

# Specifications

# TDL450B Radio



<b>Radio Name</b>	<b>TDL 450B Radio</b>
Frequency Bands	403 - 473 MHz
Channel spacing	12.5 kHz and 25kHz
Number of Channels	N/A
Number of Networks	N/A
RF Power Select	Configurable [Front panel, Programmable]
Power output	1 W to 35 W (where permitted)
Sensitivity	Typically -120 to -110 dBm (BER 10-2)
Adjacent Channel Selectivity	
Access Point for 2 Way Data	No
License Required	Yes
<b>General</b>	
DTE - DCE Interface	1 x 3 wire RS232, 115.2 kbps maximum
Keyboard and display	LCD display, 6 Lines, 18 Char On/Off button 4 navigation buttons English Power / Bluetooth / Tx / Rx
Dimensions (L x W x D)	23.12 cm x 15.12 cm x 7.70 cm
Weight	1.96 kg (4.3 lb)
<b>Power</b>	
External	9-11 V DC, max 5W output 11-30 V DC, up to 35W output
Internal battery	None
During TX (nominal)	76 - 101W with 35W RF output 24 - 32W with 10W RF output 7 - 10W with 1W RF output
During RX (nominal)	2 - 2.7W
<b>Antenna</b>	External 50 ohm, TNC(F)
<b>Modes of Operation</b>	
Base	Yes
Rover	Yes
Repeater	Yes
Max repeaters	2
Rebroadcaster	Yes, with Cellular device connected

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## Modem Specifications

RF Modulation	Gaussian Minimum Shift Keying (GMSK) or (FSK)
Link Rate / Modulation	19200 bps / 4FSK (25KHz) 9600 bps / 4FSK (12.5KHz) 19200 bps / GMSK (25KHz) 16000 bps / GMSK (25KHz) 9600 bps / GMSK (12.5KHz / 25KHz) 8000 bps / GMSK (12.5KHz) 4800 bps / GMSK (12.5KHz / 25KHz)
Link Protocols	TrimTalk v1 PCC EOT (FEC On/Off, Scrambling On/Off) PCC FST (FEC On/Off, Scrambling On/Off) PCC EOT4 (FEC On/Off, Scrambling On/Off) SATEL (FEC On/Off, Whitening On/Off, CRC16/No EC) See Link Protocols
Forward Error Correction	
Emission Designator	

## Environmental Specifications

Operating Temperature	
Transmitting	-30 °C to +65 °C (-22 °F to +149 °F)
Receiving	-30 °C to +65 °C (-22 °F to +149 °F)
Storage Temperature	-40 °C to +85 °C (-40 °F to +185 °F)
Vibration / Shock	EN 60068-2-31:2008 / IEC 60068-2-64:2008 / EN 60068-2-27:2008
Humidity / Enclosure	IP 67 (Dustproof and watertight to depth of 1m for 30 minutes) MILSTD-810H: Method 509.7 (Corrosion resistance)

## Connections

Power	2-pin ODU
Data	5-pin ODU
Antenna	5 Ohm, TNC(F)
Ethernet	N/A
Serial	1 RS-232 port, 115.2 kbps max
Bluetooth	Server and Client modes supported, class 2

## Mount

Tripod

## Configuration

Display and navigation buttons  
Virtual Warehouse/Trimble Installation Manager  
SRL using Web UI on supported GNSS receivers (v6.24 and above)

## Type Certification

All models are type accepted and certified for operation in the U.S., Canada, Australia, New Zealand, UK and Europe. For detailed information concerning your country's type certification, please contact your local sales representative

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## Notes

*Before operating this modem, users are legally required to obtain frequency licenses as required by the country of use*

*Only one frequency band per radio*

*Only one channel spacing per radio*

*Use the same frequency for all modems in the same wireless network*

*Range varies with terrain and operational conditions*

*Power consumption depends on the DC output load, the broadcast information content and wireless data rate (e.g. CMRx versus RTCMv3 packets at 1 Hz epoch rates).*

*Specifications subject to change without notice.*

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## Trimble Civil Engineering and Construction Division

10368 Westmoor Drive  
Westminster, Colorado 80021  
USA

800-361-1249 (Toll Free)

+1-937-245-5154 Phone

+1-937-233-9441 Fax

[www.trimble.com](http://www.trimble.com)

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