

## T-96SR

HI SPEC RADIO MODEM

380-512 MHz UHF  
132-174 MHz VHF



The T-96SR wireless modem provides a high-speed refarming compliant data link suitable for a wide variety of applications with system security of diagnostics reporting.

The T-96SR supports the Dataradio Inter-Operability Standard (DI-OS) to provide compatibility with the T-96S, RNet™ 9600 & 9600S, and the Dataradio T-Modem. If your application requires a base station or repeater configuration, the T-96SR is designed to work with the T-Base base station / repeater. The T-96SR is available in UHF and VHF bands.

**Designed for speed and efficiency**, the T-96SR provides over-the-air rates of 19200, 9600, or 4800 bps in a 25 kHz channel and 9600 or 4800 bps in a 12.5 kHz channel.

**Selectable operating modes** provide flexibility: RS-232 compatible, simplex or half-duplex operation, RTS-CTS handshake protocol with the option for configuring any two units as a digital repeater. Transparent, asynchronous serial data formats are supported, such as Modbus™, Modbus-RTU™, DNP 3.0™, AB DF1™ and various other protocol formats.

**Front panel LEDs** provide visual indication of transmit, receive and power. Easy-to-use Windows®-based Field Programming Software provides T-96SR's programming and diagnostics interface. Programming Software setup provides a unique programming ID that allows diagnostic reporting both locally and over-the-air from any location.

**Real-time, non-intrusive online diagnostics** report received signal strength (RSSI), RF power output, supply voltage, and other radio performance statistics. Offline diagnostics offer unit programming, link testing and RF path verification. The T-96SR's diagnostic output supports Dataradio's OPC Enabled Diagnostics.

**The T-96SR was designed specifically for data transmission** to provide an economical solution without the necessity of expensive options. Low cost options include DIN rail mounting and the SPS 2412/75 24VDC to 12VDC voltage converting power supply. Contact your sales representative for T-96SR options. Dataradio products are covered by a standard one-year warranty.

**Security & Defense**

**OIL & GAS**

**SCADA & TELEMETRY**

**WIRELESS DATA COMMUNICATION**

**Remote Monitoring**

**INDUSTRIAL AUTOMATION**

**WATER WASTEWATER**

**ELECTRIC UTILITIES**

# T-96SR Specifications

## Modem

Channel Bandwidth	12.5 kHz	25 kHz
Data rate (PC programmable)	4800, 9600 bps	4800, 9600, 19200 bps <sup>1</sup>
Modulation	DRCMSK	
Signal Level	EIA RS-232C	
Data Format	Transparent asynchronous serial	
Word Length	7 or 8 bit words, 1 or 2 stop bits	
Parity <sup>2</sup>	Even, odd, or none	
Handshake	RTS-CTS	
RTS/CTS Delay <sup>3</sup>	30 msec	
Bit error rate	1 x 10 <sup>-5</sup> @ 1.0 μV (9600 bps)	1 x 10 <sup>-6</sup> @ 1.0 μV (4800, 9600 bps) 2 x 10 <sup>-5</sup> @ 1.7 μV (19200 bps)

## General

Band	UHF	VHF
Frequency Range	380-512 MHz <sup>4</sup>	132-174 MHz
Channel Bandwidth	12.5 or 25 kHz	12.5 or 25 kHz
FCC Type Acceptance	NP42424046-001	NP42424016-001
FCC Emission Designators	9K30F1D, 15K3F1D	9K30F1D, 15K3F1D
IC Type Acceptance	2984195432A	2984195430A
IC Emission Designators	9K30F1D, 11K0F1D, 15K3F1D, 16K0F1D	9K30F1D, 11K0F1D, 15K0F1D, 16K0F1D
European Approval	CE Mark (403-470 MHz) <sup>5</sup>	CE Mark
ETSI	300.113 (403-470)	300.113
Current Drain		
Transmit @ 13.3 VDC	2.1 A	2.1 A
Receive @ 13.3 VDC	150 mA	150 mA
Frequency Tolerance	1.5 ppm	2.5 ppm
Operating Voltage	10-16 VDC	
Operating Temperature	-30° C to + 60° C	
Dimensions (W x H x D)	4.5" x 3.25" x 2.12" (11.4 cm x 8.3 cm x 5.4 cm)	
Shipping Weight	1.18 lbs. (0.54 kg)	
Operating Mode	Simplex or half-duplex	
RF Connector	SMA	
Data I/O Connector	DE-15 female	
Front Panel Indicators	Power, transmit, receive	
Timeout Timer	120 seconds switchable on/off	
Diagnostics Online	Supply voltage, internal temperature, forward and reverse power, RSSI	
Diagnostics Offline	Same as diagnostics online plus: Tx B+ voltage, analog supply voltage, & Tx test tones	
Bandwidth without tuning	450-470: 20 MHz all other bands: 16 MHz	132-150: 18 MHz 150-174: 24 MHz

## Receiver

Receive Operation	Continuous (no tuning required)
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## Transmitter

Transmit Operation	Continuous (no tuning required)
RF Output Power	1-5 watts, software adjustable
Duty Cycle	50% @ 5 watts, 30 seconds maximum transmit - extended transmit with cooling fan option

## DATA INTERFACE CONNECTOR: DE-15

Pin	Description
1	Ground
2	RXD: Receive Data
3	TXD: Transmit Data
4	Test Audio
5	+V Supply
6	Ground
7	CTS: Clear to Send
8	RTS: Request to Send
9	DCD: Data Carrier Detect
10	+V Supply
11	CS0 Channel Select bit 0
12	CS1 Channel Select bit 1
13	CS2 Channel Select bit 2
14	RSSI Receive Signal Strength Indicator
15	PGM Program Mode Select

## Mechanical Layout

