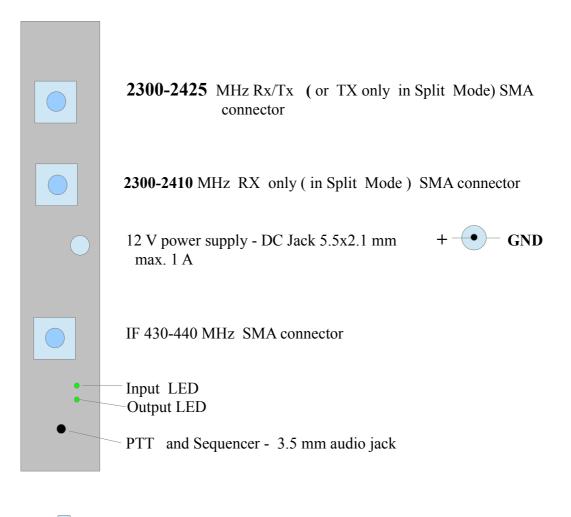
2300 / 432 MHz Transverter V1.4

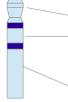
Sp	ecifications	
$\sim \mathbf{P}$	contractions	

Specifications			
	Min.	Тур.	Max.
Frequency range RF	2300 MHz		2425MHz
Frequency range IF	430	432 MHz	440
LO Frequency:		see table	
LO Accuracy at 20 deg. C		+/- 1 ppm	
LO temp. stability -20+70 deg . C		+/- 2.5 ppm	
Output Power	1.5 W	2.0 W	2.5W
Power Supply	12.0 V	12.0V	13.8 V
Current Consumption			1 A
Input Power	0.2 W		5 W
Receive Gain, Adjustable	0 dB		+10 dB
Noise Figure (Split mode)		1.5 dB	
Noise Figure (Rx/Tx mode)		1.9 dB	
Dimensions			124x94x25mm
Spurious response		< -55 dBc	

Features

2 W output power Low noise figure , GaAs HEMT input stage High performance UP / DOWN converters High stability TCXO Input for 10 MHz external reference oscillator Internal Tx/Rx switch Possibility to work with split Tx/Rx (selectable , required soldering) Internal Directional Coupler PTT can be switched by connecting PTT to ground, by RF power (RF VOX) or by DC voltage Output SWR indicator - bi color LED Optimal input power indicator - bi color LED Integrated Sequencer 4 LO frequencies , programmable by PC (RS-232, 3.3V levels)



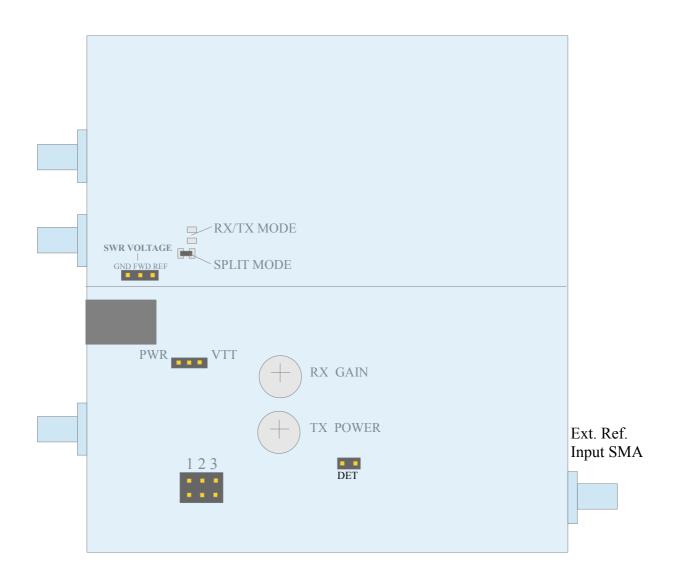


PTT - 3.5 mm audio jack , active: LOW or connect to ground Sequencer output , open collector NPN transistor 30V/0.3A max. Time delay: 30 mS after PTT LOW. RF power is applied to the output after additional 30 mS Ground

Input power adjustment:

Input LED color: of	range	- Input power is low
Ŭ	·	Input power is normalInput power is too high

Output LED color : green	- Excellent output SWR
orange	e - Moderate output SWR
red	- High output SWR



Trimmers

RX GAIN - You can adjust the overall gain from 0 to +10dB
TX POWER - When PTT is LOW and power supplied to the IF input, rotate until the LED lights up green

SWR Voltage

Can be measured by high impedance voltmeter FWD - voltage of forward wave REF - voltage of reflected wave GND - ground

PWR / VTT

PWR ON: The Transverter can be DC powered by coaxial cable. VTT ON: PTT can be switched on by applying DC voltage 5-15 V in coaxial cable

A bias tee is needed to insert DC power into coaxial cable.

DET

OFF - RF VOX detector time low

- ON RF VOX detector time high (0.3 0.5sec.)
- **RF VOX** is always switched ON. The Transverter automatically switches to the TX mode when RF power is applied to IF (430-440 MHz input)

Jumper 3

- ON Internal frequency reference is used
- OFF Internal reference is switched OFF. External reference with 10 MHz frequency and -10...0 dBm power must be connected to **Ext Reference Input SMA** The transverter needs **restart** to switch between two modes.
- **PLL unlock indicator:** Blinking Input LED in Red means a PLL unlock.

Default LO Frequencies

Jumpers	1	2	LO Freq. , MHZ Rx / Tx
LO Frequency 1	off	off	1870 / 1870
LO Frequency 2	on	off	1886 / 1886
LO Frequency 3	off	on	1888 / 1888
LO Frequency 4	on	on	1968 / 1968

How to understand what is the current LO frequency:

After switching power ON, input LED lights up in Red for 3 sec. If you switch ON and hold PTT during this time, you can hear on CW, on 432.000 MHZ what are current LO frequencies - RX and TX.