

TS2000 Mobile Radio Modem Specifications

Data Interface

Data Rates	300, 1200, 2400, 4800, 9600 baud
Data Format	Asynchronous, 8 or 9 bit words
Signal Levels	RS-232 or TTL
Handshake Protocols	Full Handshake: Supports RTS, CTS, DCD, DSR, DTR Data Only (3 wire): Requires only TD, RD and SG
Data Only Time Out	1 to 500 character periods
CTS Control Line	Buffer, Channel, Data PTT or RTS Driven
DCD Control Line	Data and/or Channel Driven
DSR Control Line	Active when Operational, Transmitting or Receiving
DTR Control Line	Enabled or Disabled (receive data flow control)
Data Connector	9 pin D, female, DCE

Radio Interface

Data Rate (Modulation)	1200 bps or 2400 bps (Continuous Phase MSK)
Sensitivity (typical)	1×10^{-5} BER (Bit Error Rate) for 14 dB SINAD, Uncoded
Receive Signal Level (100 K Ω input impedance)	0.3 to 6.0 V peak-peak (single ended or differential)
Transmit Signal Level (into 600 Ω impedance)	0 to 300 mV peak-peak (low setting) 0 to 5.0 V peak-peak (high setting)
Data PTT	Open Drain with Selectable Polarity
Tx Attack Time	Fixed: 1 to 9999 milliseconds Channel driven: Static or Pulsed Channel Grant with Selectable Polarity
Tx Time Out Timer	Disabled or 1 to 500 seconds
Carrier Detect	Disabled or Enabled with Selectable Polarity
Radio Connector	25 pin D, male

Channel Options

Duplex	Half or Full
Data Security	254 Selectable Scrambling Codes
FEC (Coding)	None or 12,8 Hamming code with 16 bit Interleaving
Shared Voice Operation	Input Controls: Voice PTT Detect, Voice Reception Detect Output Controls: Speaker Mute, Microphone Mute, Channel/Group Select
Data protocol	Transparent or Packet

Optional Packet Protocol

Channel Access	Master-Slave or Carrier Sense Multiple Access (CSMA) with Programmable Attempt Rate
Protocol	Automatic Repeat reQuest (ARQ) with Sliding Window Selective Repeat
Packet Size	1 to 5000 characters
Retries	0 to 50 (per packet)
Address Space	999 Individual Addresses per Group up to 60 Groups
Transfers	Individual with Acknowledgment (to any address) Individual without Acknowledgment (to any address) Group Broadcast (to all addresses in a single group) Network Broadcast (to all addresses in all groups) Multicast Reception (from up to 10 other groups)
Relay Operation	Store and Forward Data Repeating with Address Filtering

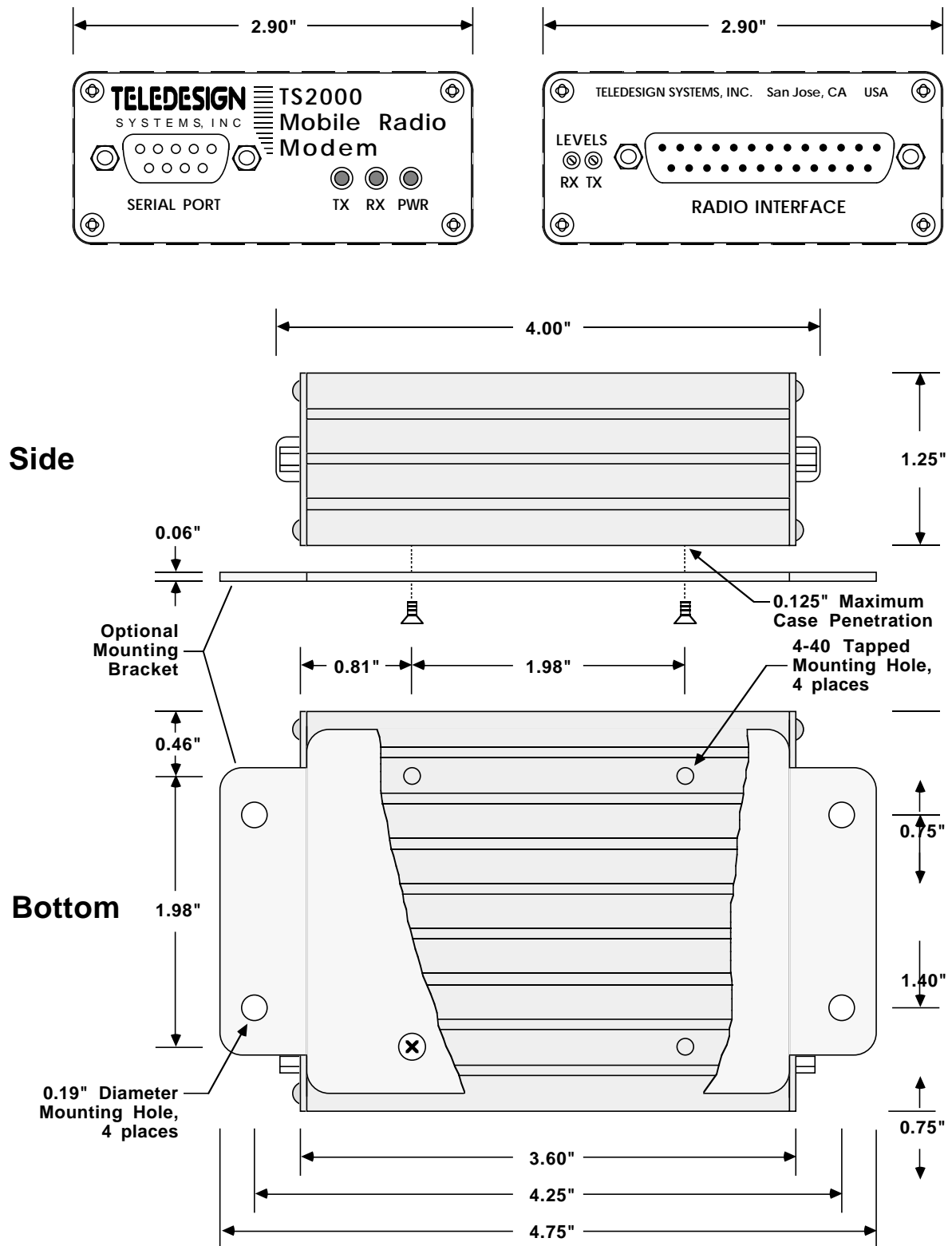
General

Supply Voltage	6 to 18 VDC
Supply Current	200 mA max, 150 mA Transmit or Receive (typ), 90 mA Standby (typ)
Data Buffer	32 KByte SRAM
Program Storage	128 KByte FLASH ROM (allows for in field firmware upgrades)
Indicator LEDs	Transmit, Receive, Power
Dimensions	4.0" x 2.9" x 1.3" (102 mm x 74 mm x 33 mm)
Weight	7 ounces (198 grams)
Temperature	-22 to +158 °F (-30 to +70 °C)
Humidity	0 to 95% (non-condensing)



TS2000 Mobile Radio Modem

Case Outline and Dimensions



The mounting bracket may be rotated 90 degrees to support an optional mounting position with the 0.19" mounting holes positioned on each side of the TS2000 case instead of at the front and rear.

