PowerVision

DFX GOLD SERIES

Professional DTV Transmitter

FEATURES

- Available for DVB-T and ATSC standards
- 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 configuation
- Dual driver configuration
- N+1 configuration
- 1Hz step local oscillator
- GPS receiver module
- SNMP

DESCRIPTION

The DFX GOLD SERIES is a family of professional DVB-T and ATSC transmitters capable of Multi Frequency Network (MFN) operation. This low/medium power series 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 900W, depending on the DTV standard and frequency band.

The standard configuration includes a DVB-T or ATSC exciter, an eventual power amplifier, an output filter compliant with the emission mask requirements, and a 19” standard rack cabinet (12HE or 21HE).

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 DVB-T modulator and an upconverter. All the modulator’s operating parameters, including modulation type, FEC, guard interval, number of carriers, and channel bandwidth, can easily be programmed on the front panel. A broadband power amplifier, based on the latest LDMOS technology, delivers high efficiency and reliable linear performance in a compact design. The PA has its own switching power supply and SWR, overtemperature, overdrive, overcurrent, and overvoltage protections. Each device is equipped with a multifunction LCD to monitor and control all the operating parameters and a remote control interface.

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Technical Specifications

DVB-T SPECIFICATIONS	
Standard	ETSI EN 300 744
MPEG-TS input	188/204 bytes - ASI, BNC female, 75 Ω
Modulation	COFDM
TS Input Data Rate	Up to 31.67 Mbps
Carrier number	2K, 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
Network mode	MFN
Spectrum polarity	Inverted or non-inverted
PCR restamper	For timing reconstruction
ATSC SPECIFICATIONS	
Standard	A/53
MPEG-TS input	188 bytes - ASI, BNC female, 75 Ω
Modulation	8VSB
TS Input Data Rate	19.392 Mbps
Spectrum polarity	Inverted or non-inverted
Channel bandwidth	6 MHz
Network mode	MFN
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
Amplitude imbalance	< 1 %
Quadrature error	< 1 degree
MER	> 34 dB (typical)
Adjacent intermodulation	< -60 dB (with output filter)
Shoulder level	< -38 dB (with output filter)
GENERAL	
Power supply	230 VAC (110 VAC optional)
Operating temperature	-5 °C to +45 °C
Relative humidity	95 %, non-condensing
Cooling	Natural convection and forced air

BAND	MODEL	OUPUT POWER (Pre-filter)		OUTPUT CONN.	POWER CONSUMPTION		SIZE
		DVB-T	ATSC		DVB-T	ATSC	
UHF	DFX-2/U-G	2.5 W	4 W	N	35 W	40 W	12HE
	DFX-5/U-G	5 W	8 W	N	80 W	90 W	12HE
	DFX-10/U-G	10 W	16 W	N	130 W	140 W	12HE
	DFX-40/U-G	50 W	80 W	N	350 W	450 W	12HE
	DFX-100/U-G	130 W	200 W	N	900 W	1.1 KW	21HE
	DFX-200/U-G	250 W	400 W	DIN 7-16	1.7 KW	1.8 KW	21HE
	DFX-400/U-G	500 W	750 W	DIN 7-16	3.1 KW	3.6 KW	21HE
VHF bIII	DFX-2/3-G	2.5 W	4 W	N	35 W	40 W	12HE
	DFX-10/3-G	10 W	16 W	N	95 W	100 W	12HE
	DFX-50/3-G	50 W	80 W	N	400 W	500 W	12HE
	DFX-100/3-G	180 W	230 W	N	800 W	1 KW	21HE
	DFX-300/3-G	350 W	450 W	DIN 7-16	1.5 KW	1.8 KW	21HE
	DFX-600/3-G	700 W	900 W	DIN 7-16	3 KW	3.6 KW	21HE
VHF bI	DFX-2/1-G	2.5 W	4 W	N	45 W	45 W	12HE
	DFX-10/1-G	10 W	16 W	N	95 W	105 W	12HE
	DFX-50/1-G	50 W	75 W	N	400 W	500 W	12HE
	DFX-100/1-G	100 W	150 W	DIN 7-16	1 KW	1.2 KW	21HE
	DFX-200/1-G	200 W	300 W	DIN 7-16	1.9 KW	2.3 KW	21HE

Model numbers refer to DVB-T. For other DTV standards, add the corresponding extension:
/A ATSC

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