation
APPROXIMATE WEIGHT	8Kg

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MODULATOR

DVB-T/-H/-T2	
STANDARD	EN300744, EN302304, EN302755, TS101191, TS102773 (T2-MI), TS102034
INPUTS	4xASI BNC(F), 75 Ohm & 2xRJ45 TSoIP GBE Switch seamless between ASI inputs. Hierarchical and not hierarchical (DVB-T)
FFT	1K (DVB-T2), 2K, 4K, 8K, 8K ext. (DVB-T2), 16K & 16K ext. (DVB-T2), 32K & 32K ext. (DVB-T2)
CODE RATE	All modalities available according to the standard Block Short or Normal (DVB-T2) DVB-T: Reed-Solomon (204, 188) DVB-T2: BCH, LDPC
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)
MISO PROCESSING	Supported
ISDB-TB	
STANDARD	ABNT NBR 15601, ABNT NBR 15603
INPUTS	4xASI TS/BTS BNC (F), 75 Ohm & 2xRJ45 TS/BTSoIP GBE
FFT	Mode 1 (2K), Mode 2 (4K), Mode 3 (8K)
CODE RATE	1/2, 2/3, 3/4, 5/6, 7/8
GUARD INTERVAL	1/4, 1/8, 1/16, 1/32
HIERARCHICAL MODULATION	Up to three layers
CONSTELLATION	QPSK, 16QAM, 64QAM
TIME INTERLEAVER	Supported
PARTIAL RECEPTION	Supported
ATSC	
STANDARD	A/53, A/110
INPUTS	4xASI/SMPTE-310M BNC(H), 75Ohm & 2xRJ45 TSoIP GBE
MODULATION	8-VSB
INPUT BIT RATE	19.39 Mbit/s
BANDWIDTH	6MHz
MAX PROCESSING DELAY	Up to 1 second (programmable)

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ANALOG	
TV REGULATION	B, G, D, K, M, N, I1
VIDEO INPUTS	CVBS, 4xSDI BNC(F), 75 Ohm
AUDIO INPUTS	Balanced audio 600 Ohm mini XLR(M), SDI embebed
COLOUR STANDARDS	PAL, NTSC
AUDIO STANDARDS	IRT dual sound, FM (-10dB)
VIDEO INPUT	0.5-1.5V
DIFFERENTIAL GAIN	±3%
DIFFERENTIAL PHASE	±3◦
LOW FREQUENCY LINEARITY	8%
ICPM	±2”
S/N	>60dB
K FACTOR	2%
20T	3%
SPURIOUS AND HARMONICS	>60dB
CHANNEL INTERMODULATION	>58dB
MODULATION CAPABILITY	±120KHz
MONAURAL INPUT	Programmable 0-12dBm
PRE-EMPHASIS	50/70µs
FREQUENCY RESPONSE	±0.5dB from 30Hz-15KHz
HARMONIC DISTORTION	0.5% from 30Hz-15KHz
AM NOISE	50dB from 30Hz-15KHz
FM NOISE	60dB with de-emphasis
SYNCHRONOUS AM NOISE	>50dB

GPS

INPUT CONNECTOR	TNC(F), 50 Ohm
INPUT/OUTPUT REFERENCE 10MHz	BNC(F), 75 Ohm
INPUT/OUTPUT REFERENCE 1PPS	BNC(F), 75 Ohm
HOLD-OVER STABILITY	5µs after 5 hours (optional 1µs after 24 hours)

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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