

Specifications

TDL450H Radio



Radio Name	TDL 450Hx Radio
Frequency Bands	390 - 430 MHz 430 - 473 MHz
Channel spacing	12.5 kHz and 25kHz derived, synthesized 6.25 kHz resolution, +/- 1ppm stability.
Number of Channels	N/A
Number of Networks	N/A
RF Power Select	Programmable
Power output	2 W to 35 W (where permitted)
Sensitivity	-110 dBm BER 10 ⁵
Adjacent Channel Selectivity	
Access Point for 2 Way Data	No
License Required	Yes
General	
DTE - DCE Interface	1 x 3 wire RS232, 115.2 kbps maximum
Keyboard and display	LCD display, 16 characters (English/Russian) or 8 characters (Chinese) by 2 rows On/Off button 5 navigation buttons English, Russian, Chinese Modem power / status indicators
Dimensions (L x W x D)	11.9 cm x 8.6 cm x 21.3 cm (4.7 in x 3.4 in x 8.37 in)
Weight	1.95 kg (4.3 lb)
Power	
External	11-16 V DC, 15 Amp maximum
Internal battery	None
During TX (nominal)	115W nominal @ 12.0 V DC, 35W RF output 45W nominal @ 12 V DC, 8W RF output 25W nominal @ 12 V DC, 2W RF output
During RX (nominal)	1.7W nominal @ 12 V DC
Antenna	External 50 ohm, TNC(F)
Modes of Operation	
Base	Yes
Rover	Yes
Repeater	Yes
Rebroadcast	Yes, with Cellular device connected
Number of Repeaters Supported in a Network	N/A

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Modem Specifications

RF Modulation

Gaussian Minimum Shift Keying (GMSK) or (FSK)

Link Rate / Modulation

19200 bps / 4FSK

9600 bps / 4FSK

19200 bps / GMSK

16000 bps / GMSK

9600 bps / GMSK

8000 bps / GMSK

4800 bps / GMSK

Link Protocols

Transparent FST, Transparent EOT/EOC, Packet-switched, TRIMMARK™,

TRIMTALK™. TT450S (HW). SATEL®

Yes

Forward Error Correction

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

-30 °C to +85 °C (-22 °F to +185 °F)

Vibration / Shock

MIL/STD 810F

Humidity / Enclosure

IP 67 (Dustproof and watertight to depth of 1m for 30 minutes)

Connections

Power

5 pin, #1 shell LEMO

Data

5 Ohm, TNC(F)

Antenna

N/A

Ethernet

Serial

1 RS-232 port, 115.2 kbps max

Bluetooth

N/A

Mount

Tripod

Operational Range

Typical

Optimal

Configuration

Display and navigation buttons, TDLCONF software via RS232

Type Certification

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

Supported Configurations

12.5 kHz Channel Bandwidth

Protocol Type	Modulation Type	Radio Link Rates (bps)
Transparent EOT/EOC and Packet Switched	GMSK	4800
Transparent EOT/EOC and Packet Switched	4FSK	9600
Transparent FST	4FSK	9600
TRIMTALK 450s	GMSK	4800, 8000
TRIMMARK II/IIe	GMSK	4800
TT450S (HW)	GMSK	4800
TRIMMARK 3	GMSK	9600 (USA)
SATEL	4FSK	9600

25 kHz Channel Bandwidth

Protocol Type	Modulation Type	Radio Link Rates (bps)
Transparent EOT/EOC and Packet Switched	GMSK	4800*, 9600*
Transparent EOT/EOC and Packet Switched	4FSK	19200
Transparent FST	4FSK	19200
TRIMTALK 450s	GMSK	4800*, 9600*, 16000*
TRIMMARK II/IIe	GMSK	4800*
TT450S (HW)	GMSK	4800*, 9600*
TRIMMARK 3	GMSK	19200 (USA)
SATEL	4FSK	19200

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 and battery life depend on the broadcast information content and wireless data rate (e.g. CMR versus RTCM SC-104 Ver 2.x packets at 1 Hz epoch rates).

Specifications subject to change without notice.

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