

TReX - TELEMETRY, DATA AND PAGING I/O TRANSCEIVER

VERSATILE RELIABLE & RESILIENT

The WTE TReX is an Ethernet, serial (RS232, RS485, RS422) and USB capable transceiver for data, paging and general telemetry use.

TReX series transceivers are advanced, high speed, long range wireless VHF & UHF data radios built to endure the stresses of daily use in harsh conditions that will keep you working with complete confidence, saving you time and money.

SCADA SIMPLIFIED

The TReX features reduce the components required in a SCADA system. Features includes: Digital and Analog I/O, Integrated Logging, Long Range Wireless I/O expansion and Modbus RTU/TCP protocol support.

Using the TReX makes SCADA system configuration easy, affordable and reliable.



TReX CAN BE USED TO:

- Transmit and receive paging messages.
- Monitor and control installations using standards SCADA software.
- Autonomously mirror analog and digital I/O to a remote unit.
- Transmit and receive serial and telemetry data at high data rates.
- Repeat and forwarding telemetry and paging messages in poor coverage areas.
- Inspect potential site interference using the integrated spectrum analyzer.
- Report system and installation errors, such as loss of communications, faults to antennas and battery states.

ROBUST FOR CONTINUOUS OPERATION

- Data transmit rates from 512 baud to 32K baud.
- Supported channel spacing of 25kHz, 12.5kHz and 6.25kHz.
- Sends and receives 512, 1200, 2400, 4800 and 9600 baud POCSAG paging messages.
- Receives 1600 baud 2 level FLEX™ paging messages.
- Paging store and forward repeater operation with configurable duplicate reject.
- 8 digital inputs and outputs.
- Two 10 bit 0-10V DACs
- Two 10 bit 0-16V ADCs.
- Integrated spectrum analyzer (optional).
- Simple to configure back to back mirroring and monitoring of analog and digital IO.
- Configurable logging to SD card of all transmitted and received messages.
- Graphics display shows all transmit and receive activity including I/O state.
- Multi language support
- Fully configurable via front panel without the need for an external PC connection.
- RS232, RS422 and RS485 support.
- USB connection allows downloading of TX and RX

logs or direct access to configuration files.

- Ethernet support allowing remote configuration and operation via TCP and Web
- Configured inputs can be programmed to send messages when triggered.
- Configured outputs can be controlled via received messages.
- Any output can be assigned to indicate:
 - Channel busy
 - Alert on filtered match of message payload
 - Comms link fail
 - Antenna fault
 - Low output power
 - Low input voltage
 - High temperature
- Periodic message support to ensure radio link integrity.
- Inclusion of the WTE "CUSTOM" protocol, that allows support of many existing paging protocols without the need for new firmware.
- Firmware upgradeable.
- Antenna mismatch detection
- High sensitivity receiver
- Internal real time clock.
- Up to 4W power output.

FIELD CONFIGURABLE AND BUILT TO LAST

TReX can be configured and/or cloned through serial commands, TCP, USB or via a web browser.

The TReX is suitable for commercial, industrial and remotely managed control/monitoring applications.

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.

SPECIFICATIONS:

FREQUENCY RANGE	TReX-460: 421MHZ to 480MHZ TReX-160: 142MHZ to 175MHZ
SUPPLY VOLTAGE	Nominal 12V. Min 10.8. Max 15.6V.
TX POWER	250mW, 500mW, 1W, 2W and 4W
DIGITAL INPUTS	8
ANALOG INPUTS	2 (0-16V)
DIGITAL OUTPUTS	8
ANALOG OUTPUTS	2 (0-10V)
ANTENNA CONNECTOR	BNC
INTERFACES	RS232, RS422, RS485 AND ETHERNET (Web/TCP)
RECEIVER SENSITIVITY	460MHZ (512 BAUD) -126 dBm 460MHZ (4800 BAUD) -118 dBm 160MHZ (512 BAUD) -126 dBm 160MHZ (4800 BAUD) -118 dBm

SPECTRUM ANALYZER (OPTIONAL):

RESOLUTION BANDWIDTH (RBW)	1KHZ OR 25KHZ
SPAN	up to 3MHz
SWEEP MODE	Continual or peak display.
MINIMUM SIGNAL	-120 dBm
MAXIMUM SIGNAL	-10 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

PAGING SUPPORT:

POCSAG ENCODE AND DECODE BAUD RATES	512, 1200, 2400, 4800, 9600
FLEX™ PAGING DECODE SUPPORT	1600 BAUD (2 LEVEL ONLY)

PROTOCOL SUPPORT:

- MODBUS RTU/TCP
- WTE PROTOCOL
- PET/TAP
- ESPA 4.4.4
- MULTI-TONE
- WTE CUSTOM
- TNPP
- SCOPE
- OTHERS ON REQUEST

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 further information about TReX, please visit WTE website and download the latest TReX manual.



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