

# New Product Information Release

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## MOTR - 9™ - Trusted Wireless™ Ethernet

### 900MHz Trusted Wireless Ethernet Radio



#### Description

The RAD-ISM-900-EN-BD incorporates the MOTR-9™ radio board, and a 1 watt, frequency-hopping, spread spectrum (FHSS) transceiver. It operates in the license-free 902-928 MHz ISM band. The MOTR-9™ provides user-configurable over-the-air data rates up to 500 kbps. Adjustable packet sizes maximize data speed and minimize latency. The radio provides selectable 128/192/256-bit AES encryption to prevent unwanted intrusion and keeps data secure.



Operating temperature range of -40°C to +65°C!!!

The module allows users to configure a master, slave or repeater for use in a wireless Ethernet network. The RAD-ISM-900-EN-BD supports TCP/IP, UDP and IPv4 protocols with all programming and radio diagnostics accessible via a simple integrated web server. The radio also features field-upgradeable firmware, so future functions can be easily adapted. With the DSP based MOTR-9™ board, no tuning is required, unlike traditional analogue boards.



Integrated serial ports allow broadcasting RS-232/485/422 protocols to serial clients. It can also be used as a Modbus RTU/TCP gateway.



#### Features

- 900MHz, 1W radio (adjustable)
- Selectable 125, 250, & 500 kbps over-the-air speeds
- Functions as a master, store and forward repeater, or a slave. One master supports up to 4095 radios in one network
- Security features user-selectable 128/192/256-bit AES encryption
- RS-232 and RS-485/422 ports allow integration of serial devices onto Ethernet network (built-in device server)
- Programming and network diagnostics are accessed via integrated IT-friendly web server; no additional software needed
- Modbus RTU/TCP compatible for process and industrial applications
- Class 1, Division 2, Groups A, B, C, & D approved

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900MHz Trusted Wireless Ethernet Radio



[www.phoenixcon.com/WIRELESS](http://www.phoenixcon.com/WIRELESS)

## Applications

- SCADA systems
- PLC/RTU extensions
- Pump controls
- Tank level/ pressure/temperature monitoring
- Water/wastewater treatment
- Petroleum and chemical processing

## Ordering Data

Description	Type	Order No.
Radio, 900 MHz	RAD-ISM-900-EN-BD	2900016

## Accessories

Description	Type	Order No.
Antenna, 0 dB gain, omni-direction, 1.8 M (6ft.) cable, MCX connector	RAD-ISM-900-ANT-OMNI-0-6	2867160
Antenna, 3 dB gain, omni-directional fiberglass, type N connector (female)	RAD-ISM-900-ANT-OMNI-FG-3-N	2867791
Antenna, 6 dB gain, omni-directional fiberglass, type N connector (female)	RAD-ISM-900-ANT-OMNI-FG-6-N	2865579
Antenna, 6.5 dB gain, yagi-directional, 7.6m - (25 ft.) RG213 cable, type N connector (male) CN-UB, and MCX-to- N adapter	RAD-ISM-900-ANT-YAGI-6.5-25-AS	2867827
Antenna, 6.5 dB gain, yagi-directional, 15.2m (50 ft.) LMR400 cable, type N connector (male) CN-UB, and MCX-to-N adapter	RAD-ISM-900-ANT-YAGI-6.5-50-AS	2867830
Enclosure, NEMA 4X pre-wired, includes MINI-UPS, power distribution and surge protection for 900 MHz radio system	RAD-SYS-NEMA4X-900	2917188
Cable, 7.5m (25ft.) RG213 with type N connectors (male)	RAD-CAB-RG213-25	2867597
Surge protection, bulkhead mount for 900 MHz radio	CN-UB-280DC-BB-ASSY	5603859
Adapter cable, 1.2m (4ft.) RG316 with type N (male) and MCX (male) connectors	RAD-CON-MCX90-N-SS	2885207

## General Data

Mounting	35 mm mounting rail (EIC 60715)
Dimensions (W x H x D)	52 x 99 x 115 mm (2.1 x 3.90 x 4.5 in.)
Weight	296 g (0.65 lb)
Case material	Polyamide PA non-reinforced with aluminum heatsink
Operating temperature	- 40 to 65°C (- 40 to 149°F)
Storage temperature	- 40 to 75°C (- 40 to 167°F)
Relative humidity	10 - 95% non-condensing
Degree of protection	IP20

## Supply Voltage

Power	12 - 30 V DC Class 2
Connection	Screw-type terminal, 12 - 24 AWG
Current consumption, maximum	250 mA @ 24 V DC
RF Link Contact	30V DC / 0.5 A