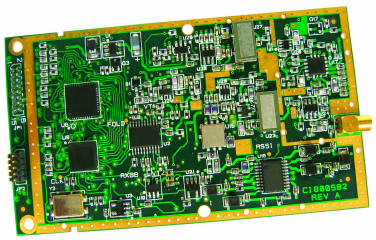
WIT910 900MHz Frequency Hopping Transceiver OEM Module

Combining 900MHz frequency hopping technology and 500mW of transmit power, the WIT910 is the latest in a long line of wireless OEM transceiver modules from Cirronet. With the same physical dimensions of the industry-leading WIT2410 module, smaller than a business card and just 8.6mm thick, the WIT910 provides immunity to both jamming and multipath fading. The WIT910 also provides a low power consumption mode suitable for battery operation.



Powerful. With a full 1/2 watt transmit power and a receive sensitivity of -103dBm, the WIT910 can achieve ranges in excess of 20 miles using 3dB omni-directional antennas. When long range isn't needed, the WIT910, measuring just 80.2mm x 46.5mm x 8.6mm and weighing just 35 grams, is a powerful performer at low power, consuming less than 100mA at 3.3 volts.

With the same size and mounting dimensions as the industry-leading WIT2410 module, the WIT910 can be used in place of the WIT2410 in existing designs, creating a 900MHz product with practically no development effort.

Versatile. All of the module parameters are configurable under software control including transmit power via a straight-forward command set. Point-to-point, point-to-multipoint and store-and-forward repeating while operating as a node are supported. Standard communication rates between the 910 and the host are supported between 1200 bps and 57.6 Kbps. Non-standard rates are supported as well.

Reliable. The WIT910 provides both reliable communication and reliable operation. With frequency hopping spread spectrum technology, the WIT910 provides immunity to jamming and multipath fading. Using automatic retransmit request (ARQ) in addition to a 512 byte buffer, transparent error-free communication is automatic. The built-in data scrambling adds a measure of security.

Reliable operation is assured through our stringent QA processes. All WIT910s are manufactured in an ISO9000 certified facility, another reason Cirronet is the choice of hundreds of designers.

Simple. Simple to use and simple to integrate, the WIT910's factory default settings work for many applications. For other applications, software control makes changing settings easy.

The WIT910, with its small size and low power consumption, is simple to integrate into your product. The RS-232 style interface with standard CMOS signal levels makes the electronic integration easy. As the WIT910 is FCC certified, your 910-based product does not have to repeat the FCC type approval.

Let us be your experts. Cirronet has delivered high-performance wireless products since 1987. To find out how to put our experience to work for you, call **+1.678.684.2000** or visit our website at **www.cirronet.com**

Features:

- 900 MHz frequency hopping spread spectrum technology
- 20+ mile range w/omni-directional antennas
- 3.3 volt operation
- Low power consumption
- Small size, light weight
- 172.8 Kbps channel data rate
- RS-232 style asynchronous interface
- Store-and-forward repeating while operating as a node

Benefits:

- License-free operation
- Immunity to jamming and multipath fading
- Supports long range applications
- Ideal for battery powered devices
- Supports large number of nodes
- Easy to integrate
- Shortens time to market

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CIRRONET 3079 PREMIERE PKWY, SUITE 140, DULUTH, GEORGIA 30097
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WIT910 Specifications

General Specifications

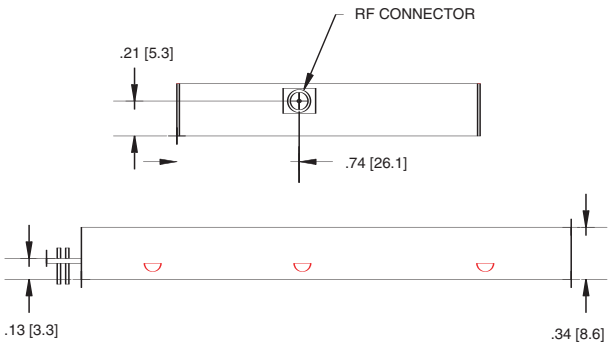
RF Frequency	902 to 927 MHz
Radio Certification	FCC Part 15.247, license free
Operating Range	Indoor: 1000'+ Outdoor: >20 miles with omni-directional antenna
Network Topology	Star network
Network Protocol	Dynamically assigned TDMA
Error Detection and Correction	24 bit CRC and ARQ
Serial Data Interface	Asynchronous (RS-232) CMOS signals, 3.3v; 5v tolerant
I/O Data Rate	Up to 86.4 Kbps, software selectable
Channel Data Rate	172.8 Kbps
# of Frequency Channels	54
RF Bandwidth	460 KHz
Transmit Power Output	500mW, 100mW, 10mW, software selectable
Receiver Sensitivity	-103 dBm for 10^{-5} BER
Supply voltage	3.3 v to 10 v, 5 v nominal
Current Consumption (500mW Transmit Power, 57.6Kbps I/O)	Remote Operation: Sleep 250µA; Stby 43mA; Typical <100mA; Peak (Tx) 600mA — Base Operation: Continuous Peak (Tx) 125mA 600mA
Size	80.2mm x 46.5mm x 8.6mm
Weight	35g
Operating Temperature	-40°C to 70°C
Humidity	20% to 90% (non-condensing)

Connector Pinout

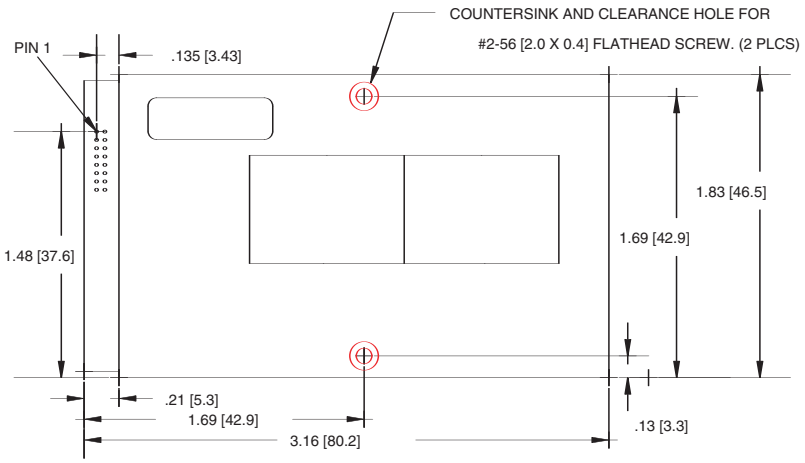
Pin	Signal	Type	Description
1	Gnd	-	Signal and chassis ground
2	TxD	Input	Transmit data
3	RxD	Output	Receive data
4	CFG	Input	Configuration selector. Used to switch radio between data and control mode
5	RTS	Input	Request to send. Used for receive flow control by the host
6	Sleep	Input	Sleeps/wakes the radio transceiver
7	DCD	Output	Data carrier detect. For remotes, indicates successful synchronization
8	CTS	Output	Clear to send. Used for receive flow control by the radio
10	Reset	Input	Resets module
16	Vcc		Positive supply. Min 3.3 v, Nom 5.0 v, Max 10.0

Physical Specifications

Side Views



Top View



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