♦*Product Data* ♦

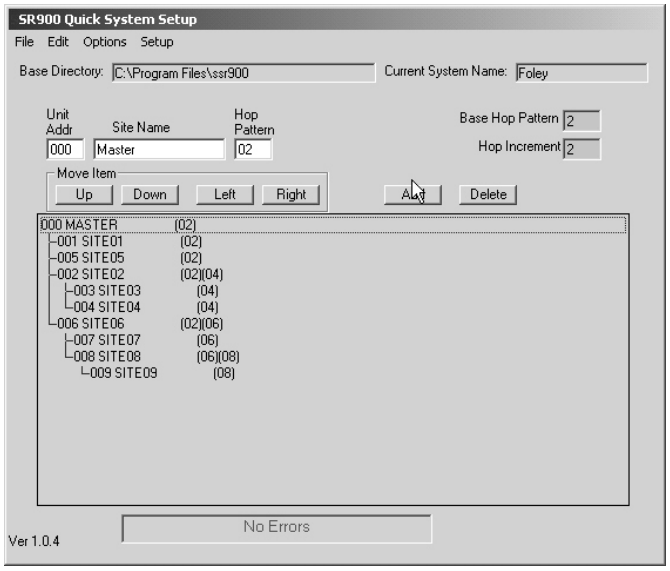
for supervisory control and Data Acquisition

NBT

TSR900 Spread Spectrum Telemetry Radio

Frequency Hopping 902-928 MHz Transceiver

The TSR900 is a reliable, wireless interface for most serial applications. It includes a built-in RTU utilizing Modbus protocol, making it an economical choice for any monitoring and/or control application requiring a small I/O count.



Software includes "quick" system configurator

TSR900 Features

- Integral RTU - 5 DI, 2DO, 2 AI
- Point-to-point and point-to-multipoint operation
- Field configurable as master, slave, or repeater
- Built-in repeater capabilities
- Configuration software free with purchase
- Software includes Spectrum Analysis utility
- Quick Network Configuration utility included with software
- Power requirement of 12-24 VDC
- Small "footprint" ideal for panel mounting
- Repeater can also function as slave for local RTU
- Serial port can support additional RTU concurrently with onboard RTU
- Transparent operation with most protocols
- Maximum legal transmit power - 1 Watt
- Operates in license-free ISM band
- Encryption available to maximize security and privacy
- 60 user-selectable psuedo-random hopping patterns
- Built-in CRC-16 error detection and auto-retransmit to provide accurate and reliable data
- Remote diagnostics and configuration capability

- **The standard has been raised for performance, reliability and cost effectiveness.** The TSR900 has all the features of the SR900 but has the added value of a built-in RTU. It has 5 Digital inputs, 2 digital outputs, and 2 (12 bit) analog inputs.

- **The latest generation of industrial license-free radios...** The TSR900 was designed and developed specifically for telemetry and SCADA applications. The built-in RTU results in an economical package for remote monitoring and control..

- **I/O Expansion** - Any NBT 300, 800, or 900 series RTU can plug into the serial port for a wide variety of expansion possibilities..

Rugged, Reliable, Adaptable Telemetry Products

NBT

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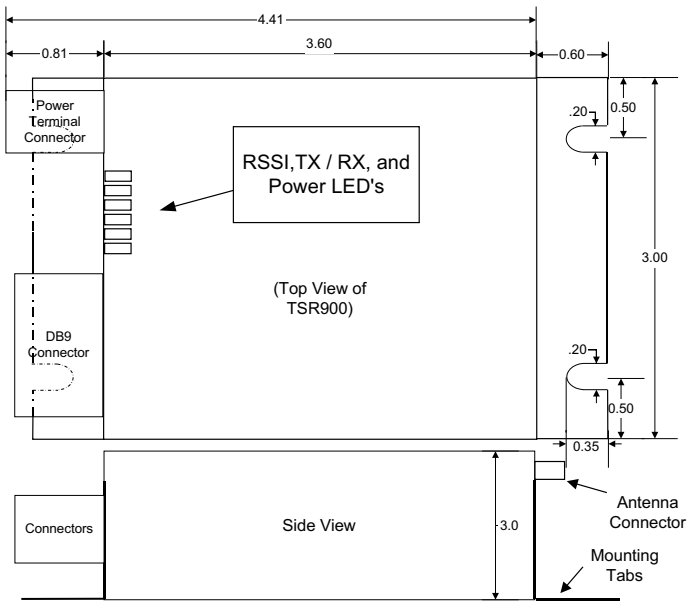
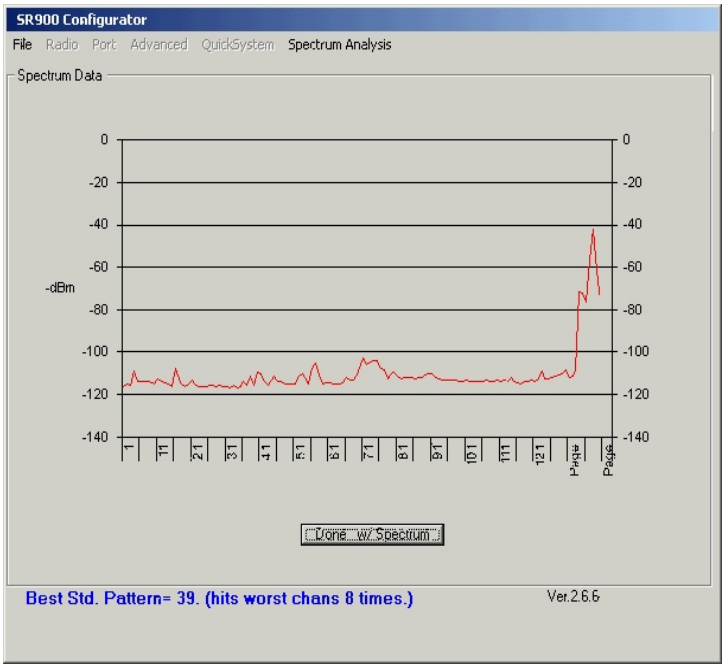
Nota Bene Technology TSR900 - Technical Specifications





Spectrum analysis utility included with the software

Transmitter and Receiver Details

Operating Freq.	902-928MHz
System Gain	137 dB
Sensitivity	-107 dB
Output Power	1mW to 1 W (User-Configurable)

Min: signal for sync: -110dB

Hopping Pattern	60 pseudo-random, user selectable
Freq. Stability	± 2.5ppm ± .00015%
TX Keying	Data Activated

Transmitter

Output impedance 50 ohms
Spurious Emissions , <60 dBa
Harmonic Emissions , <60 dBa
Power Output 1mW, 10mW, 100mW, 1 W selectable

Receiver

Intermodulation 75dB minimum
Adjacent Channel Rejection >50dB
Desensitization 60dB in band, 70dB out of band
In band Rejection >60dB, Out of band >70dB

General

Approvals	FCC and Industry Canada
RS232 Baud range	2400-115,000
Handshaking options	RTS-CTS,DTR,CD
LED Indicators	RXMode, TXMode, RSSI level
Range	Up to 19 Miles (30 Km) line-of-sight
Memory	Nonvolatile configuration memory
Operating Modes	Point-to-point, Point-to-multipoint
Power Requirements	12-24VDC @ maximum of 542mA
Error Detection	CRC-16 with auto-retransmit
Data Latency	25 - 50mS

Environmental

Dimensions(WxDxH)	3" x 4.8" x 2”
Weight	Approx. 11 ounces
Operating Environment	-40 to +65C; Humidity 5-95% Non-condensing

Primary Power

Transmit Supply Current	1mW=193mA, 10mW=212mA, 100mW=294mA, 1W=542mA
Receive Supply Current	180mA
Power Requirements	12-24VDC @ maximum of 542mA (see TX & RX specification above)
Reverse Polarity Protection	Diode across primary power input

Visit our web page at www.nbtinc.com

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