



Model: X09-019PKC2N
Industrial Wireless Modem

Overview

The X09-019PKC2N was designed to provide end users with an easy to install wireless communication link between equipment. Systems integrators love the functionality provided by the serial connection, switch, indicator lights, high quality antenna, mounting plate and flexible power supply inputs.

The X09-019PKC2N wireless modem transfers data at 19200 baud up to 1/4 mile in a city environment or greater than 7 miles line-of-sight with a directional antenna. This radio is perfect for applications in supervisory control and data acquisition (SCADA), remote meter reading, home automation, security, instrument monitoring, point of sale systems (POS) and many other applications.

The X09-019PKC2N transceiver module has built-in support for multi-drop networking protocols. Multiple independent networks can operate in the same vicinity by using distinct network identifiers. The radio integrates quickly and seamlessly into any new or existing design. Simply output serial data from any micro-controller or RS-232 device into the radio to send FCC approved, frequency hopping spread spectrum data through the air and capture it on all receivers within range on the same network. The system behaves as a virtual half-duplex parallel-wired network.

Features

- Best sensitivity in industry for low cost and extended transmission range
- Low power consumption suitable for battery powered applications
- Small size
- Easy to integrate, no knowledge of RF necessary, simple networking protocol
- Standard serial digital interface, interfaces with any micro-controller
- Reliable data transfer performance
- Choice of integral or separate external antennas
- FCC approved with no further licensing or approval required

Specifications

Radio Frequency:	902-928 MHz, unlicensed ISM band
Type:	Frequency Hopping Spread Spectrum Transceiver
Frequency Control:	Direct FM
Network Topology:	Point-Multipoint and Point-to-Point Multi-Drop Transparent Networking
Channel Capacity:	65,000 Network Identifiers share 25 hop channels
Serial Data Interface:	RS-232 (DCE)
I/O Data Rate:	Software selectable 2400 to 57,600 bps
RF Baud Rate:	20,000 bps
Data Throughput:	19,200 bps
Transmit Power Output:	100 mW nominal
Rx Sensitivity:	-107 dBm
Range*:	Indoor: 600 to 1500 feet Outdoor: 7 miles with dipole (Greater than 20 miles with gain antenna)

*Range is calculated assuming line-of-sight. Actual range will vary based upon specific board integration, antenna selection, and environment.

International Headquarters:

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Interference Rejection: 70 dB at pager and cellular phone frequencies
 Power: 7 to 18 VDC (includes 120VAC to 9VDC @ 400 mA power supply)
 Current: TX 210mA, RX 70mA, Power Down less than 10 μ A
 Dimensions: 2.8 x 5.5 x 1.1 in (7 x 14 x 2.8 cm)
 Weight: 6.9 oz (195.6 g)
 Operating Temperature: 32 to 158°F (0 to 70°C)
 Operating Humidity: 10 to 90% (non-condensing)
 Antenna Connector: Reverse-polarity SMA
 Antenna Impedance: 50 ohms unbalanced
 Included Antenna: 1/2 wave flexible whip (6 in), Reverse-polarity SMA,
 2.1 dBi gain
 Certification: United States: FCC ID: OUR9XTREAM
 Canada: # 4214A-9XSTREAM

Serial Connector Pinouts

Pin	Signal	Type	Description
1	NC	-	No Connect
2	RX	Output	Data
3	TX	Input	Data
4	DTR	Input	Sleep Control
5	SIG GND	Ground	Common Return
6	NC	-	No Connect
7	RTS	Input	Binary Program Control
8	CTS	Output	Clear to Send Control
9	NC	-	No Connect

Other versions of this radio are available. Options consist of 2.4 GHz, RS-422/485 interface, wide temperature range (-40 to 85°C), or 9600 baud version offering a receiver sensitivity of -110 dBm (maximizing distance).

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