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SPECIFICATION SHEET

TITLE: COMMUNICATOR II
Wireless Data Transceiver

PART NO.:
Communicator II



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 any 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 architecture 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

GENERAL SPECIFICATIONS

| | | |
|---|--|-------------------|
| Enclosure Size | Ruggedized extruded aluminum with rubber traction bumpers 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 | D89 (TXD, RXD, CTS, RTS, DTR, GND, Power), DCE | |
| Diagnostic | D89 (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 <small>(average/maximum)</small> | | |
| <small>(max RF output power setting)</small> | 900 MHz at 12 VDC: | 2.4 GHz at 12VDC: |
| Sleep | 5 mA | 5mA |
| Idle | 21 mA | 30 mA |
| Receive | 86 mA | 100 mA |
| Transmit <small>(average)</small> | 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 (+27 dBm) |
| 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+BER: -110 dBm at 10+BER | -108 dBm at 10+BER: -110 dBm at 10+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

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

For more information, visit our website at www.oceanstatesignal.com