

# Communicator II

## Wireless Data Transceiver in 900 MHz or 2.4 GHz



### OVERVIEW

The Communicator II is a high-performance wireless data transceiver designed for industrial serial and serial to IP networks. The Communicator II enables long-range wireless connectivity at for robust and secure wireless communications for a broad set of fixed and mobile applications. The Communicator II has proven to be a workhorse in the industrial automation and control markets.

**Functional & Flexible:** The Communicator II offers the capability and flexibility to meet a variety of wireless networking challenges. The Communicator II offers license-free operation in North America and many other locations around the world. Utilizing superior Frequency Hopping Spread Spectrum (FHSS) technology, the Communicator II provides long-range data transport with continuous throughput of up to 115 Kbps. Designed for functionality, the Communicator II offers the flexibility to provide point-to-point communications or more advanced multi-point applications. Robust and highly reliable performance is achieved through superior low signal performance.

The Communicator II's rugged enclosure, extreme temperature range and broad scale of voltage inputs make it the clear choice for many harsh industrial environments

**Secure:** Frequency Hopping Spread Spectrum technology dynamic shift key with 256-bit AES encryption provides the user with the tools to ensure data integrity and protection against malicious attacks.

### Features

- Proven robust, reliable performance
- Long Range: 60+ miles
- Superior performance in noise-congested environments
- 900 MHz and 2.4 GHz options for license-free operation
- Single unit—multiple modes of operation: Base, Remote, Repeater or Remote/Repeater
- Secure: Using Frequency Hopping Spread Spectrum (FHSS) technology; available with 256-bit AES encryption
- Error-free communications: 32-bit CRC with automatic retransmissions
- Low power consumption: Ideal for remote, solar, and battery applications
- Industrial operating temperature from -40°C to +75°C
- Real-time network-wide diagnostics
- Compatible with Intuicom's CommPro software to easily configure and monitor your radio network.

### Applications

- SCADA
- Traffic and Transportation Control
- Energy Production
- Water and Wastewater Systems
- Agriculture
- Pipeline Monitoring and Leak Detection
- Electrical Utility Applications
- Automation and Control Solutions

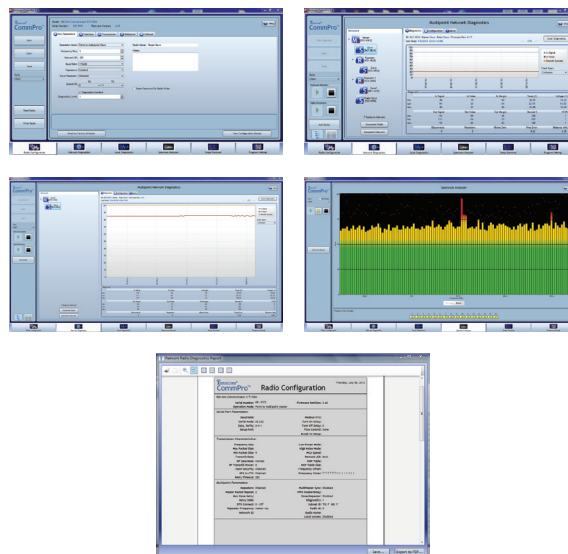
# Technical Data: Communicator II

## SPECIFICATIONS

Specification	Description	
	<b>900 MHz</b>	<b>2.4 GHz</b>
Frequency Range	902-928 MHz	2.4-2.4835 GHz
Transmitter Output Power	100 mW to 1 W (+30 dBm)	20 mW to 500 mW (+27dBm)
Range, Line of Sight	60+ Miles	20+ Miles
Modulation	Spread Spectrum, GFSK, 115.2 Kbps or 153.6 Kbps	Spread Spectrum, GFSK, 115.2 Kbps or 153.6 Kbps
Occupied Bandwidth	230 KHz	230 KHz
Spreading Method	Frequency Hopping	Frequency Hopping
Hopping Patterns	15 per band, 105 total, user selectable	15 per band, 105 total, user selectable
Hopping Channels	50 to 112, user selectable	75 to 80, user selectable
Hopping Bands	7, user selectable	3, user selectable
Receiver Sensitivity	-108 dBm at $10^{-6}$ BER; -110 dBm at $10^{-4}$ BER	-108 dBm at $10^{-6}$ BER; -110 dBm at $10^{-4}$ BER
Selectivity	20 dB at $f_c \pm 115$ KHz; 60 dB at $f_c \pm 145$ KHz	20 dB at $f_c \pm 115$ KHz; 60 dB at $f_c \pm 145$ KHz
System Gain	140 dB	137 dB
Data Transmission Error Detection	32 Bit CRC, retransmit on error	32 Bit CRC, retransmit on error
Data Encryption	Substitution, dynamic key	Substitution, dynamic key
Maximum Throughput	115.2 Kbps*	115.2 Kbps*
Data Interface	RS232	RS232

### General Specification

Enclosure	Ruggedized extruded aluminum with rubber traction bumpers	
Size	H: 53 mm (2.1") x W: 167 mm (6.6") x L: 105 mm (4.5")	
Weight	793 g (1.75 lbs.)	
Temperature Operating Range	40° C to +75° C 100% full performance tested	
Connectors/Signals		
External Antenna	N Type Female, Professional installation only	
Data	DB9 (TXD, RXD, CTS, RTS, DTR, GND, Power), DCE	
Diagnostic	DB9 (TXD, RXD, GND, Power), DCE	
Power	2.1 mm x 5.5 mm jack	
Input Voltage	6-30 VDC (900 MHz), 9.5-30 VDC (2.4 GHz)	
Power Consumption (approx.) max RF output power setting	900 MHz at 12VDC:	2.4 GHz at 12VDC:
Sleep	5 mA	5 mA
Idle	21 mA	30 mA
Receive	86 mA	100 mA
Transmit (average)	250 mA	200 mA
Operating Modes	Point-to-Point, Point-to-Multipoint, TDMA, Base, Remote, Repeater or Remote/Repeater	



\* Uncompressed throughput assuming 75% frequency availability; no repeaters

**Note:** Specifications subject to change