Communicator II

WIRELESS DATA TRANSCEIVER

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 high bandwidths for robust and secure wireless communications for a broad set of fixed and mobile applications.

FUNCTIONALITY AND FLEXIBILITY

The Communicator II offers the capability and flexibility to meet a variety of wireless networking challenges. Available in 902-928 MHz and 2.4-2.4835 GHz frequencies, 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 multipoint and IP- bridged network applications.

Robust and highly reliable performance is achieved through superior low signal performance. Low power consumption and user-definable operating parameters provide optimal performance for a wide variety of applications.

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.

SCALABLE NETWORK SOLUTION

Used within an Intuicom wireless network, the Communicator II can meet the needs of both small and complex communication challenges.

Ease of integration, robust performance, an optional IP interface, and a strong set of support tools including real-time diagnostics provide for rapid deployment. Within an Intuicom Network, the Communicator II is typically used in conjunction with Intuicom's network server software as a network gateway base station or as a bi-directional repeater. The Communicator II may also be used for remote device interface in network architectures involving a single serial interface at the remote node.

APPLICATIONS

Whether providing data acquisition and control or real-time vehicle tracking, the Communicator II can support fixed or mobile communication needs. Some common commercial and industrial applications include:

- Scientific and Environmental Monitoring
- SCADA
- Telemetry
- Display signs
- Traffic signal control
- Security
- Vehicle data/tracking

To learn more about enabling wireless networking for your applications, contact us at: info@intuicom.com

FEATURES

- License–free operation
- Data throughput up to 115.2 Kbaud
- Long range operation (60+ miles)
- Full duplex communications
- Ability to operate in different modes including base station, repeater, slave and slave/repeater
- Low power consumption
- Network-wide diagnostics
- Rugged industrial enclosure

FEATURES OF INTUICOM WIRELESS DATA NETWORKS

- Available bundled with a variety of Intuicom products and solutions
- Network coverage ranges from facility to state-wide levels
- Optional TCP/IP data streams provide a standard interface
- Intuicom expertise for planning and design of wireless networks

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GENERAL SPECIFICATIONS

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 (approximate) (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, Repeater, Slave, Slave/Repeater	

WIRELESS TRANSCEIVER

SPECIFICATIONS	900 MHZ	2.4 GHZ
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 fc ± 115 KHz; 60 dB at fc ± 145 KHz	20 dB at fc ± 115 KHz; 60 dB at fc ± 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	RS232/485/422	RS232

*uncompressed throughput assuming 75% frequency availability, no repeaters
Note: Specifications subject to change without notice

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