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 -40º C to +75º C  100% full performance tested

Connectors/Signals
External Antenna N Type Female, Professional installation only
Data DB9 (TXD, RXD, CTS, RTS, 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
Selectivity 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