

## TETRA CHANNEL SELECTIVE OFFSET REPEATER

- **LOW ANTENNA ISOLATION REQUIREMENT**
- **HIGH SENSITIVITY**
- **HIGH DYNAMIC RANGE**
- **COMPACT SIZE**

This system uses two repeaters as one pair in a special configuration. One of them is located near to the base station. A small part of the transmitted TETRA RF power is coupled out and this signal is converted to the same TETRA band, but to different channel and transmitted to the far side counterpart. This unit can be installed more than ten kilometres away. The received signal then converted back to the original TETRA channel and transmitted to the mobile users and vice versa. As can be seen, there is no need to have an extra microwave link, this function is provided by the repeater itself. At the uncovered new site, a smaller „Baby cell” is created with the full capability of the „Mother cell” supported by the already existing BTS.

It is a compact and reliable unit and it is especially advantageous to use it in villages, or open fields where the field strength is weak and the isolation between the repeater antennas is small. It is a cost effective solution to cover areas, which cannot be covered economically with base stations. Parameters and monitor voltages can be accessed by RS232 interface or through GSM modem.

### Electrical characteristics:

	Base station side <b>converter</b> unit		Far side <b>offset</b> unit	
	BRTB11		BRTO11	
	Downlink	Uplink	Downlink	Uplink
Number of channels	4	4	4	4
Input frequency *	390 – 395 MHz	380 – 385 MHz	390 – 395 MHz	380 – 385 MHz
Output frequency *	390 – 395 MHz	380 – 385 MHz	390 – 395 MHz	380 – 385 MHz
Channel Spacing	25 kHz	25 kHz	25 kHz	25 kHz
Gain	50 dB	50 dB	90 dB	90 dB
Gain setting range /step	30 / 1 dB	30 / 1 dB	50 / 1 dB	50 / 1 dB
Noise Figure	--	<5 dB typ. 7 dB max.	< 4 dB typ. 6 dB max.	< 4 dB typ. 6 dB max.
Max. ALC level @ Vset=5V	33 dBm	10 dBm	33 dBm	33 dBm
Factory setting	30 dBm	0 dBm	30 dBm	33 dBm
ICP3	> 70 dBm typ	> 36 dBm	> 70 dBm typ	> 76 dBm typ
Delay @ BRTO & BRTB	< 30 µsec			
EVM	According to the ETSI regulation < 10%			
Out of band Gain	According to the ETSI regulation			
Harmonics	According to the ETSI regulation			
Spurious Radiation	According to the ETSI regulation			
Local Leakage	According to the ETSI regulation			
Local RS232 & Remote control & SMS	Yes			
Operating temp.	0 to + 50 °C			
Supply Voltage	230V / 50 Hz AC 240-350 W			
Weight	45 kg			50 kg
Application	outdoor			
Dimension	<b>580 x 400 x 174 mm</b>		<b>580 x 400 x 214 mm</b>	

(\* ) Channel frequency can be specified in the whole TETRA band.  
Specifications are subject to change without notice.