

## Radio SS-900 Hoplite

### DIN Rail Mount Frequency-Hopping Spread Spectrum Radio Transceiver

The SS-900 is a DIN rail mount spread spectrum 902-928 MHz frequency hopping radio designed specifically for moving RS232 serial data in industrial applications.



Capable of accepting a wide range of input voltages, and able to operate across a broad temperature range, this radio's strength lies in its ability to withstand ISM band interference while ensuring the integrity of each data packet. This is accomplished via the Iris data protocol that uses ARQ and Auto-Routing to move data accurately in hostile RF conditions. While supporting transparent data communications as well as MODBUS RTU and AB DF1 packet communications, the Auto-Routing feature allows the SS-900 to build routing tables using Allen-Bradley and MODBUS addresses. This feature enables the radio to further "assure" communications between PLC's and devices in a system for both inbound and outbound messages.

Each unit is also capable of acting as a master, a slave and/or a store-and-forward repeater/slave. As a "next generation" HopLink product, the SS-900 stands in a long line of successful and robust industrial radios.

## Engineering Specifications

### General

Frequency Band	902-928 MHz
Frequency Hopping Sequence	4 selectable groups, each containing 63 frequencies
Operation	Half duplex
Radio Addresses	64,260
Radio Modes	Master, Slave, Repeater/Slave
Security Codes	65,536

### Data Characteristics

Serial Port	RS-232
Serial Connector	DB9
Antenna Connector	MCX female
Data Port Rates	1200, 2400, 4800, 9600, 19200, 38400 baud (Asynchronous)
Data Rate in RF Channel	9600 bps
Flow Control	Selectable between Hardware or None
Typical Latency	70 ms
Auto-Routing	MODBUS RTU, AB DF1 protocols
Error Correction/Detection	ARQ with CRC-16
RF Channel Protocol	Iris

**Transmitter**

Power Output	1 Watt (30dBm)
Duty Cycle	50%
Output Impedance	50 ohms
Transmitter Keying	Data activated
Maximum SWR (with no damage)	Infinite at all phase angles

**Receiver**

Type	Double conversion superheterodyne
Data Threshold	Less than -110dBm
Acquisition Threshold	Less than -113dBm

**Primary Power**

Voltaje	9 to 28 VDC
Supply Current – Transmitting	170mA at 24 VDC
Supply Current – Receiving	16mA at 24 VDC
Fuse	0.5A polyfuse
Reverse Polarity Protection	YES

**Environmental**

Humidity	0% - 95% at 40 °C, non-condensing
Temperature	Operating: -40 ° to 158 °F (-40 ° to 70 °C) Storage: -40 ° to 185 °F (-40 ° to 85 °C)
Size	4.2" x 3.0" x 0.88" (105mm x 75mm x 22mm)
Weight	4.9 oz (140 g)
Mounting	DIN rail
Enclosure	NEMA 1 (IP 30)

**Diagnostics**

Indicators	External LED's (RF, TX, RX)
Digital Outputs	RSSI, Link status

**Agency Approvals**

FCC	Part 15.247
Industry Canada	RSS 210
CSA/C & US	Class 1 Div 2 Groups A, B, C, D (pending)

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