



▶ **DVB-T2 Exciter**

- ▶ Fully numerical signal elaboration and modulation
- ▶ DVB-T2 in MFN or SFN
- ▶ DVB-T2 in VHF BIII and UHF
- ▶ More robust radiated signal
- ▶ Increased data rate by 30%

DVB-T2 EXCITER



DVB-T2, second generation digital terrestrial television broadcasting, is the newest transmission standard developed by the DVB project. It introduces the latest modulation and coding techniques to enable the highly efficient use of the valuable terrestrial spectrum for the delivery of audio, video and data services to fixed, portable and mobile devices.

The new Electrosys DVB-T2 Exciter is a state-of-the-art exciter fully compliant DVB-T2 Standard. Thanks to Electrosys experience in digital signal processing and in implementation of sophisticated technologies, the Exciter provides high quality solution for broadcast network operators.

The Exciter receives two ASI inputs, with seamless switching in case of failure, performs the DVB-T2 modulation making a modulated RF signal available at its output, appropriate for subsequent RF amplification chain.

In order to improve the transmitter RF characteristics, a digital pre-equalization is perfor-

med to compensate for the linear antenna filter distortions and a digital pre-correction for the non-linear final HPA distortions.

An integrated GPS receiver is available when the Exciter is being used in DVB-T2 SFN Network. The exciter is equipped with a control unit that allows commands, configuration and parameters monitoring locally and remotely, by means of Web server and SNMP protocols.

The DVB-T2 Exciter, perfectly integrated inside VHF BIII and UHF transmitters, with both liquid and air cooling, allows Electrosys to offer a complete range of DVB-T2 transmitters that can meet all customers requirements in terms of frequency band and output power.

The use of latest LDMOS technology in the new lines of Electrosys equipment makes the new DVB-T2 transmitters extremely compact, with minimum space requirements inside the station, and allows an impressive reduction of power consumption.

Electrosys DVB-T2 Transmitters Characteristics

- Fully numerical signal elaboration and modulation
- 2 ASI Input with seamless switching
- Digital pre-distorter and pre-equalizer
- Optional integrated GPS receiver
- Ethernet control with HTTP, TFTP, and SNMP protocols
- Latest LDMOS technology for power amplifier
- High efficiency
- DVB-T2 in MFN or SFN
- DVB-T2 in VHF BIII and UHF
- Liquid cooled and air cooled transmitters available

DVB-T2 Key Performances

- More robust radiated signal
- Increased data rate by 30%, alternatively a 30% greater coverage
- Lower battery consumption of receivers due to Time-Slicing similar to DVB-H
- Improved SFN performance compared to DVB-T
- Service-specific transmission robustness
- Program transmission for mobile and stationary receivers
- Extensive re-use of DVB-T infrastructure
- Reduction of peak-to-average power ratio and therefore of transmitter operating costs

TECHNICAL SPECIFICATIONS

GENERAL SPECIFICATIONS

Frequency Range	170-240MHz VHF BIII 470-870MHZ UHF
Power Supply	100-240VAC
Relative Humidity	95% without condensation
Temperature Range	0°C to 45°C
Maximum Operating Altitude	Up to 2000 meters

INTERFACES

Transport Stream Input	2 DVB-ASI (BNC 50Ω)
Local Control	Front panel Display and Keyboard
Remote Control	Ethernet for HTTP (Web Server), SNMP
RF Output	Main RF Output SMA 50Ω, Monitoring RF Output SMA 50Ω MER over 42dB, Shoulder over 55dB

MODULATION

PLP Constellation	QPSK, 16QAM, 64QAM, 256QAM
L1 post constellation	BPSK, QPSK, 16QAM, 64QAM
Constellation Rotation	Normal, Rotate
Channel Bandwidth	1,7/5/6/7/8 MHz
Guard Interval	1/128, 1/32, 1/16, 19/256, 1/8, 19/128, 1/4
FFT mode	1k, 2k, 4k, 8k, 16k, 32k (normal and extended)
Code Rate	1/2, 3/5, 2/3, 3/4, 4/5, 5/6
FEC	Short (16k), Normal (64k)
Pilot Pattern	From PP1 to PP8
Network type	MFN and SFN
Test Mode	Single tone, PRBS & MPEG generator, Central carrier cancellation
Bandwidth	6, 7, 8 MHz



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Printed in Italy

Version 1.00 - February 2010

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