

DVB-T/H Transposers and Gap-fillers

RDE9000 SERIES



MAIN FEATURES

- Input frequency continuous tuning (150 and 900 MHz) without readjustments.
- Output continuous frequency tuning between 470 and 862 MHz without readjustments.
- Output power versions available for 1 and 100Wrms (other output power versions on request).
- IF/RF Converter with two fixed intermediate frequencies (double conversion) for high spectral purity.
- Extremely compact design in 19"- 1+2U (20 to 100W versions) and 19"-1U+9.5"-2U (1 to 10W versions).
- High sensitivity and selectivity (> 40 dB @ ± 4.2 MHz).
- MFN (as transposer) and SFN (as gap-filler) modes.
- Configurable via easy-to-use push-buttons /display.
- Linear precorrector with amplitude-frequency response correction.
- Non-linear precorrector with independent adjustments AM/AM and AM/PM.
- Highly stable internal frequency reference with the possibility of external synchronization.
- High performance echo canceller (optional).
- Antioscillation system (SAO) with automatic regulation of output power.
- LDMOS balanced power amplifier.
- Remote interfaces: dry contacts and SNMP/GPRS.
- PC Graphical interface.

The DVB-T / DVB-H transposer/gap-filler allows for a simple and affordable extension of coverage in MFN/SFN networks. The reception/transmission channels are fully programmable in a very easy and fast way. The high selectivity allows to work without problems in presence of adjacent channels; besides, it optionally incorporates a digital processing echo-canceller that effectively decreases the bandpass ripple resulting from an inadequate isolation between transmission and reception antenna systems. Remote control and supervision is via dry contacts and SNMP (optional).



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TECHNICAL CHARACTERISTICS

EXCITER (RED9001)

RECEPTION RF INPUT

Signal type:	One DVB-T channel
Frequency band:	150-862 MHz.
Sensitivity:	-80...0 dBm
Selectivity (Pi=-40dBm.):	>40dB ±4.2MHz.
-with Echo Canceller:	>80dB ±4.2MHz.
Noise figure:	<8 dB (Pin<-47 dBm).
RF/IF Conversion:	Double conversion.
Connector:	N (f) 50 ohm.
Return losses:	>18 dB.

IF Processing

Central frequency:	36,15 MHz.
Bandwidth:	8 MHz. (others opt.).
Amplitude equalization:	± 3dB (continuous).
Gain predistortion:	3 x 6 dB max.
Phase predistortion:	3 x 16° max.
Delay (Without Echo C.):	2,4 µS.
Delay (With Echo C.):	2,8 µS.

Echo canceller

Cancellation level:	>30 dB.
Maximum echo level:	+15 dBc.
Level of output sample:	0 dBm.

Clock and synchronization

Internal clock:	10 MHz.
Stability (typ.):	1 ppm (<0,01 opt.).
External reference:	10 MHz. BNC(f).
Impedance:	50 Ω.
Level:	-5 a +10 dBm.

RF Output

Level:	-10...+10dBm.
Frequency Band:	470...862 MHz.
Resolution:	1Hz.
IF/RF Converter:	Double conversion.
Connector:	SMA(f).
Spurious:	<-60 dBc.

General

Operating temperature:	0°C ... 45°C.
Supply voltage:	90-264 VAC.
Consumption:	40W.
Dimensions:	19"-1U.
Weight:	5Kg. aprox.

OPTIONS

SNMP remote interface.

UHF AMPLIFIER

RF Input

Level:	-9...0dBm (-4dBm nom).
Connector:	SMA(f) -50 ohm.

RF Output

Frequency margin:	470...862 MHz.
Output power:	1Wrms (ADE9010). 5Wrms (ADE9050). 10Wrms (ADE9100). 20Wrms (ADE9200). 50Wrms (ADE9500). 100Wrms (ADE9101).
Output power stability:	<± 0.2 dB.
Intermodulation:	>37dB.
MER:	>33dB.
Connector:	N-7/16"(f) 50 ohm.(d.on model).
Return losses:	>18 dB.
Harmonics after filter:	<-85dBc (up to 1 GHz).
Spurious after filter:	<-60dBc (up to 1,7 GHz).

GENERAL

Operating temperature:	0°C ... 45°C.
Relative Humidity:	95% max.
Supply voltage:	90-264 VAC.
Consumption:	80W (ADE9010). 140W (ADE9050). 170W (ADE9100). 300W (ADE9200). 450W (ADE9500). 630W (ADE9101).
Cooling:	Forced air.
Dimensions:	19" 1U+2U (20W to 100W). 19" 1U+9.5"-2U (1W to 10W).
Weight:	10/18 Kg. aprox.

PARAMETERS/SETTINGS VIA FRONT KEYPAD/DISPLAY

- Configuration of linearity reception
- Gain control: Manual/Automatic
- Configuration of eco canceller
- Linear / Non linear precorrection
- Selection of input / output frequency
- Forward power
- Warnings/alarms

Examples of configurations for 20W and 100W Transposers.

RDE9200 = RED9001 + ADE9200
RDE9101 = RED9001 + ADE9101

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