

SIMREX Corporation

SP-2.4 Spread Spectrum Modem

UNLICENSED wireless DATA

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SIMREX..Global wireless solutions. Unlicensed Wireless Data

For almost 2 decades, SIMREX Corporation's wireless products have been providing wireless networking solutions with applications in SCADA, telemetry, telecommunications, mobile data and online transaction markets. SIMREX Corporation provides licensed and unlicensed solutions, installed worldwide.

Product Overview

The SP-2.4 is a 2.4 GHz frequency-hopping spread-spectrum communications transceiver. Systems supporting serial communication can now use the SP-2.4 for reliable wireless point to point communication over distances of 22 miles and further.

A pair of SP-2.4s provides a practical and reliable alternative to using traditional analog phone-line modems or "null-modem" serial cable (RS-232) connections for data communications between serial communications equipment. Moreover, wireless data communications using the SP-2.4 means you will benefit from: greater flexibility and freedom to relocate serial communications equipment; reduced cabling hassles; eliminated requirement for access to wire-based transfer media such as telephone lines; no ongoing access fees; and, the ability to communicate through walls, floors and many other obstacles.

The SP-2.4's versatility makes it the ideal solution for applications ranging from office-productivity to industrial data acquisition. The SP-2.4 is optimized for effective point-to-point communication, while also providing basic point-to-multipoint capability. For most point-to-multipoint applications, the feature-rich SP-2.4 is the preferable choice.

FEATURES

- Transmission within a public license-exempt band of the radio spectrum (this means that the SP-2.4 can be used without access fees such as those incurred by cellular airtime)
- DB9 RS-232 serial I/O data port with hardware flow control (allowing the SP-2.4 to interface with virtually any communications device with an asynchronous RS-232 port such as a computer)
- Supports point-to-point and point-to-multipoint, repeater operation with user-configurable addressing
- User-configurable encryption key maximizes security and privacy of communications
- Twenty different user-selectable pseudo-random hopping patterns to offer the possibility of separately operating multiple networks while providing security, reliability and high tolerance to interference
- Built-in CRC-16 error detection and auto re-transmit to provide accurate and reliable data
- Ordering options for the SP-2.4 include a user-friendly terminal interface; or, an industry-standard AT command line interface
- FCC (Federal Communications Commission) and IC (Industry Canada) approved
- Used Internationally as a licensed free radio

APPLICATIONS

- Gas / Oil production and distribution
- Industrial process control
- Many More
- Water, gas and electric utilities
- Railroad communication systems
- Lotteries
- Vehicle Data / Tracking
- Traffic control
- Display Signs

SP-2.4 Wireless Spread Spectrum Radio Specifications

Data Interface	Asynchronous RS-232, 9-pin female D-sub
Signals	Sig. Gnd, TX, RX, DCD, DSR, DTR, RTS, CTS
User Interface	AT command line interface
Bandwidth/Data Rate	2400 - 115,200 bps, uncompressed half-duplex
Communications Range	22 miles line-of-sight or more
Memory	Non-volatile configuration memory
Operating Modes	Point-to-Point, Point-to-Multipoint
Power Requirements	9-30 VDC, 1 Amp
Power Consumption	490 mA (Max) at 1W TX, 200 mA receive (12VDC input)
Frequency (North American Version)	2.400 - 2.4835 GHz
System Gain	135 dB
Sensitivity	-105 dBm @ 10 ⁻⁶
Output Power	1mW, 10mW, 100mW, 1W (user-configurable)
Spreading Code	Frequency Hopping
Hopping Patterns	45 pseudo-random, user selectable
Error Detection	CRC-16 with auto-retransmit, FEC
Enclosure Material	Milled aluminum, black baked powder coat finish
Dimensions (WxDxH)	Encl: 3.72" x 4.25" x 1.72" (95 x 108 x 44mm)
Antenna Connector	Reverse gender TNC
Weight	Approx. 420 grams
Operating Environment Temperature:	-40 to +65°C; Humidity: 5 to 95% non-condensing
Approvals	FCC, IC

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