

MReX-SF

TELEMETRY AND MESSAGING STORE FORWARD REPEATER

The MReX-SF is a very high sensitivity transceiver for paging and general telemetry use. The MReX-SF is a compliant mobile and base station transmitter and a store and forward repeater.

Suitable for a number of monitoring and control applications in sectors such as industry, agriculture, farming, retail, hospitality, security and emergency services.

APPLICATIONS:

- Transmit DMR Messages to a variety of standard DMR radios.
- Transmit and receive POCSAG paging messages for use with legacy belt pager type systems.
- Transmit and receive serial and telemetry data at high data rates (optional).
- Repeat and forwarding telemetry and paging messages in poor coverage areas.
- Remotely control outputs or monitor inputs.



FEATURES:

- Sends and receives 512, 1200 and 2400 baud POCSAG paging messages.
- Transmits DMR Tier 1 messages (optional).
- Sends telemetry data from 512 baud to 9600 baud
- Paging store and forward repeater operation with configurable duplicate reject.
- Transmit data at rates from 512 baud to 9.6K baud.
- Supports channel spacing of 25kHz, 12.5kHz and 6.25kHz.
- Optionally can be used as a point to point wireless serial link operating at speeds up to 9600 baud. In this manner a wireless transparent serial link can be achieved.
- 5 I/O pins. One Input may be reconfigured to be an open collector output.
- Configured inputs can be programmed to send POCSAG and DMR messages simultaneously when triggered.
- Configured output can be controlled via paging message.
- Periodic message support to ensure link integrity.
- Output power up to 100mW.
- Operates from 421 to 480MHz.
- High stability oscillator ensuring minimal drift over the entire specified temperature range.
- High sensitivity receiver (-127dBm at 512 baud).
- Operation through external power supply (6-15Vdc).
- RS232 port with support for WT protocol for simple system integration.
- Easy clone the radio system using WTE configuration software, which minimises the downtime when updating an installation.

BENEFITS:

- Simple, Fast, Reliable
- Low cost installation.
- Quick to deploy
- The MReX provides a practical, efficient means to simultaneously message many users
- Integrates seamlessly with other WTE radio products.
- Low power consumption.
- Approved for use as a mobile or base station transmitter at rates up to 9600 bps. This allows fast telemetry control.

- Approval for use with any antenna means the user can choose between size or performance by using a directly attached or elevated external antenna.
- Less interference on channel used through "polite" operation, checking channel is clear before transmitting.
- Supports batching of paging messages for fast transmission.
- RS232 port for simple system integration.

DMR MESSAGING SUPPORT

The MReX supports the transmission of short Digital Mobile Radio text messages, allowing direct messaging to a variety of DMR radios.

CONNECTIONS

Can be supplied with internally housed screw terminals (default) or external screw terminal plug

CUSTOMISATION

The MReX has been developed and is maintained "in-house". WTE can work with your team to customize the MReX to meet your system needs. Designed and manufactured in New Zealand.



SPECIFICATIONS:

FREQUENCY RANGEMReX-460: 421MHZ to 480MHZ
TX POWER Up to 100mW (+20dBm)
RECEIVER SENSITIVITY**450MHZ** (512 BAUD) -126 dBm
450MHZ (1200 BAUD) -124 dBm
MAXIMUM RX INPUT POWER13 dBm
Tx/Rx FREQUENCY ACCURACY0.5ppm

POWER SUPPLY VOLTAGE Min 6. Max 15V.

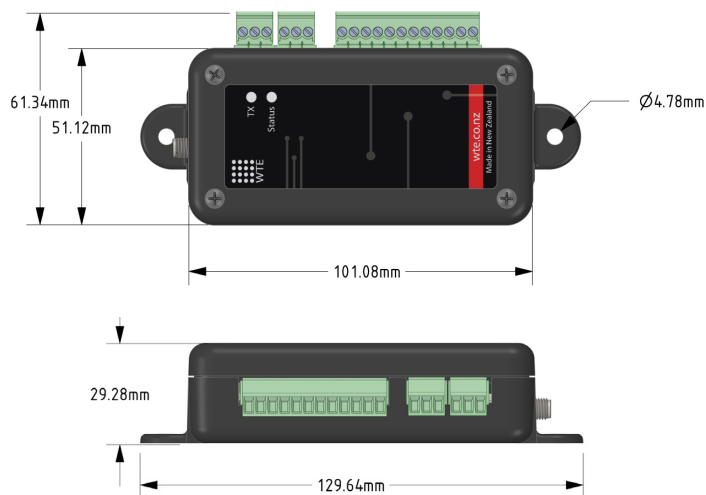
OPERATING CURRENT:

RECEIVING: 21mA
TRANSMITTING: 95mA
STANDBY:<300nA in transmit only standby

DIGITAL INPUTS 5
ANALOG INPUTS (optional)5(0-3V)
DIGITAL OUTPUTS 5 (1 Open Drain)
INTERFACES RS232 9600:8-N-1 BAUD
ANTENNA CONNECTOR SMA female

MECHANICAL:

WEIGHT: 100 Grams
MOUNTING:M4 flange



ENVIRONMENTAL

OPERATING TEMPERATURE -10 to +55 °C
HUMIDITY Maximum 95% non-condensing

DMR SUPPORT:

ENCODE Partial ETSI TS 102 361-1 (Tier 1 direct mode).
Short Message Type, unconfirmed.
Max Message Length 50 characters.
DECODE N/A

POCSAG SUPPORT:

ENCODE AND DECODE BAUD RATES 512, 1200, 2400, 4800, 9600
SUPPORTED MODESAlphanumeric and numeric, singular or batched
for 25KHz, 12.5KHz and 6.25KHz channel spacing
Adjustable preamble from 64 to 5000 bits

MODULATIONS SUPPORT:

25KHZ CHANNEL WIDTH 512 BAUD (FSK), 1200 (FSK)
12.5KHZ CHANNEL WIDTH512 BAUD (FSK), 1200 (FSK), 1800(GFSK),
2400 (GFSK), 4800 (GFSK), 9600 (GFSK), 9600 (4GFSK)
6.25KHZ CHANNEL WIDTH512 BAUD (FSK), 4800 (4GFSK)

REGULATORY COMPLIANCE

FCC FCC Part 90.217
EN EN 300 224 (base station and mobile transceiver compliant).
EN EN 50385
AS/NZ AS/NZ 4769.1:2000
EMC EN 301 489
SAFETY EN 62368
RoHS (Restriction of Hazardous Substances) Compliant
WEEE (Waste Electrical and Electronic Equipment) Compliant¹
FCC ID2ASGC-MREX460

Notes: ¹ Please contact your WTE dealer or WTE directly for further information regarding safely disposing of electronic equipment

For latest information and specifications please visit wte.co.nz



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