



FEATURES

- Available for DVB-T standard
- MFN & SFN operations
- Compact design
- High energy efficiency to minimize consumption and OPEX
- High redundancy to ensure maximum reliability
- Natural convection or forced air cooling
- AGC and ALC circuits
- Remote control interface

Options:

- Transposer configuration
- Dual driver configuration
- GPS receiver for SFN synchronization
- 1Hz step local oscillator

DESCRIPTION

The DX TITANIUM SERIES is a family of high-performance DVB-T exciters capable of Multi Frequency Network (MFN) and Single Frequency Network (SFN) operations. The exciter is engineered to be used as a stand-alone transmitter for LPTV or to drive high power amplifiers. It features easy operation and great flexibility in a compact design. UHF and VHF bI/bIII models are available with output power levels from 2.5W to 10W.

The modular design provides great versatility thanks to several possible plug-in module configurations. It also facilitates maintenance and control procedures. The exciter, housed in a 3HE cabinet, integrates the COFDM modulator and an upconverter. It can easily be programmed using the keypad and display on the front panel or via the USB port. A broadband pallet amplifier, based on the latest LDMOS technology, delivers high efficiency and reliable linear performance in a compact design. The exciter is equipped with a multifunction LCD to monitor and control all the operating parameters and a remote control interface.

SIGNAL INPUTS

Multiplexed Transport Stream	188/204 bytes - ASI, BNC female, 75 Ω
Frequency reference	10 MHz Level: 0.1 - 3.3 Vpp BNC female, 50 Ω
Time reference	1 PPS, TTL level Trigger: falling or rising edge SMA male, 50 Ω

DVB-T SPECIFICATIONS

Standard	ETSI EN 300 744
Network mode supported	MFN & SFN (selectable)
Modulation	COFDM
TS Input Data Rate	Up to 31.67 Mbps
Carrier number	2K, 4K, 8K
Channel bandwidth	6 MHz, 7 MHz, 8 MHz
Code rate	FEC = 1/2, 2/3, 3/4, 5/6, 7/8
Guard interval	1/32, 1/16, 1/8, 1/4
Constellation	QPSK, 16QAM, 64QAM
Hierarchical	α = 1, 2, 4 for 16QAM and 64QAM
Spectrum polarity	Inverted or non-inverted
Configuration	Real-time through USB port

IF OUTPUT

Connector	2 x SMB male, 50 Ω
Center frequency adjustable	35 to 46 MHz with 0.1 Hz step
Spectrum polarity	Inverted or non-inverted
Level	-20 dBm to 0 dBm (adjustable)
Return loss	> 26 dB
Shoulder level	≤ -55 dBc
Harmonics and spurious	< 60 dB
MER	≥ 49 dB (typical)

RF OUTPUT

Frequency range	UHF: 470 - 860 MHz VHF bIII: 170 - 240 MHz VHF bI: 47 - 85 MHz
Frequency stability	± 1 ppm or externally synchronized with 10 MHz
MER	> 34 dB (typical)
Spurious emission outside channel	< -60 dB (with output filter)
Shoulder level	< -36 dB (with output filter)

CONTROL INTERFACES

Front panel	LCD display and function keys
USB	Type B connector
RS-232 serial port	9-pin SUB female connector
Communication protocol	USB: 115200 bps - 8 data bit - 1 stop bit - no parity - no flow ctrl RS-232: 2400 bps - 8 data bit - 1 stop bit - no parity - no flow ctrl

GENERAL

Power supply	230 VAC (110 VAC optional)
Operating temperature	-5 °C to +45 °C
Relative humidity	95 %, non-condensing
Cooling	Natural convection or forced air

MODEL	BAND	OUTPUT POWER (Pre-filter)	OUTPUT CONN.	POWER CONSUMPTION	SIZE
DX-2/U-UM		2.5 W	N	35 W	12HE
DX-5/U-UM	UHF	5 W	N	80 W	12HE
DX-10/U-UM		10 W	N	130 W	12HE
DX-2/3-UM	VHF bIII	2.5 W	N	35 W	12HE
DX-10/3-UM		10 W	N	95 W	12HE
DX-2/1-UM	VHF bI	2.5 W	N	45 W	12HE
DX-10/1-UM		10 W	N	95 W	12HE