DVB-T/H DIGITAL TV TRANSMITTERS
MOT 1400 DVB-T/H

The **MOT 1400 DVB-T/H** transmitter provides a cost-effective solution to meet the most demanding requirements of today's Digital Terrestrial Television Broadcasting. It is made up of the **DVB-T/H modulator** and two **S 700 DVB-T** amplifiers. The amplification stages incorporate high linearity LDMOS transistors. An intermediate external driver is included in order to improve the efficiency of the final amplifying stage. Using the complete alarm and digitalized information systems of this transmitter, the user can control the most relevant parameters of the modulation (according to EN 300 744 standard) and of the amplifying stages. The MFN mode allows adjusting the bit rate of the transport stream signal. Digital telemetry output is included, and critical or non-critical mask filter can be supplied, also, it can be optionally served with a GPS receptor.

TECHNICAL FEATURES

SIGNAL PROCESSING (EN 300 744)

IFFT	2K, 4K and 8K
GUARD INTERVAL	1/4, 1/8, 1/16 and 1/32
CODE RATE	1/2, 2/3, 3/4, 5/6 and 7/8
CONSTELLATION	QPSK, 16-QAM and 64-QAM
HIERARCHICAL MODE (OPTIONAL)	16-QAM and 64-QAM with α=1, 2, 4)
NETWORK MODE	MFN/SFN
BANDWIDTH	8MHz and 7MHz (5/6MHz optional)

INPUTS

MPEG-2	4 ASI inputs and Ethernet Gigabit input 188/204 bytes Bit rate: 4.98-31.67Mbps Connector: BNC Female 75Ω
CLOCK REFERENCE	Connector: BNC (50Ω/ >1KΩ adj.) Frequency: 10MHz Level: 100mV - 3Vpp
TIME REFERENCE	Connector: BNC (50Ω / >1KΩ adj.) Frequency: 1 PPS Level: TTL

PRECORRECTOR

NON-LINEAR CORRECTION	Gain correction: 12dB max. Phase correction: -6 to +30º
LINEAR CORRECTION	Amplitude correction: ± 10dB Amplitude resolution: 0.01dB Group delay correction: ± 1000ns Group delay resolution: 1ns

RF OUTPUT (DVB-T MODULATOR)

CENTRAL FREQUENCY	30 ~ 1000MHz adj. (1Hz step)
FREQUENCY STABILITY	1ppm
SPECTRAL POLARITY	Inverted / Non-inverted
GROUP DELAY	±10ns (pre-filter)
AMPLITUDE-FREQUENCY RESPONSE	±0.5dB (pre-filter)
PHASE NOISE	-90dBc/Hz at 1kHz

AMPLIFICATION

FREQUENCY RANGE	Bands IV & V UHF: 470 ~ 862MHz
AMPLIFICATION CLASS	Driver: A-Class Final amplifier: AB-Class
OUTPUT CONNECTOR	EIA 7/8"
OUTPUT IMPEDANCE	50Ω
TEST MONITOR OUTPUT CONNECTOR	BNC Female
TEST MONITOR OUTPUT IMPEDANCE	50Ω
SPURIOUS (WITH OUTPUT FILTER)	< -60dBc
HARMONICS (WITH OUTPUT FILTER)	< -60dBc
SHOULDERS	<-37dBc
MER	> 36dB
NOMINAL POWER	1400Wrms

CONTROL AND VISUALIZATION

OUTPUT POWER CONTROL	Automatic/ Manual
PARAMETER VISUALIZATION	On LCD Display (output power, reflected power, voltages and currents, temperature?)
RS-232 INTERFACE	Connector: 9-pin SUB-D Female
HW INTERFACE	Connector: 9-pin SUB-D Female
ETHERNET	RJ45; modulator parameters control and visualization through HTTP and SNMP protocols

POWER SUPPLY

VOLTAGE	90 ~ 264V_{AC}
FREQUENCY	47 ~ 63Hz
TOTAL CONSUMPTION	6.7KVA

MECHANICAL FEATURES (WITHOUT RACK)

TEMPERATURE	0-45ºC
COOLING	Forced air
DIMENSIONS	19RU 19"rack (1240 x 590 x 900mm)
WEIGHT	120Kg

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