

Communicator-T

WIRELESS TRAFFIC INTERCONNECT TRANSCEIVER



The Communicator-T is a high performance wireless traffic interconnect link designed for long range, high speed, error-free communications. Compatible with most traffic signal control systems, the Communicator-T provides a cost efficient alternative to traditional hard-wire infrastructure and can be rapidly deployed in either permanent or interim installations.

CONTROLLER COMPATIBILITY

Intuicom makes it easy to integrate wireless "comm" capabilities that satisfy both legacy and new traffic interconnect requirements. Using a single slot in a loop detector card rack, the Communicator-T plugs into and draws power from industry standard controllers (170, 2070, NEMA).

NETWORK FLEXIBILITY

Providing up to 115 Kbps of available bandwidth, a Communicator-T network is scalable to facilitate dynamic systems integration requirements. The network can support an unlimited number of Communicator-T units and offers a broad range of end-user configurable parameters and data (RS-232, RS-485, or RS-422) transport requirements. Designed for flexibility, the rugged Communicator-T can be operated in point-to-point or point-to-

multipoint mode. In addition to operating as a master, slave, or a single radio repeater, any radio can perform both slave and repeater functions!

SYSTEM MANAGEMENT

To simplify management of your Communicator-T system, Intuicom provides network-wide diagnostics and spectrum analysis tools for monitoring and optimizing system performance. Data transfer performance, signal strength, and noise figures are among the many comprehensive parameters that can be monitored.

"BEST-IN-CLASS" RF PERFORMANCE

Employing secure, frequency hopping spread spectrum technology; the Communicator-T is inherently resistant to interference from other communications equipment, including other spread spectrum radios.

Empowered with an ultra sensitive and highly selective, digitally filtered RF receiver, the Communicator-T provides real-time, robust communication links with 32-bit CRC error correction. The Communicator-T is capable of delivering the maximum effective radiated output power allowable by the FCC for unlicensed operation—the benefit of which is realized in exceptional RF propagation characteristics with up to 60 miles range (LOS).

With proven performance in dense RF environments, Intuicom's wireless networks power through the congestion to provide reliable data transport where other technologies fall short.

To learn more about enabling wireless networking for your applications, please contact us at: info@intuicom.com or call (303) 449-4330

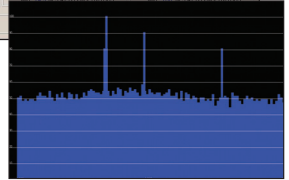
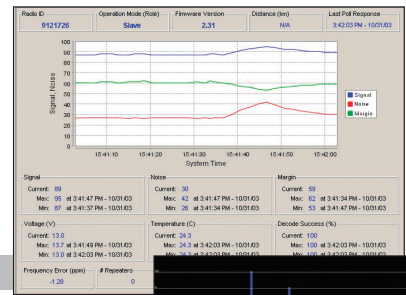
FEATURES

- 60+ mile range ("best-in-class" performance)
- 115.2 Kbaud throughput with 32-bit CRC, error correction
- Compatible with 170, 2070, & NEMA controllers
- RS-232/485/422 std.
- Secure 900 MHz or 2.4 GHz FHSS technology
- FCC maximum allowable RF output power for license-free operation
- Full or half duplex
- Master, slave, or slave/repeater operation
- Remotely configurable
- Network-wide diagnostics
- -40°C to +75°C operation
- 2 year warranty
- Made in USA



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GENERAL SPECIFICATIONS

Detector Rack Interface	2x 22 contact edge card with 0.156" centers (170, 2070, NEMA compatible)	
Size	Single slot (standard loop detector rack)	
Weight	206 g	
Operating Temperature	-40° C to +75° C	
Connectors/Signals		
External Antenna	SMA	
Data	DB9	
Diagnostic	3-pin mini sub-D	
Power	Edge card contacts; loop detector rack	
Input Voltage	6-30 VDC (900 MHz); 9.5-30 VDC (2.4 GHz)	
Power Consumption (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 (@ full TX power)	200 mA
Operating Modes	Master, Repeater, Slave, Slave/Repeater, Point-to-Point, Point-to-Multipoint, TDMA	

SOFTWARE

Network Wide Diagnostics:

Provides time saving tools to effectively monitor and manage your network.

Spectrum Analyzer:

Real-time data on the RF environment to assist in planning and performance.

WARRANTY

2 Year Term

WIRELESS TRANSCEIVER

SPECIFICATIONS	900 MHZ	2.4 GHZ
Frequency Range	902-928 MHz	2.4-2.4835 GHz
Transmitter		
Output Power	10 mW to 1 W (+30 dBm), user programmable	5 mW to 500 mW (+27dBm), user programmable
Range, Line of Sight	60 Miles	20 Miles
Modulation	Spread Spectrum, GFSK	Spread Spectrum, GFSK
Occupied Bandwidth	230 KHz	230 KHz
Spreading Method	Frequency Hopping (FHSS)	Frequency Hopping (FHSS)
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	6, user selectable
Receiver		
Sensitivity	-108 dBm at 10 ⁻⁶ BER	-108 dBm at 10 ⁻⁶ 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 exclusive of antennas	135 dB exclusive of antennas
Data Transmission		
Error Detection	32 Bit CRC, retransmit on error	32 Bit CRC, retransmit on error
Data Encryption	Substitution, dynamic key	Substitution, dynamic key
Data Rate*	115.2 Kbps	115.2 Kbps
Data Protocol (standard)	RS-232, RS-485, RS-422, user selectable	RS-232, RS-485, RS-422, user selectable

*Assumes 75% frequency availability, no repeater