

TReX Lite TELEMETRY, DATA & MESSAGING TRANSCIVER

The TReX Lite is a serial RS232 capable transceiver for data, telemetry and paging (one and two-way). The TReX is suitable for commercial, industrial and remotely managed control/monitoring applications.

Use the TReX when high reliability, long range and high speed control or messaging is required.

DMR MESSAGING

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

APPLICATIONS:

- Transmit DMR Messages.
- Transmit and receive POCSAG paging messages.
- Transmit and receive serial and telemetry data at high data rates.
- Act as a repeater for forwarding telemetry and paging messages in poor coverage areas*.
- Detect antenna faults during normal operation*.

FEATURES:

- Up to 4W power output.
- Operates from 421 to 480MHz.
- Data transmit rates from 512 baud to 32K baud.
- Supported channel spacing of 25kHz, 12.5kHz and 6.25kHz.
- Sends and receives POCSAG paging messages.
- Transmit DMR tier 1 text messages.
- Receives FLEX™ paging messages.
- Two-Way paging, with auto acknowledge and request confirmation message.
- Variable content macro which allows the TReX to build a periodic message with current system status, IO state and more.
- 4 digital inputs
- RS232 support.
- Configured inputs can be programmed to send POCSAG and DMR messages simultaneously when triggered.
- Periodic message support to ensure radio link integrity.
- High sensitivity receiver.
- Antenna mismatch detection*.
- Low battery/voltage messaging.
- Support for additional protocols upon request and negotiation.

CONFIGURABLE:

The TReX can be configured and cloned through serial commands.

TReX Lite OPTIONS

With the purchase of a license, the following features are available:

- Increase of output power from 500mW to 4W.
- Support for additional protocols (other the default WT Protocol)
- Antenna mismatch detection.
- Store and forward repeater operation.

CUSTOMISATION

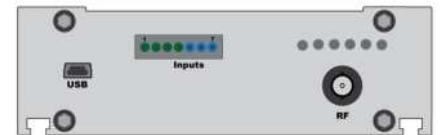
The TReX has been developed and is maintained "in-house". WTE can work with your team to customize the TReX to meet your system needs. Designed and manufactured in New Zealand.

CONNECTING TO THE TReX Lite

The minimum required connections for a usable system:

- Connection to a 50 ohm antenna constructed for the frequency of interest.
- 13.8V, 3A supply connected to the power terminals

Right Panel:

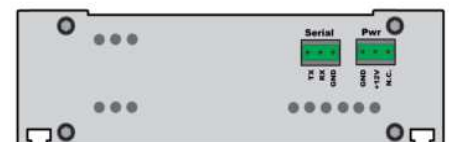


RF: BNC CONNECTOR (50 OHMS)

USB: MINI TYPE B CONNECTOR

Inputs/Outputs Pin Number	Description
1	Input - Digital 1
2	Input - Digital 2
3	Input - Digital 3
4	Input - Digital 4
5	GND
6	GND
7	GND

LEFT Panel:



Serial Connector:

Serial Connector Pin Number	Description
1	RS232 TX
2	RS232 RX
3	Ground (GND)

Power Connector:

Power Connector Pin Number	Description
1	Ground (GND)
2	+13.8V
3	Not Connected (N.C.)

*Model dependent optional features



SPECIFICATIONS:

FREQUENCY RANGE	TReX-460: 421MHz to 480MHz
SUPPLY VOLTAGE	Nominal 12V. Min 10.8. Max 15.6V.
TX POWER	250mW, 500mW, 1W, 2W and 4W
DIGITAL INPUTS	4
ANTENNA CONNECTOR	BNC
INTERFACES	RS232
RECEIVER SENSITIVITY	460MHZ (512 BAUD) -123 dBm 460MHZ (4800 BAUD) -118 dBm

MECHANICAL:

LENGTH:	104mm (125mm including BNC connector)
WIDTH:	131mm
HEIGHT:	41mm
WEIGHT:	550 Grams
MOUNTING:	RACK, WALL & DIN RAIL
IP RATING:	IP51

ENVIRONMENTAL

OPERATING TEMPERATURE	-40 to +70 °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 MODES	Alphanumeric and numeric, singular or batched for 25KHz, 12.5KHz and 6.25KHz channel spacing Adjustable preamble from 64 to 5000 bits
FLEX™ PAGING DECODE SUPPORT	1600 BAUD (2 LEVEL ONLY)

PROTOCOL SUPPORT:

• WTE PROTOCOL	• COMP2
• PET/TAP	• SCOPE
• ESPA 4.4.4	• ASCOM
• MULTI-TONE	• SALCOM
• WTE CUSTOM	• OTHERS ON REQUEST
• TNPP	
• TPP	

MODULATIONS SUPPORT:

25KHZ CHANNEL WIDTH	512 BAUD (FSK), 1200 (FSK), 1600 (FSK), 2400 (GFSK), 3200 (4GFSK), 4800 (2GFSK), 9600 (GFSK), 9600 (4GFSK), 16K (4GFSK), 32K (4GFSK)
12.5KHZ CHANNEL WIDTH	512 BAUD (FSK), 1200 (FSK), 2400 (GFSK), 4800 (GFSK), 9600 (GFSK), 9600 (4GFSK), 16K (4GFSK)
6.25KHZ CHANNEL WIDTH	512 BAUD (FSK), 1200 (GFSK), 2400 (GFSK), 4800 (4GFSK)

REGULATORY COMPLIANCE

FCC	FCC Part 90
EN	EN 300 113
EN	EN 50385
AS/NZ	AS/NZ 4769.1:2000
EMC	EN 301 489
SAFETY	EN 60950 + IEC 62368
RoHS (Restriction of Hazardous Substances)	Compliant
WEEE (Waste Electrical and Electronic Equipment)	Compliant ¹

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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