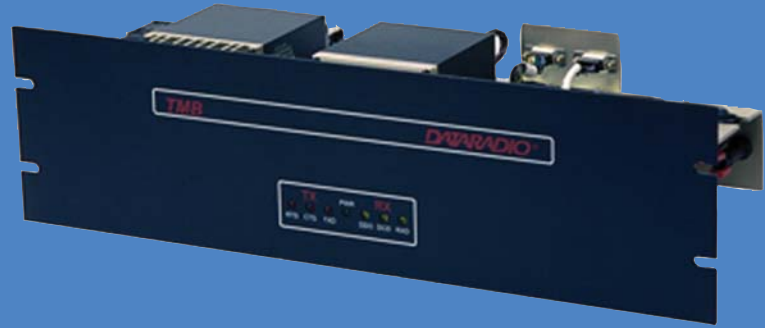


## SYNTHESIZED T-BASE/R

Full-Duplex Repeater  
Full- or Half-Duplex Base Station



**The T-Base/R** is designed for today's high-speed telemetry and SCADA networks. Its flexible design allows for a full- or half duplex base station or a full-duplex repeater.

**The T-Base/R** provides a transparent digital link (19200 bps in a 25 kHz channel or 9600 bps in a 12.5 kHz channel) that is compatible with most protocols including Modbus™, Modbus-RTU™, DNP 3.0™, and AB DF1™. Baud rate is PC programmable from 19200 to 4800 bps to meet application requirements.

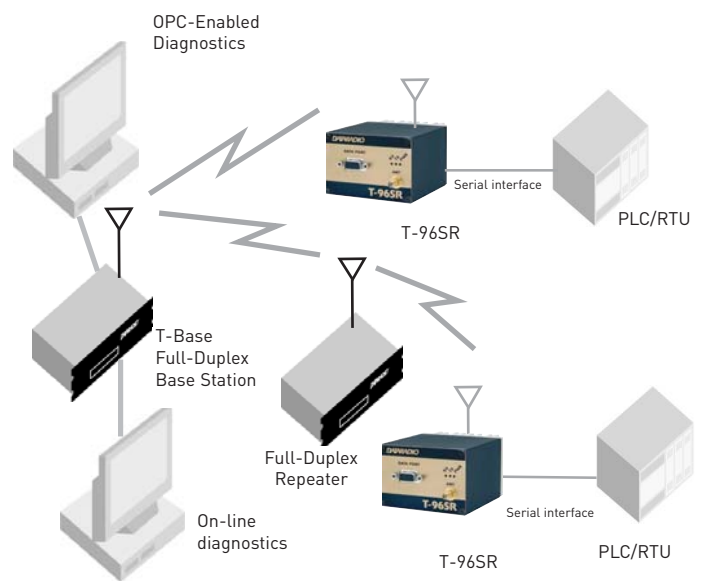
**SCADA system center** The T-Base/R is available at VHF, UHF, and 900 MHz and supports RNet™ and COR brand wireless modems.

**Base Station** As a base station, the T-Base/R is designed to operate as the polling master. It is configurable as a full- or half-duplex or simplex base unit.

**Digital Repeater** The T-Base/R regenerates digital data in real time to bridge gaps in long hauls or overcome terrain obstacles. It is configurable with or without an optional duplexer.

**Rugged Design** The T-Base/R mounts in a standard 19-inch rack. Dataradio units are covered by our standard two-year warranty with one-year warranty on labor. Third-party components are covered by their respective manufacturer's warranty.

### System Diagram



### MODEM

Interface	EIA RS-232
Operation	Simplex/half-duplex, full-duplex, repeater
Data Rate	4800, 9600, or 19200 bps
Modulation	DRCMSK
RTS/CTS Delay	30 msec (on-line diagnostics off)
Protocol	Transparent to user
Bit Error Rate	19200* bps - 25 kHz channel: better than $2 \times 10^{-5}$ @ 1.7 $\mu$ V 9600 and 4800 bps - 25 kHz channel: better than $1 \times 10^{-6}$ @ 1.0 $\mu$ V 9600 bps - 12.5 kHz channel: better than $1 \times 10^{-5}$ @ 1.0 $\mu$ V

## GENERAL

	VHF	UHF	900 MHz
Frequency Ranges (without duplexer)	132-174 MHz	403-512 MHz	928-960 MHz
(with duplexer)	148-174 MHz	403-512 MHz	928-960 MHz
Channel Bandwidth	12.5 or 25 kHz	12.5 or 25 kHz	12.5 or 25 kHz
Current Drain Transmit @ 12 VDC (5 W fan off. Add 60 mA when fan is running)	1.8 A	2.0 A	2.5A
Receive @ 12 VDC	300 mA (200 mA half-duplex)		
Frequency Control Channels	Synthesized 8		
RF Connectors	N-type 50 ohm female One on simplex/half-duplex or full-duplex versions with duplexer Two on full-duplex version without duplexer		
Dimensions (HxWxD)	5.25" x 19" x 9.25" (131.25mm x 475mm x 231.25mm)		
FCC Type Acceptance	NP42424016-001	NP42424046-001	NP42424096-001
FCC Emission Designators	15K3F1D, 9K30F1D		
IC Type Acceptance	2984195430A	2984195432A	2984195431A
Bandwidth without tuning	132-150: 18 MHz 150-174: 24 MHz	450-470: 20 MHz All other bands: 16 MHz	928-960: 32 MHz
Frequency Tolerance	2.5 ppm	1.5 ppm	1.5 ppm
Diagnostics (On/Offline**) T-Base/R Remote Units	RSSI RSSI, receive quality index, internal supply voltages, forward and reverse power (5 W remotes only), unit temperature		

## RECEIVER

Receive Operation	Continuous (no tuning required)
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## TRANSMITTER

Transmit Operation	Continuous (no tuning required)
RF Output Power (PC programmable)	1-5 watts without duplexer, 0.7 - 3.5 watts with duplexer
Transmit Attack Time	< 7 msec

\*19200 bps requires 25 kHz channel.

\*\*Radio configuration and local/remote diagnostics require Dataradio Field Programming Software and programming cable.