

ATSC MODULATOR

OMB **ATSC Modulator** provides a flexible and cost-effective solution to meet the most demanding requirements of today's digital Terrestrial Television Broadcasting.

The ATSC Modulator is designed to serve three functions for DTTB: channel coding, IF modulation and frequency conversion from IF to the UHF channel desired.

This modulator performs all processing stages and includes a backend block, with dual side nonlinear pre-corrector and 64 taps linear pre-corrector. The primary application is as a terrestrial TV transmitter modulator and thus special attention has been paid to optimizing the total transmitter performance. The unit is equipped with an amplitude and phase non-linearity pre-corrector which digitally optimizes the transmitter performance and thus increases the coverage area available at a given output power level.



(I+D)

3MOT S1500 YAV 3DIR SGP 2-R COM LIM3 MMS 412 MIX ONE100

DTP3 TX3000



TECHNICAL SPECIFICATIONS

PROCESADO DE SEÑAL ATSC SINGAL PROCESSING

SUPPORTED MODE	8VSB
BANDWIDTH	6MHz
NETWORK MODE	SFN y MFN
TEST MODE	CW mode, selectable from the Control interface

INPUTS

DVB-ASI: IN A, IN B	MPEG-2 2 ASI inputs Connectors: BNC Female 75Ω
G.703/G.704: IN A, IN B	ETI (NI) 2.048MHZ short haul or ETI (NA) 2 G.703/G.704 inputs Connectors: BNC Female 50Ω Connector: BNC Female
GPS CLOCK REFERENCE	Frequency: 10MHz Level: 100mV-3Vpp Impedance: 50Ω Connector: BNC Female
TIME REFERENCE	Frequency: 1PPS Level: TTL Trigger: positive transition Impedance: 50Ω

RF OUTPUT PARAMETERS

CONNECTOR	N type Female 50Ω
FREQUENCY	50-1000MHz in 1Hz step
FREQUENCY STABILITY	In accordance with external GPS reference Internal ref 1ppm
LEVEL	-10dBm to 0dBm in 0.1dB step (optional from 0 to 10dBm)
LEVEL STABILITY	±0.3dB
RETURN LOSS	>20dB
MER	≥43dB
SHOULDER LEVEL	≤-51dBc
SPURIOUS LEVEL OUTSIDE CHANNEL	≤-60dBm at 0dBm output 10Hz: <-56dBc/Hz 100Hz: <-90dBc/Hz 1kHz: <-100dBc/Hz 10kHz: <-110dBc/Hz 100kHz: <-120dBc/Hz 1MHz: <-120dBc/Hz
PHASE NOISE SSB (MEASURED AT 474MHZ)	

IF OUTPUT PARAMETERS

CONNECTOR	BNC Female
CENTER FREQUENCY (ADJUSTABLE)	35 - 46MHz in 0.1Hz step
FREQUENCY STABILITY	In accordance with external GPS reference Internal ref 1ppm
LEVEL	-10dBm to 0dBm in 0.1dB step
LEVEL STABILITY	±0.2dB
LOSS RETURN	>26dB
MER	≥43dB
SHOULDER LEVEL	≤-52dBc
SPURIOUS AND HARMONICS	<60dB relative to the total output power
SPECTRUM POLARITY	Inverted or non-inverted, user selectable

PRECORRECTION

NON-LINEAR PRE-CORRECTION	Gain correction: Max. 12dB Phase correction: -6 a 30° Amplitude correction: ±10dB
LIENAR PRE-CORRECTION	Amplitude resolution: 0.01dB Group delay correction: ±2000ns Group delay resolution: 1ns

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MONITOR OUTPUTS

DVB-ASI: OUT A, OUT B	MPEG-2 Two ASI outputs Connectors BNC 50Ω
G/703/G.704: OUT A, OUT B	ETI (NI) 2.048MHz short haul or ETI (NA) two G.703/G.704 outputs Connectors BNC 50Ω
RF MONITOR OUTPUT	Connector BNC Female 50Ω Level: 30dB below the RF output Connector BNC Female
REFERENCE MONITOR	50Ω 10MHz sinewave 2Vpp on 1k

ADDITIONAL DATA

CONTROL INTERFACES	- Frontal panel - RS-232 Interface - RS-485 Interface - USB Interface - Web Interface - Alarm relay - SNMP control interface
VOLTAGE	90-264VAC, 47-63Hz
POWER	Max. 45VA
HARMONIC CORRECTION	EN 61000-3-2
OPERATING TEMPERATURE	0°C to +50°C (+32°F to +122°F)
STORAGE TEMPERATURE	-30°C to +70°C (-22°F to +158°F)
HUMIDITY	Max 90% RH
COOLING	Temperature controlled fan to assist natural convection
DIMENSIONS	1RU of 19" standard rack (483x44x483mm)
WEIGHT	6kg

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