

## 2KW ANALOG TRANSMITTER DIGITAL TV UHF TRANSMITTER MODEL MOT 2000 A/D

- 2000 Watts PS Analog Output Power
- Digital Output Power of 700Watts rms (DVB-T2, ISDB),900 Watts rms (ATSC)
- Analog Video BNC Input
- ASI Input, includes Integrated Exciter/Digital Modulator
- Adaptive pre-correction for MER to yield higher than 38 dB MER under all operating conditions
- Embedded Re-Multiplexer / Layer Combiner / TS to BTS (188 to 204 byte) converter for ISDB-TB.
- On-board high stability battery backed GPS receiver.
- Local or Remote Control via SNMP, web interface and touch screen display.



### PRODUCT APPLICATION:

The transmitter can work as an analog 2 Kw transmitter or as a digital transmitter, to facilitate conversion from analog to digital.

The transmitter has a digital output power of 700W/900W rms (depending on modulation format) at higher than 38 dB MER and conforms to DVB-T/H, DVB-T2, ISDB-T/TB and ATSC standards.

It includes a modulator integrated electrically and mechanically into the same rugged package, and it has provisions for inclusion of the critical mask filter required for operation as a digital transmitter.

The transmitter incorporates state-of-the-art adaptive pre-correction technology to achieve high MER at high power while minimizing thermal stress, resulting in a rugged design with outstanding reliability and durability.

It also incorporates an high precision GPS receiver for SFN networks and it comes equipped with several types of ASI input interfaces.

This transmitter has an overall efficiency of over 40%, allowing for very efficient operation at low recurring cost.

It incorporates a full set of control and monitoring features accessible via local touch screen or by remote control via SNMP or Web Interface.

# Product Specification

# CABLE AML

<b>GENERAL CHARACTERISTICS</b>	
DIGITAL OUTPUT POWER	700W rms >38dB typ. (DVB, ISDB) 900W rms >38dB typ. (ATSC)
ANALOG OUTPUT POWER	2KW ps
FREQUENCY AGILITY	Bands III or IV + V
FREQUENCY RESOLUTION	1Hz
PRECORRECTION	Adaptative
RF CONNECTION	EIA 7/8, 50 Ohm or 7/16
POWER SUPPLY	Single phase 100-240V, 50/60Hz Three phase 380 VAC
AVERAGE CONSUMPTION	Up to 40% efficiency in digital
DIMENSIONS	Standard rack unit of 19"
CONTROL	TFT touchscreen, web GUI, SNMP y GPIO
OPERATING TEMPERATURE	-5 to 40°C
MAXIMUM RELATIVE HUMIDITY	90% without condensation

<b>Modulator: DVB-T/H-T2</b>	
STANDARD	EN300744, EN302304, EN302755, TS101191, TS102773 (T2-MI), TS102034
INPUTS	4xASI BNC(F), 75 Ohm o 2xASI BNC(F), 75 Ohm & 2xRJ45 TS oIP 10/100/1000 Switch seamless between ASI inputs. 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-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)

<b>Modulator: ANALOG</b>	
STANDARD	B, G, D, K, M, N, I
INPUTS	Video BNC(F), 75 Ohm, 2*audio Tini-QG "Mini XLR", 6 Pin (M), 600 Ohm
COLOUR SYSTEM	PAL, NTSC

<b>Modulator: ISDB-TB</b>	
STANDARD	ABNT NBR 15601, ABNT NBR 15603
INPUTS	4xASI TS/BTS BNC (F), 75 Ohm o 2xASI TS/BTS BNC (If), 75 Ohm & 2xRJ45 TS/BTS oIP 10/100/1000
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	Fully supported

<b>Modulator: ATSC</b>	
STANDARD	A/53, A/110
INPUTS	4 x ASI / SMPTE-310M BNC (f), 75 Ohm or 2 x ASI / SMPTE-310M, 75 Ohm and 2 x RJ45 oIP 10/100/1000
MODULATION	8-VSB
INPUT BIT RATE	19.39 Mbit/s
BANDWIDTH	6 MHz

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