



Refarmed T-96SR

Hi Spec 19.2 kbps Wireless Modem

380-512 MHz 132-174 MHz 928-960 MHz

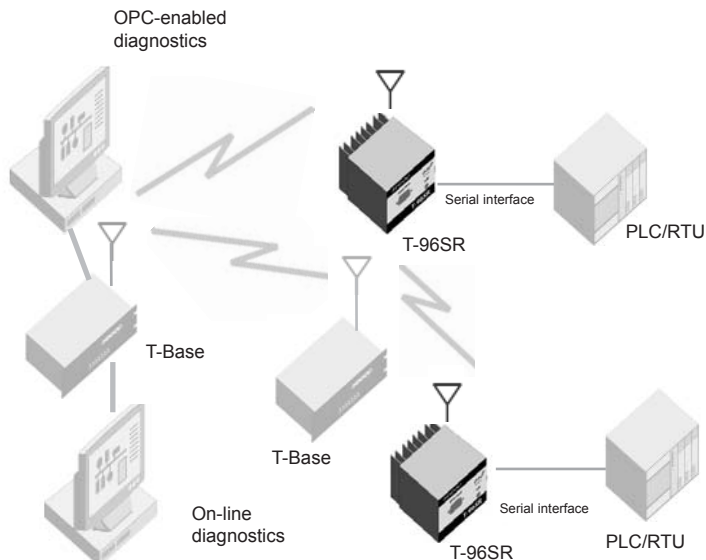


Models
Available

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, VHF and 900 MHz 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 like 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 two-year warranty.

Wireless data when and where you need it.

T-96SR Specifications

DATARADIO®

MODEM

	12.5 kHz	25 kHz
Channel Bandwidth	12.5 kHz	25 kHz
Data rate (PC programmable)	4800, 9600 bps	9600, 19200 bps ¹
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 ²	Even, odd or none	
Handshake	RTS-CTS	
RTS/CTS Delay ³	30 msec	
Bit error rate	1 x 10 ⁻⁵ @ 1.0 µV (9600 bps)	1 x 10 ⁻⁶ @ 1.0 µV (4800, 9600 bps) 2 x 10 ⁻⁵ @ 1.7 µV (19200 bps)

GENERAL

Band	UHF	VHF	900 MHz
Frequency Range	380-512 MHz ⁴	132-174 MHz	928-960 MHz
Channel Bandwidth	12.5 or 25 kHz	12.5 or 25 kHz	12.5 or 25 kHz
FCC Type Acceptance	NP42424046-001	NP42424016-001	NP42424096-001
FCC Emission Designators	9K30F1D, 15K3F1D	9K30F1D, 15K3F1D	9K30F1D, 15K3F1D
IC Type Acceptance	2984195432A	2984195430A	2984195431A
IC Emission Designators	9K30F1D, 11K0F1D, 15K3F1D, 16K0F1D	9K30F1D, 11K0F1D, 15K0F1D, 16K0F1D	9K30F1D, 11K0F1D, 15K3F1D, 16K0F1D
European Approval	CE Mark (403-470 MHz) ⁵	CE Mark	-
ETSI	300.113 (403-470)	300.113	-
Current Drain			
Transmit @ 13.3 VDC	1800 mA	1600 mA	2300 mA
Receive @ 13.3 VDC	125 mA	120 mA	135 mA
Frequency Tolerance	1.5 ppm	2.5 ppm	1.5 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	60 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	928-960: 32 MHz

RECEIVER

Receive Operation	Continuous (no tuning required)
-------------------	---------------------------------

TRANSMITTER

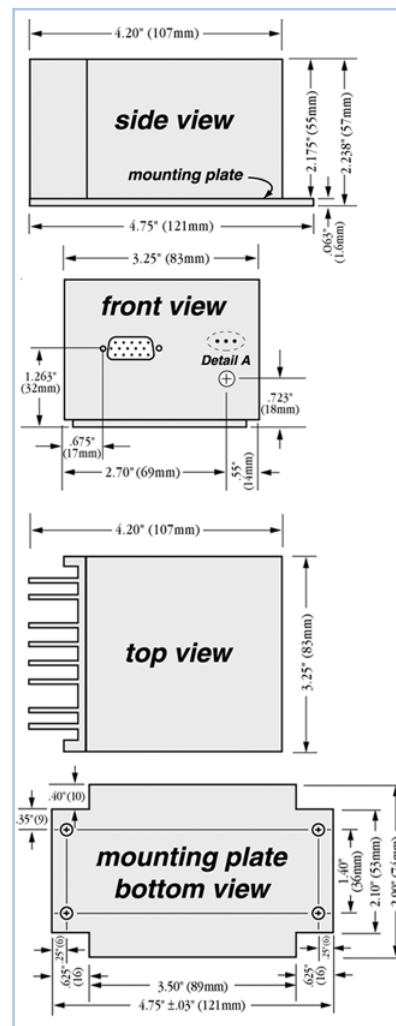
Transmit Operation	Continuous (no tuning required)
RF Output Power	1-5 watts, software adjustable
Duty Cycle	50% @ 5 watts, 30 seconds maximum transmit - extended transmit with cooling fan option
Tx Attack Time	< 7 msec

Dataradio COR Ltd.
299 Johnson Avenue, P.O. Box 1733
Waseca, MN 56093-0833 USA
Phone: 1-800-992-7774; 507-833-8819
Fax: 507-833-6748
www.dataradio.com

¹ 19200 requires 25 kHz channel.
² 7-bit no parity is not supported.
³ Extended RTS/CTS time options for repeater use.
⁴ 380-403 MHz frequency band is not FCC or IC type approved.
⁵ CE approval is limited to 4800 bps in a 12.5 kHz channel.
Note: Software shown in system diagram (front page) does not include computer.
Dataradio is a registered trademark of Dataradio Inc.
©2000 Dataradio Inc. 000-0000-160 **Printed in U.S.A. 4/02**

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



T-96SR Not To Scale

Specifications are typical and are subject to change without notice. Actual performance may vary due to RF propagation and environmental conditions. Refer to the Integra-TR technical manual for minimum operating specifications.

