



DIN-S 1W 900 MHz Serial Radio **MODEL: DIN-S-9-HP**



Two-way secure wireless connections of serial RS232, RS485, RS422 data signals

The DIN-S-9-HP radio provides a wireless interface between serial devices. Each radio can mirror the serial data of other radios in the system. Or, radios can be configured as remote / host devices - where the host broadcasts user data (polls) to multiple remotes, and the addressed remote device, connected to the remote radio responds. On highly obstructed long distance links, a Repeater radio can be used - simply the same model configured to Repeat.

EASY TO INSTALL:

The DIN-S-9-HP is one of the easiest radios to install and operate in the business. Every radio is factory configured and tested to your final configuration by the factory. RSSI is displayed directly on the front panel.

Compared to Others...	Synetcom's DIN-S-9-HP excels:
Maximum Transmit Power Allowed by FCC	1 Watt Default TX Power
Advanced Retry / Acknowledge Protocol	Excellent performance on obstructed links and with interference
Long Range	40 miles range with 20 dB margin
High Security	256AES Encryption + FHSS
Industrial Ready	Wide temperature range, ESD protection, solid state fusing, CSA approved
Compact Non-Conductive Package - Low mass - DIN Rail Mount	~5" Panel Depth x 4"W x 3"H easily fits into most enclosures, 1 lb mass

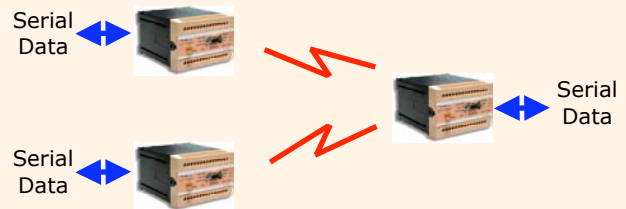
STANDARD FEATURES

- 900 MHz (902 - 928 MHz) 1 Watt FHSS serial data connections
- RS232, RS485 (2-wire) and RS422 (4-wire)
- 1 Watt maximum TX power - 256AES encryption
- Serial port rates from 1200 to 115,200 baud
- -40°C to +70°C operating temperature
- Front panel real time RSSI - Signal Link Margin display
- Front panel real time TX/RX LEDs
- Rear panel DIP switch configures serial port mode
- FCC, IC, CSA Approved - Class 1, Division 2
- 40 miles maximum range (1 Watt version)
- I/O expansion, Repeaters & Full set of industrial radio accessories from Synetcom
- 20 dB radio link margin at specified distances

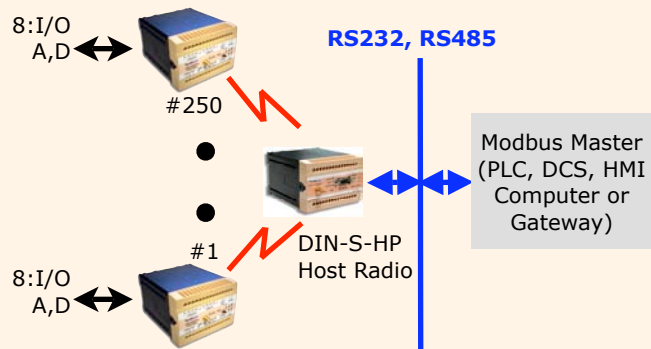
POINT TO POINT - RS232, RS485, RS422 serial data



POINT TO MULTIPOINT - Typical Poll/Response System



DISTRIBUTED I/O Example - Modbus



Up to 250 DIN-R-9-HP-MB Radios

SPECIFICATIONS

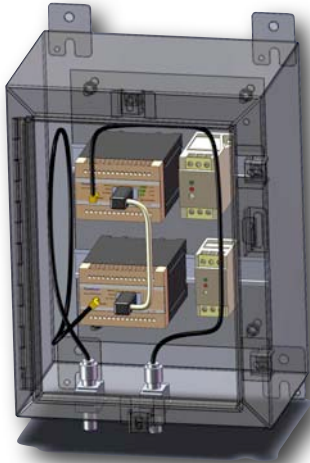
Serial Radio Site Checklist:

A typical serial radio remote site consists of the core radio, your serial device (PLC, sensor, etc.) and accessories. Longer distances (>2,000') generally require an external antenna with lightning protection. DC power required can range from 7-28V with 0.8A peak current during transmit.

Turnkey Site:

1. DIN-S-9-HP Radio
2. 3' RF Jumper - Radio to Lightning Protector
3. 900 MHz Lightning Protector
4. DIN Rail Mount AC Supply or Battery + Solar Supply
5. NEMA4 Plastic, Metal or Stainless Enclosure
6. Antenna Coaxial Cable
7. Omni or Yagi Antenna

Contact the factory for information on complete site solutions.



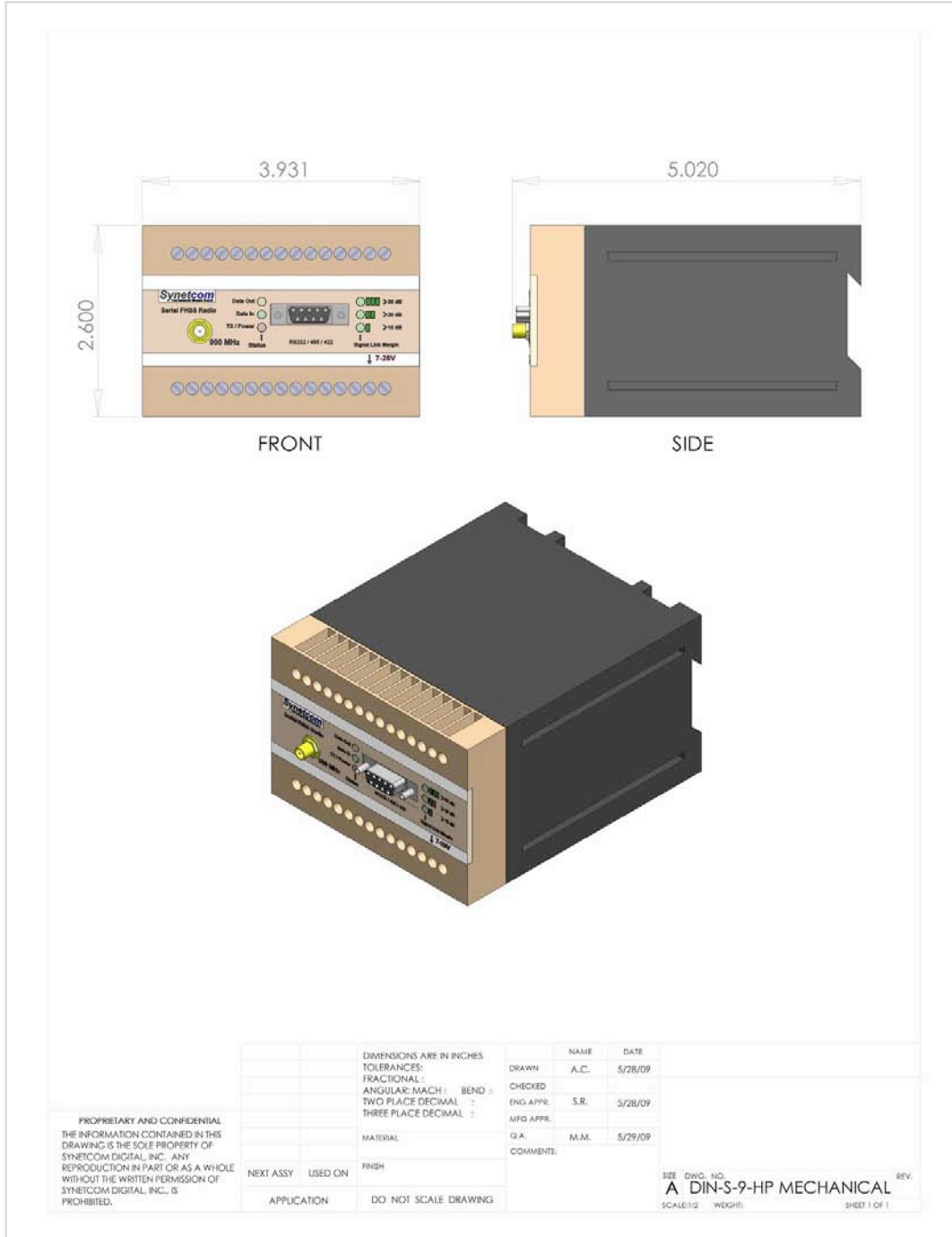
About Synetcom:

With 20 years of industrial wireless experience, Synetcom has engineered radio systems in virtually every sector including: Water, Wastewater, Petrochemical, Pipeline, Well Field, Environmental, and Geothermal Energy. Based on our experience, we provide support at all levels, from system planning, site surveys (onsite and virtual), radio system engineering to customized radios and packaging. Free tech support from a factory engineer who knows the products is a phone call away.

ITEM	SPECIFICATION
Part Number	Synetcom DIN-S-9-HP
RF Power	1 mW - 1 Watt (configurable)
Frequency Range	902 to 928 MHz, FHSS
Hopping Frequencies	50 Hopping Frequencies, 10 Patterns
Receiver Sensitivity	-110dBm 9.6kb/s ; -103dBm 115.2kb/s
Maximum Channel Data Rate	115.2 kb/s
Hopping Pattern / Radio Speed / Retrys / Protocol	Serial port configurable
Link Error Protection	CRC
Link Protocol	Retry / ACK: Point to Point, Multipoint, Repeater
Operating Temperature	-40°C to +70°C
DC Power - 1 Watt Radio	12V Input .1A RX, .8A TX (10 - 13.5V) 24V Input .1A RX, .5A TX (24 - 28 VDC)
Solar Load Budgeting	12V System: 2.5 - 3 Amp-hour/day typ. 24V System: 2.5 - 2.8 Amp-hour/day typ.
Front Panel Indicator LEDs	TX/Power - Off for TX, On for Power Applied Data In - Data into Serial port, Radio TX Data Out - Data out of Serial port, Radio RX Signal Link Margin - 10dB, 20dB, 30 dB above threshold
Back Panel DIP Switch	DIP switch setting configures electrical characteristics of serial port: RS232, RS485 (2 wire) or RS422 (4 wire)
Serial Protocols Supported	Modbus, Modbus RTU Contact factory for others
Range	Maximum Line of site range: 40 miles w/20 dB margin, with at least .6 Fresnel clearance, 1W radios, 4 element Yagi antennas
Approvals	FCC, IC (Canada), C-TICK (Australia) CSA Class 1, Division 2, Groups A, B, C, D

MECHANICAL

SolidWorks 3D and most 2D drawing file formats available to our customers...



ACCESSORIES



VALUE ADDED SERVICES

From radio systems to turnkey SCADA assemblies, Syntecom offers a complete design and fabrication service - including UL508A certification. Our design team uses state of the art tools including 3D modeling from SolidWorks.

INDUSTRIAL RADIO ACCESSORIES

DIN-S Radios are available with enclosures, sunshields, solar panels, batteries and a wide variety of antennas - to suit any application. Coaxial cable types from LMR400 to Heliax. Lightning protection and surge protection devices for RF and data lines. Grounding kits and explosion proof enclosures.

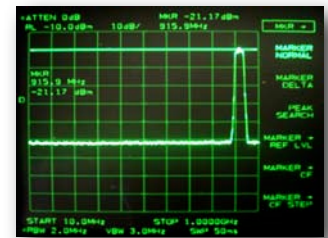
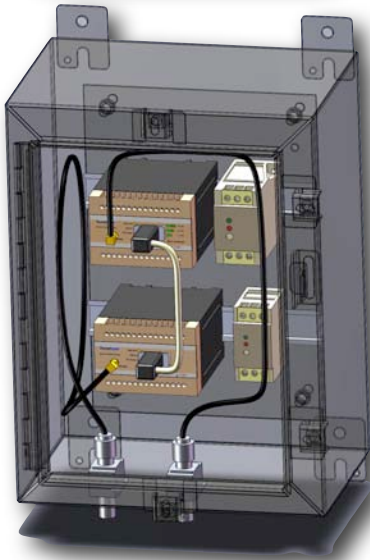
HOSTILE RF ENVIRONMENTS

The DIN-S is designed to perform even when collocated with spread spectrum, trunked radio, walkie talkie, cellular and high power broadcast transmitters. For the most extreme cases, we offer high-order cavity bandpass filters, designed to reject interference.

3D SolidWorks Models

Antennas, Cables, & Protection

Interference Filters & Filter Response



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AVAILABLE FROM: