

# 900 MHz Half Duplex Transceiver



## DESCRIPTION

The M90SXCRN1 is a fully synthesized, half-duplex low power 900 MHz transceiver for OEM wireless data communication applications. This transceiver is intended for low data rate peer to peer wireless links and wireless networking applications. It has been specifically designed for cost sensitive applications that do not require the overhead of onboard protocol processing. The system level functions of error detection, error correction and network protocol processing are not handled by the transceiver and must be performed in the host system software.

The M90SXCRN1 supports a standard RS-232C voltage level base band serial interface. The transceiver requires externally supplied regulated 5 volt DC power and an antenna.

The onboard micro controller can be commanded to change frequency by the host to avoid interference or frequency contention problems.

**VTECH**<sup>®</sup>  
WIRELESS, INC.

## FEATURES

*Half duplex 900 MHz RF transceiver for OEM data communications applications*

*Operates in the 902 - 928 MHz ISM Band, FCC part 15.249*

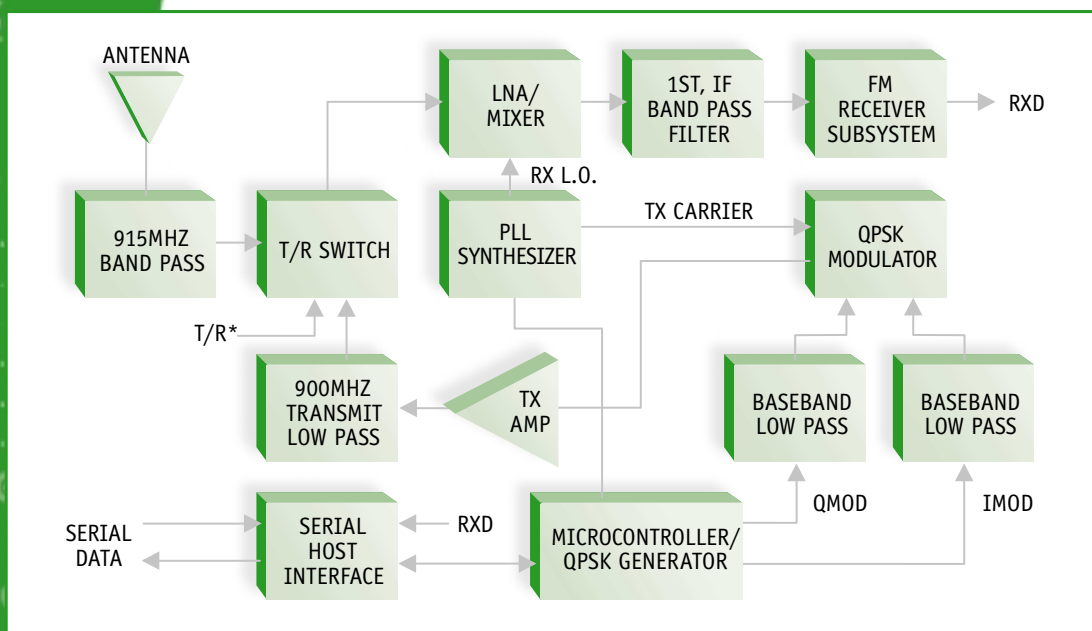
*RS-232C serial host interface (TXD, RXD, RTS, CD, DTR, GND)*

*Supports baud rates of DC to 57.6K baud*

*Supports non-standard baud rates generated from dedicated logic or micro controller I/O ports*

*Fully synthesized for programmable channel selection*

*Onboard micro controller and non-volatile storage enabling soft OEM configuration*



## TYPICAL APPLICATIONS

- ▶ Telemetry
- ▶ Point of sale terminals
- ▶ Remote controls
- ▶ PDA to PC connectivity
- ▶ Wireless modems
- ▶ Wireless TCP/IP devices
- ▶ Auto PC data link
- ▶ Utility meter short range wireless link

## RADIO SPECIFICATIONS<sup>3</sup>

Operating Frequency Range	902 - 928 MHz ISM Band
Transmit Power	50,000 uV/Meter @ 3 meters (approximately 1 mw)
Receiver Sensitivity	-95 dBm typical
Modulation Method	Quadrature derived FSK
Minimum Data Rate	DC
Maximum Data Rate	57.6K baud
Range, Indoors <sup>1</sup>	Up to 300 feet
Range, Open Field <sup>1</sup>	Up to 1000 feet
Wireless Protocol	None, determined by host software
Standard Antenna <sup>2</sup>	1/4 wave whip (MMCX coaxial cable connection)
DC Power Requirements	+5 VDC $\pm$ 10% (110ma Transmit, 70ma Receive)
Operating Temperature	0° C to +60° C
Storage Temperature	-40° C to +85° C
Physical Dimensions	3.0" L x 1.85" W x 0.3" H

1. Wireless transceiver range is a function of many factors including operating environment, antenna configuration, antenna placement, and interference. Typical ranges stated are line of sight. Indoor range is a function of building construction and density as well as the factors mentioned above.

2. Many different antenna configurations can be supported. Vtech Wireless provides technical assistance for antenna configuration and proper module integration into OEM equipment to achieve optimal performance.

3. Specifications subject to change without notice.



WIRELESS, INC.

1 Corporate Park Drive, Suite 100  
Irvine, CA 92606

Tel 949 752 0312 • Fax 949 752 5014

E-mail [sales@vtechrf.com](mailto:sales@vtechrf.com) • Web [www.vtechrf.com](http://www.vtechrf.com)