

DIO Wireless Transceiver

MULTIFUNCTIONAL CONTACT CLOSURE SOLUTION



OVERVIEW

The Intuicom DIO is a high performance wireless contact closure radio for ON-OFF and Detection applications.

Designed for short and long-range error free communications, the DIO delivers a complete bi-directional wireless I/O capability for point-to-point, point-to-multipoint and multipoint-to-multipoint applications, providing an alternative to hardwire, fiber and other RF solutions

EASE OF USE

Intuicom makes it easy to integrate wireless I/O (on-off) capabilities for a variety of applications. Incorporating Intuicom's "Single Unit Operation™", the DIO is capable of serving as any component (master, remote, repeater or remote/repeater) in a wireless system.

Designed with a simple and easy setup, the DIO is an excellent plug-and-play type device for rapid integration. Intuicom's CommPro™ software, provides a complete toolset to assist in designing, configuring, monitoring and optimizing your wireless solutions. Going from the box to the field has never been easier.

FUNCTIONALITY AND FLEXIBILITY

The Intuicom DIO provides bi-directional communication with 16 individual channels, eight (8) input and eight (8) output, for a virtually limitless number of I/O routing possibilities including positive confirmation of command execution.

KEY FEATURES

- "Best-in-Class" RF performance
- Robust on-off control and monitoring of multiple events
- Software mapping of input and output channels
- Single Unit Operation™
- 900 MHz or 2.4 GHz license free operation
- Point-to-point, point-to-multipoint and multipoint-to-multipoint operation
- 2-year warranty

COMPLETE COMMUNICATION SYSTEM

A complete communication system lives Inside every Intuicom Wireless solution.

- Network Software Management
- Service and Support
- Exclusive Product and Software features
- Field proven reliability



GENERAL SPECIFICATIONS

Enclosure	Ruggedized extruded aluminum	
Size	46 mm (1.81) x : 157 mm (6.18) x L 111 mm (4.37)	
Weight	603.8 g (21.3 lbs.)	
Temperature	-40° C to +75° C Operating Range	
Connectors/Signals		
External Antenna	N Type Female, Professional installation only	
Setup/Diagnostic	RJ12, (TXD, RXD, CTS, TS, GND), DCE	
Power Locking	Receptacle (MOLEX Mini-Fit J .)	
Input	Voltage 900 MHz: 6-30 VDC 2.4 GHz: 9.5-30 VDC	
Power Consumption typical		
Operating Mode	900 MHz at 24 VDC (mA)	2.4 GHz at 24 VDC (mA)
Base	75	80
Remote	55	70
Remote/ Repeater	83	98
Operating Modes	Point-to-Point (bi-directional), Point-to-Multipoint (bi-directional)	Point-to-Point (bi-directional), Point-to-Multipoint (bi-directional)
System Configurations	base, repeater, remote, remote/repeater	base, repeater, remote, remote/repeater
Unit Operational Modes		

WIRELESS TRANSCEIVER

Specifications	900 MHZ	2.4 GHZ
Frequency Range		
Transmitter		
Output Power	1000mW	500 mW
Range, Line of Sight	60 miles	20 miles
Modulations	Spread Spectrum. GSKF	Spread Spectrum. GSKF
Occupied Bandwidth	230 KHz	230 KHz
Spreading Method	Frequency Hopping	Frequency Hopping
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	40 dB at fc ± 115 KHz; 60 dB at fc ± 145 KHz
System Gain	140dB	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

I/O SPECIFICATIONS and CAPABILITIES

I/O Interface Specifications			
Inputs	8 digital, 3-40 VDC, ground acti ated		
Outputs	8 digital, 550 mA Max Load current per output (mosfet open drain), 2 Amps total		
I/O Connector Type	Quick release terminal block		
Indicators	Power, Input, Output, Link		
Supported Architectures/Protocols	DIO to DIO / DIO to Multiple DIO Modbus: PC Interface to Multiple DIO		
User-defined output control	Time based	Normal Mode Long	Distance Mode
I/O iming Specificati ns (bi-directional)	Low Latency Mode	bi-directional < 14 ms	bi-directional < 15 ms
End-to-End Change Latency (typical)	bi-directional < 12 ms		
Max. Change Frequency (Min. I/O Change Time)	25 Hz (20 ms) 2	0 Hz (25 ms)	10 Hz (50 ms)
Failsafe Time	100 ms 10 s, user selectable	100 ms 10 s, user selectable	100 ms 10 s, user selectable



ITS/Traffic



Precision Agriculture



Security



Industrial

Note: Specifications subject to change without notice.