

#### **MAIN FEATURES**

- Digital filter technology (SDR)
- Flexible filter selection
- Frequency shift function
- High dynamic range
- High sensitivity
- SNMP support
- Low power consumption
- Compact size

### DESCRIPTION

This repeater is intended for use in 400 MHz TETRA systems. Based on the latest digital filter technology this model offers freedom for the users to select the best possible filter characteristics for the actual application type. It has perfect EVM parameters of <1% and low power consumption figures.

Supplied in a compact box, this repeater is an ideal choice for use in areas where flexible filter selection is essential for smooth operation and/or network design. The unit can be monitored and controlled by local and remote-control software.

RF PARAMETERS		
Franciscon established	Downlink: 390 – 395 MHz	
Frequency band	Uplink: 380 – 385 MHz	
Operating frequency bandwidth	5 MHz	
Mode of operation	Channel selective mode, up to 4 Channels	
Linear output power	Downlink: +23 dBm	
	Uplink: +22 dBm	
1600	Downlink: +50 dBm @ 2x20 dBm (2 carriers) @ meets with ETSI	
ICP3	Uplink: +49 dBm @ 2x19 dBm (2 carriers) @ meets with ETSI	
ACPR	60 dB @ linear output power	
Nominal gain	75 dB	
Gain setting range	75 to 46 dB in 1 dB steps	
Gain ripple	<±1.5 dB typical	
Gain stability	<±1.5 dB (within operating temp. range)	
Uplink input noise figure	typ. 4 dB, max. 5 dB @ max. gain	
Harmonics	According to the ETSI regulation	
Spurious radiation	According to the ETSI regulation	
Local leakage	According to the ETSI regulation	
EVM	<1% typ. (ETSI regulation <10%)	
MECHANICAL PARAMETERS		
RF connectors	4.3-10 – female (optional N – female)	
Supply voltage	230 VAC 50 – 60 Hz (optional 48 VDC)	
Power consumption	<80 W	
Weight	20 kg	
Dimension	420 x 400 x 158 mm	

# **SPECIFICATIONS**



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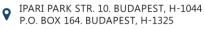
#### BRTM32 400 MHz TETRA Digital Mini Repeater

Operating temperature range       0 C + 70 °C         Cooling       Convection         Degree of protection       IP40 Indoor         SOFTWARE PARAMETERS       Ethernet, SNMP v1 / v2c / optional v3 protocol Optional additional RS-232 interface <sup>(1)</sup> Alarm reporting       SNMP error messages, front LED, 4 external alarm inputs, user configurable sum alarm         Wireless control       Optional 2G / 4G modem         SUM ALREM CONNECTOR PIN MAP (9 PIN D-SUB MALE) <sup>(2)</sup> Pin no.       Function         1       NC         6       GND         1       NC         6       GND         5       GND         5       GND         6       GND         Ext.Alarm 2         Common         Ext. Alarm 1         Ext. Alarm 2         Ov         Ext. Alarm 1         Ext. Alarm 1         Visc Connected         Ov         Visc Connected         Sinter Connected         Sinter Connected         Sinter Connected         Sinterial colspanet colspanet colspane"2"	Operating temperature range		0 °C +45 °C		
Cooling       Convection         Degree of protection       IP40 Indoor         SOFTWARE PARAMETERS       Ethernet, SNMP v1 / v2c / optional v3 protocol Optional' additional RS-232 interface <sup>(1)</sup> Alarm reporting       SNMP error messages, front LED, 4 external alarm inputs, user configurable sum alarm         Wireless control       Optional 2G / 4G modem         SUM ALARM CONNECTOR PIN MAP (9 PIN D-SUB MALE) <sup>(2)</sup> Pin no.       Function         1       NC         6       GND         2       *RX Data         3       *TX Data         8       NC         5       GND         5       GND         6       PIN EXTERNAL ALARM INPUT CONNECTOR PIN OUT	Operating temperature range				
Degree of protection       IP40 Indoor         SOFTWARE PARAMETERS       Ethernet, SIMP v1 / v2c / optional v3 protocol         Wired control       Optional "additional RS-232 interface(")         Alarm reporting       SIMP error messages, front LED, 4 external alarm inputs, user configurable sum alarm         Wireless control       Optional 2G / 4G modem         SUM ALARM CONNECTOR PIN MAP (9 PIN D-SUB MALE)("2")         Pin no.       Function         1       NC         2       *RX Data         3       *TX Data         4       Dry Contact         5       GND         4       Dry Contact         5       GND         5       GND         6 PIN EXTERNAL ALARM INPUT CONNECTOR PIN OUT         Ext. Alarm 1         OV         +12V					
SOFTWARE PARAMETERS         Wired control       Ethernet, SNMP v1 / v2c / optional v3 protocol Optional additional RS-232 interface <sup>(1)</sup> Alarm reporting       SNMP error messages, front LED, 4 external alarm inputs, user configurable sum alarm         Wireless control       Optional 26 / 4G modem         SUM ALARM CONNECTOR PIN MAP (9 PIN D-SUB MALE) <sup>(2)</sup> Pin no.       Function         1       NC         2       *RX Data         3       *TX Data         4       Dry Contact         5       GND         5       GND         5       GND         5       GND         6 PIN EXTERNAL ALARM INPUT CONNECTOR PIN OUT    Software 1          Sum Alarm 2    Ext. Alarm 3          Ext. Alarm 4    OV          Vir Connected    S PIN FAN CONNECTOR PIN OUT					
Wired control       Ethernet, SNMP v1 / v2c / optional v3 protocol Optional additional RS-232 interface <sup>(1)</sup> Alarm reporting       SNMP error messages, front LED, 4 external alarm inputs, user configurable sum alarm         Wireless control       Optional 2G / 4G modem         SUM ALARM CONNECTOR PIN MAP (9 PIN D-SUB MALE) <sup>(2)</sup> Pin no.       Function         1       NC         2       *RX Data         3       *TX Data         4       Dry Contact         5       GND         5       GND         5       GND         6       PIN EXTERNAL ALARM INPUT CONNECTOR PIN OUT         Ext. Alarm 1         Ext. Alarm 2         OV         +12V					
Optional' additional RS-232 interface <sup>(1)</sup> Alarm reporting       SNMP error messages, front LED, 4 external alarm inputs, user configurable sum alarm         Wireless control       Optional 2 d/ 4G modem         SUM ALARM CONNECTOR PIN MAP (9 PIN D-SUB MALE) <sup>(2)</sup> Pin no.       Function         1       NC         2       *RX Data         3       *TX Data         4       Dry Contact         5       GND         5       GND         5       GND         6       Function         6       GND         6       GND         6       GND         5       GND         6       Image: Control of the state			Ethernet SNMP v1 / v2c /	optional v3 protocol	
Alarm reporting       SNMP error messages, front LED, 4 external alarm inputs, user configurable sum alarm         Wireless control       Optional 2G / 4G modem         SUM ALARM CONNECTOR PIN MAP (9 PIN D-SUB MALE) <sup>(2)</sup> Pin no.       Function         1       NC       6         2       *RX Data       7         3       *TX Data       8         4       Dry Contact       9         5       GND       -         6       FUN EXTERNAL ALARM INPUT CONNECTOR PIN OUT         Ext. Alarm 2         Ext. Alarm 1         Ext. Alarm 2         Common         Ext. Alarm 1         OV         +12V	Wired control				
Airm reporting Vireless control SUM ALARM CONNECTOR PIN MAP (9 PIN D-SUB MALE) <sup>(2)</sup> Pin no. Function 1 NC 6 GND 2 *RX Data 7 Dry Contact 3 *TX Data 8 NC 4 Dry Contact 9 NC 5 GND 6 PIN EXTERNAL ALARM INPUT CONNECTOR PIN OUT 6 PIN EXTERNAL ALARM INPUT CONNECTOR PIN OUT Ext. Alarm 2 Common Ext. Alarm 1 Virel Connected 3 PIN FAN CONNECTOR PIN OUT 0V V V V V V V V V V V V V V			•		
Wireless control     Optional 2G / 4G modem       SUM ALARM CONNECTOR PIN MAP (9 PIN D-SUB MALE) (2)     Pin no.     Function       1     NC     6     GND       2     *RX Data     7     Dry Contact       3     *TX Data     8     NC       4     Dry Contact     9     NC       5     GND     -     -	Alarm reporting				
SUM ALARM CONNECTOR PIN MAP (9 PIN D-SUB MALE) <sup>(2)</sup> Pin no. Function Pin no. Function 1 NC 6 GND 2 *RX Data 7 Dry Contact 3 *TX Data 8 NC 4 Dry Contact 9 NC 5 GND 6 PIN EXTERNAL ALARM INPUT CONNECTOR PIN OUT 6 PIN EXTERNAL ALARM INPUT CONNECTOR PIN OUT Ext. Alarm 3 Common Ext. Alarm 4 Not Connected 3 PIN FAN CONNECTOR PIN OUT 0 +12V N t Connected	Wireless control				
Pin no.       Function       Pin no.       Function         1       NC       6       GND         2       *RX Data       7       Dry Contact         3       *TX Data       8       NC         4       Dry Contact       9       NC         5       GND       -       -         6 PIN EXTERNAL ALARM INPUT CONNECTOR PIN OUT       Ext. Alarm 2         Ext. Alarm 3         Ext. Alarm 2         Ext. Alarm 3         Ext. Alarm 3         Ext. Alarm 1         Ext. Alarm 1         Ext. Alarm 3         Ext. Alarm 4         OV         Ext. Alarm 4         OV         V         OV         Ext. Alarm 4         OV         Ext. Alarm 4		1AP (9 PIN	•		
1       NC       6       GND         2       *RX Data       7       Dry Contact         3       *TX Data       8       NC         4       Dry Contact       9       NC         5       GND       -       -         6 PIN EXTERNAL ALARM INPUT CONNECTOR PIN OUT         Ext. Alarm 1         Ext. Alarm 2         Ext. Alarm 3         Ext. Alarm 1         Ext. Alarm 3         Ext. Alarm 3         Ext. Alarm 1         OV         Ext. Alarm 1         OV         V         OV         Ext. Alarm 1         OV         OV         Ext. Alarm 2         OV         Ext. Alarm 2         OV         OV         OV         Superior					
3       *TX Data       8       NC         4       Dry Contact       9       NC         5       GND       -       -         6 PIN EXTERNAL ALARM INPUT CONNECTOR PIN OUT         Ext. Alarm 2         Ext. Alarm 2         Common         Ext. Alarm 3         Ext. Alarm 1         Common         Ext. Alarm 4         OV         +12V					
3       *TX Data       8       NC         4       Dry Contact       9       NC         5       GND       -       -         6 PIN EXTERNAL ALARM INPUT CONNECTOR PIN OUT       Ext. Alarm 2         Ext. Alarm 2         Ext. Alarm 3         Ext. Alarm 1         Ext. Alarm 1         Ext. Alarm 4         OV         +12V	2 *RX Data	7	Dry Contact		
5 GND 6 PIN EXTERNAL ALARM INPUT CONNECTOR PIN OUT Ext. Alarm 3 Ext. Alarm 1 Ext. Alarm 1 Ext. Alarm 1 Ext. Alarm 1 Not Connected 3 PIN FAN CONNECTOR PIN OUT OV +12V E	3 *TX Data	8			
6 PIN EXTERNAL ALARM INPUT CONNECTOR PIN OUT Ext. Alarm 3 Ext. Alarm 1 Ext. Alarm 1 Ext. Alarm 4 S PIN FAN CONNECTOR PIN OUT OV V V V V V V V V V V V V V	4 Dry Contact	9	NC		
Ext. Alarm 2 Common Ext. Alarm 3 Ext. Alarm 1 Not Connected 3 PIN FAN CONNECTOR PIN OUT OV +12V	5 GND	-	-		
Ext. Alarm 3 Ext. Alarm 1 Ext. Alarm 4 Not Connected 3 PIN FAN CONNECTOR PIN OUT OV V V V V V V V V V V V V V	6 PIN EXTERNAL ALARM INPUT (	CONNECT	OR PIN OUT		
<u>OV</u> N L E E E E E E E E E E E E E E E E E E	Ext. Alarm 3 S S S S S S S S S S S S S				
	3 PIN FAN CONNECTOR PIN OUT				
<u>N.C.</u>					
	<u>N.C.</u>				

Specifications are subject to change without notice.

(1) Available upon request.

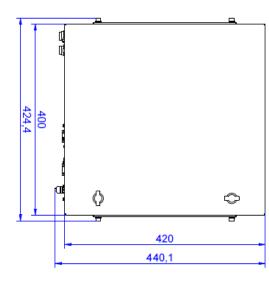
(2) In SWITCH OFF case the relay will be open. The operation of the Dry Contact relay configurable by the user.

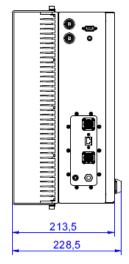


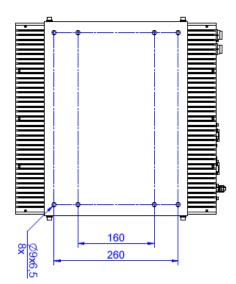


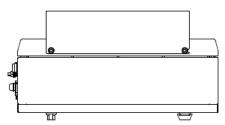


## **OUTLINE DRAWING (mm)**









## **ORDERING INFORMATION**

MODEL NUMBER	DESCRIPTION
BRTM32K11172	BRTM32 23 dBm, 380-385 MHz / 390-395 MHz, G 75dB, 230 VAC, 4CH, Ethernet port, Independent Channel Gain, SNMPv2, 2G/4G modem, 2x 4.3- 10-female Combined ports, wall mount

## **DOCUMENT REVISION**

DOCUMENT NAME	REVISION	DATE
BRTM32-DS-K11172	V01	24/02/2022



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