



LOW POWER TV TRANSMITTERS



Analogue / Digital

VHF / UHF

1mW to 20Wrms in COFDM
1,5mW to 20Wrms in ATSC
3mW to 30Wps in Analogue

In this **compact** transmitter (only 1RU), modulation is implemented by digital processing which allows a flexible configuration so as to cover **all television standards** (Analogue TV, DVB-T/H, DVB-T2, ATSC and ISDB-T) at full performance.

It fits an **LCD screen** for local control. The change of frequency is immediate thanks to its **agile** Up-Converter. It also fits **Low-Noise** Local Oscillators

For SFN GPS reception, it can accept **external GPS** reference or optionally include an **internal GPS** receiver board.

It is designed to offer great flexibility to our customers, offering a **wide range of options** such as **adaptive pre-correction**, **regenerative transmitter**, RJ45 input for **TSolP**, **GPS receiver** and **dual cast** (analogue and digital transmission software switching between them) for countries where the analogue switch-off has not taken place.

OPTIONS

OUTPUT POWER		MODULATION		OTHER	
P1	1mWrms (DVB-T, DVB-T2, ISDB-T) 1,5mWrms (ASTC) 3mWps (Analogue)	M1	DVB-T/H	O1	Adaptive precorrection
P2	75mWrms (DVB-T, DVB-T2, ISDB-T) 110mWrms (ASTC) 220mWps (Analogue)	M2	Analogue (PAL B/G/K/I, NTSC M/N, SECAM)	O2	Regenerative transmitter
		M3	Dual cast (Analogue and DVB-T)	O3	TSolP input
P3	0,5Wrms (DVB-T, DVB-T2, ISDB-T) 1,5Wrms (ASTC) 3,0Wps (Analogue)	M4	ATSC	O4	Internal GPS Receiver
		M5	ISDB-T	O5	External GPS Receiver
P4	20Wrms (DVB-T, DVB-T2, ISDB-T) 20Wrms (ASTC) 30Wps (Analogue)	M6	DVB-T2	O6	Automatic Switchover unit for dual driver or 1+1
				O7	Ethernet interface (RJ45) for control (External unit)
				O8	O84: 4-cavity output filter O86: 6-cavity output filter

SPECIFICATIONS

General

Output power	1mW - 20Wrms (DVB-T) / 3mW- 30Wps (ATV)	See 4 options above
Standards	PAL B/G/K/I, NTSC M/N, SECAM DVB-T/H, DVB-T2, ATSC, ISDB-T	Dual cast optional NICAM and IRT sound optional
Frequency	1mW and 75mWrms: 174-862 MHz (BIII&UHF) 0,5W and 20Wrms: 470-862 MHz (UHF)	8 MHz standard. Also 7, 6 & 5 MHz
Input Connector	- Analogue: Video CVBS (BNC). Audio balanced 2 x Jack 1/4" - Digital: 2xASI (seamless switching) (BNC)	Option hierarchical modulation: 2xASI, option 4xASI (2 backup) Option TSolP: RJ45 input
Output Connector	SMA	Adaptors available

Quality parameters

MER (DVB-T) (at nominal output power)	1mW-75mW > 41 dB 0,5Wrms > 37 dB (41dB with precorrection) 20Wrms > 32 dB (39dB with precorrection)	Measured in the worst channel UHF Adaptive precorrection optional
Shoulders (DVB-T) (at nominal output power)	1mW-75mWrms > 50 dB 0,5Wrms > 42 dB (47dB with precorrection) 20Wrms > 35 dB (45dB with precorrection)	Measured in accordance with ETSI 101 290 before output filter
Intermodulation (analogue)	<-60dB	(-5dB, -16dB, -10dB)
Non-essential radiations	< -100 dBc	With respect to r.m.s. power
Short term stability	$\pm 5 \times 10^{-11}$ when locked to GPS (SFN) $\pm 1 \times 10^{-8}$ when locked to optional OCXO (MFN) $\pm 1 \times 10^{-7}$ when locked to VTCXO (MFN)	
LO Phase noise	< -90 dBc/Hz @ 1kHz	For UHF (for VHF is even better)
Frequency resolution	1 Hz steps	Based on DDS

Control

Monitoring points	RF level, IF level , LO level	SMA connectors
Local control	LCD and keyboard, RS-232, RS-485	
Remote control	1. User console to access all parameters 2. BTESA network management system for minimum data rate (Optional) 3. SNMP agent (Optional)	External unit (1RU) for RJ45 One unit can collect the information of all transmitters in the station and send it remotely

Mechanical and Electrical

Dimensions (WxDxH) (mm) Weight	1mW to 0,5Wrms: 442 x 460 x 44.45 – 5,5 kg 20Wrms: 442 x 480 x 44,45 – 6 kg	19", 1RU
Power supply	110V \pm 20% / 220V \pm 20% 50Hz/60Hz and optionally redundant 48VDC	Opt: Both AC and DC inputs can be connected at the same time
Power Factor	> 0.95	Dynamic PF correction
Consumption (DVB-T)	1mWrms: 70VA / 75mWrms: 75VA 0,5Wrms: 110VA / 20Wrms: 220VA	+15VA for ISDB-T and DVB-T2 Others consult
Temperature range	0° to +45° C	
Humidity	Up to 95%	without condensation
Altitude	Up to 2.500 m above sea level	Higher upon request

Specifications subject to change without notice



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