



FEATURES

- Available for leading DTV standards (DVB-T/H, DVB-T2, ATSC, ISDB-T/T_B)
- Latest generation MOSFET technology
- Excellent noise figure
- Digital display unit
- “Soft-start” circuit
- AGC and ALC circuits
- 10MHz external synchronization
- S.A.W. vestigial filter
- Remote control interface
- Low power consumption

Options:

- Battery power supply
- GPS receiver module
- 1Hz step local oscillator
- Redundant configuration

DESCRIPTION

The RP GOLD SERIES DTV transposer is engineered to be used as a stand-alone system for LPTV installations or to drive high power amplifiers. The system supports most leading international DTV standards (DVB-T/H, DVB-T2, ATSC and ISDB-T/T_B). UHF and VHF bI/ bIII models are available with output power levels from 2.5W to 16W, depending on the DTV standard.

The modular design provides great versatility thanks to several possible plug-in module configurations. Each unit is equipped with a multifunction display to monitor and control all the operating parameters, a remote control interface, an RS-232 communication port, an RF monitor, and an in-out reference (10MHz). Synthesized oscillators and broadband amplifiers enable fast and easy frequency changes for both the transmitted and received signals. The latest MOSFET technology delivers high efficiency and reliable linear performance over the entire selected frequency band.

There are two different versions of the RP SERIES DTV transposer:

The regenerative version offers the best performance as the signal is completely remodulated, removing all possible errors contained in the received signal. It is composed of a professional DTV receiver, housed in a 1HE cabinet, which demodulates the off-air signal into an ASI TS, then sends it to a digital exciter to be modulated and amplified.

The non-regenerative version is composed of plug-in modules interconnected to a motherboard mounted inside a 19” 3HE rack cabinet. The received signal is filtered and converted to an IF frequency, passed through the ALC and AGC module, and converted to another RF frequency.

REGENERATIVE TRANSPOSERS

RF INPUTS	
Connector	F female, 75 Ω
Frequency	UHF, VHF bl and blll
Frequency resolution	10 KHz
Channel bandwidth	6 MHz, 7 MHz, 8 MHz
Level	From 40 to 130 dBuV

DVB-T DEMODULATION

Modulation	COFDM
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	1/4, 1/8, 1/16, 1/32
Constellation	QPSK, 16QAM, 64QAM
Network mode	MFN
Hierarchical mode	none, α = 1, 2, 4

ASI OUTPUT

Connector	BNC female, 75 Ω
Mode	188 bytes
Spectrum polarity	Inverted or non-inverted

RF OUPUT

MER	> 34 dB
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NON-REGENERATIVE TRANSPOSERS

RF INPUTS

Connector	N female, 50 Ω
Frequency	UHF, VHF bl and blll
Frequency resolution	10 KHz
Channel bandwidth	6 MHz, 7 MHz, 8 MHz
Level	From 40 to 130 dBuV

RF OUPUT

MER degrading	< 2 dB
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COMMON RF SPECIFICATIONS

Frequency range	UHF: 470 - 860 MHz VHF blll: 170 - 240 MHz VHF bl: 47 - 85 MHz
Frequency stability	± 1 ppm or externally synchronized with 10 MHz
Amplitude imbalance	< 1%
Quadrature error	< 1 degree
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

MODEL	INPUT BAND		OUTPUT BAND	OUTPUT POWER		MAX POWER CONS.
	DVB-T	Other DTV Standards		DVB-T/H DVB-T2 ISDB-T/T _β	ATSC	

REGENERATIVE TRANSPOSERS

RP-10/U-XR				2.5 W	4 W	65 W
RP-20/U-XR	UHF, VHF bl or blll		UHF	5 W	8 W	115 W
RP-50/U-XR				10 W	16 W	165 W
RP-10/3-XR	UHF, VHF bl or blll		VHF blll	2.5 W	4 W	65 W
RP-50/3-XR				10 W	16 W	125 W
RP-10/1-XR	UHF, VHF bl or blll		VHF bl	2.5 W	4 W	70 W
RP-50/1-XR				10 W	16 W	130 W

NON-REGENERATIVE TRANSPOSERS

RP-10/U-X				2.5 W	4 W	40 W
RP-20/U-X	UHF	UHF VHF bl or blll	UHF	5 W	8 W	90 W
RP-50/U-X				10 W	16 W	140 W
RP-10/3-X	VHF bl or blll	UHF VHF bl or blll	VHF blll	2.5 W	4 W	40 W
RP-50/3-X				10 W	16 W	100 W
RP-10/1-X	VHF bl or blll	UHF VHF bl or blll	VHF bl	2.5 W	4 W	45 W
RP-50/1-X				10 W	16 W	105 W

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

/A ATSC
/T2 DVB-T2
/IS ISDB-T

Higher output powers are available with the addition of power amplifiers. Please contact our sales department.