



**OMNEX**  
TRUSTED WIRELESS

**OMNEX Control Systems Inc.**

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## OEM-900 Data Sheet

# Wireless OEM Transceiver Module



The OEM-900 is a one Watt wireless data transceiver module with an integrated DC-DC power supply. Using OMNEX's Trusted frequency hopping spread spectrum technology for license-free, interference-free operation, the OEM-900 is ideally suited for system-critical applications and environments with extreme interference. Credit card sized and easy to integrate, the OEM-900 also comes with a windows software interface for configuration and remote diagnostics.

### OMNEX Industrial Wireless is:

**Robust & Reliable**

**License Free**

**Interference Free (FHSS)**

**Easy to Integrate**

### OMNEX is the OEM's choice because:

**OMNEX understands industrial radio requirements**

**OMNEX designs and manufactures its own radios**

**OMNEX is exclusively focused on industrial and SCADA applications**

**OMNEX is an ISO-9001:2000 Certified Manufacturer**

**OMNEX radios work where other technologies fail**

## FEATURES

- Maximum allowed 1 Watt transmit power
- Wide temperature range
- 20 + miles (32km +) range line-of-sight using gain antennas
- TTL, RS232 or RS485 serial data interface
- Built-in 6-30VDC Power conditioning to correct "dirty power" and deliver power to auxiliary circuits
- Remote diagnostics via 2nd serial port

## APPLICATIONS

- Wireless Instrumentation • PLC/RTUs
- Data Loggers • Display Signs
- Traffic Control • Utilities/Metering
- Pump Control

**Industrial Wireless Solutions**

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## OEM-900 Data Sheet

### Wireless OEM Transceiver Module

Transmit Power	1W
Range	600-1000 feet (180-305m) in heavily obstructed areas, 20 miles +(32km +) line-of-sight using gain antennas
Frequency	902 to 928MHz - ISM band
Frequency Hopping	4 selectable bands, 63 frequencies per band
Power Source	6 to 30VDC
Power Consumption	170mA transmit, 16mA receive,
Receiver Sensitivity	-108dBm @ BER 10-6
Network Topology	master/slave with repeaters
Error Detection & Correction	ARQ with CRC16
Serial Data Interface	TTL, RS232 or RS485

#### Communication Interface

Over-the-air Data Rate	9600 baud
Serial Port Data Rate	up to 38,400 baud
Indicator LEDs	Three: Tx & Rx Data and RF Link
Antenna Connector	MCX Female

#### General Specifications

Temperature Range	-40 °F to 158 °F (-40 °C to 70 °C)
Relative Humidity	20-90% RH non condensing
Dimensions	3.1" x 2.1" x .6" (78mm x 54mm x 14.3mm)
Weight	1.4 oz (40g)
Approvals	USA - FCC Part 15.247 Canada - ISC RSS 210

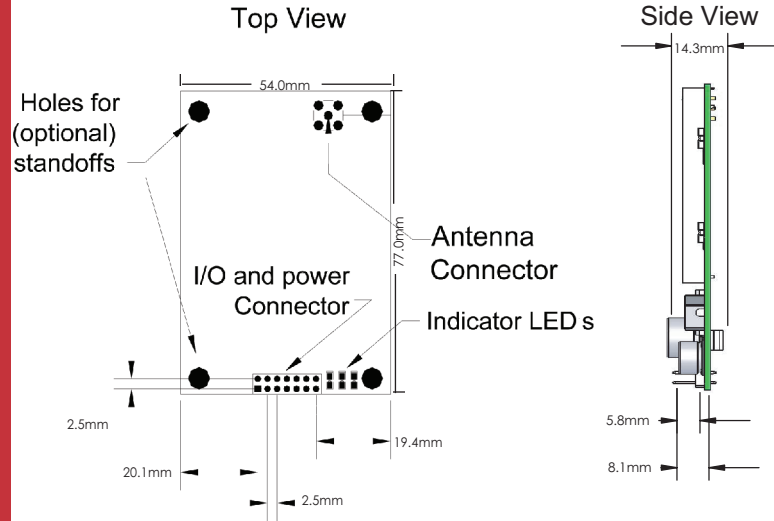
Mounting Options Threaded Standoffs or Antenna & Data Connectors

#### Pin Outs

1 - Ground	8 - Module Power (6-30VDC)
2 - Auxiliary In/Out #4 (RF LED indicator (out))	9 - Chan A RTS (out) (Logic Level, RS232)
3 - Auxiliary In/Out #3 (Hand shaking mode (input))	10 - Chan A CTS (in) (Logic Level, RS232)
4 - Chan B Rx Data (in) (Logic Level)	11 - Chan A Rx Data (in) (Logic Level, RS232, RS485)
5 - Chan B Tx Data (out) (Logic Level)	12 - Chan A Tx Data (out) (Logic Level, RS232, RS485)
6 - Auxiliary In/Out #2 (Link Output (out))	13 - Auxiliary In/Out #1 (RSSI (out))
7 - +4VDC Put (100mA max)	14 - Ground

Auxiliary pins can be configured as inputs or outputs with custom firmware. Standard functionality is shown in parentheses.

Specifications subject to change without notice



### OEM Developer's Kit:

- Two OEM-900s configured with TTL serial interface on two carrier boards with RS232 level shifting & DB9 connectors
- Two 1/4 wave omni antennas with mating connectors
- Two DB9 serial cables (straight through configuration)
- One CD-ROM with configuration and remote diagnostics software, documentation and CAD drawings

Manufactured & Distributed by



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