# WIT2410 Roaming Frequency Hopping Transceiver OEM Module

Combining seamless roaming capability, a low operating voltage and low power consumption, the CIRRONET™ WIT2410 represents the next generation of wireless OEM transceiver modules. Smaller than a business card and just 8.6mm thick, the WIT2410 utilizes 2.4 GHz frequency hopping spread spectrum technology providing immunity to both jamming and multipath fading. Certified in both North America and Europe, the WIT2410 can be used license-free worldwide.
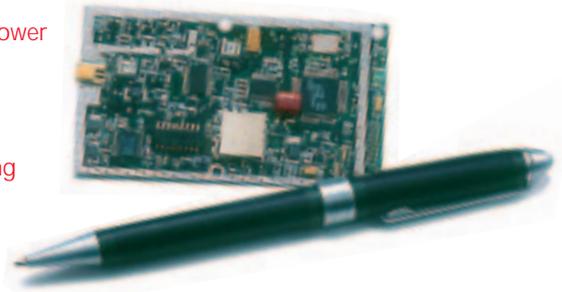
Mobile. Used with the companion SNAP2410 access point, the WIT2410 provides seamless roaming. With 16 million factory-set addresses available, the 2410 can move from access point to access point without the need for re-synchronizing. This means the application can be in constant communication with each 2410, even when the user moves from one access point to another.

Measuring just 80.2mm x 46.5mm x 8.6mm and weighing 35 grams, the WIT2410 can be integrated into a portable or handheld device with little impact on the size and weight. The 3.3 volt operating voltage and 22 mA standby current consumption make the 2410 well suited for battery operation.

Versatile. All of the module parameters are configurable under software control. Even transmit power can be selected through a straightforward command set. Point-to-point and point-to-multipoint modes are supported. Standard communication rates between the 2410 and the host are supported between 1200 bps and 230.4 Kbps. Non-standard rates are supported as well.

Reliable. The WIT2410 provides both reliable communication and reliable operation. With Frequency Hopping Spread Spectrum technology, the WIT2410 provides immunity to jamming as well as immunity to multipath fading.

Using Automatic Retransmit Request (ARQ) in addition to a 3K 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 WIT2410s are manufactured in an ISO9000 certified facility and go through a 24-hour burn-in. Another reason CIRRONET™ is the choice of hundreds of designers.

Simple. Simple to use and simple to integrate. Although the WIT2410 offers great flexibility, the factory default settings work for many applications. For those other applications, software control makes changing settings simple.

The WIT2410, 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. Since the WIT2410 is FCC certified, your 2410-based product does not have to repeat the FCC type approval.

Let us be your experts. The WIT2410 lets you be the expert on your product and lets CIRRONET™ be the expert on wireless transceivers. Put our 10+ years experience with wireless technology to work for you.

Features:

- 2.4 GHz Frequency Hopping Spread Spectrum technology
- Seamless roaming capability
- 3.3 Volt operation
- Low power consumption
- Small size, light weight
- 460 Kbps channel data rate
- RS-232 style asynchronous interface
- FCC & ETSI certified for unlicensed operation

Benefits:

- Worldwide license-free operation
- Immunity to jamming and multipath fading
- Supports far ranging mobile applications
- Ideal for battery powered devices
- Supports large number of nodes
- Easy to integrate
- Shortens time to market

CIRRONET™

WIT2410 Specifications

General Specifications

RF Frequency	2400 to 2483 MHz
Radio Certification	FCC Part 15.247 and ETS 300.328 rules, license free
Operating Range	Indoor: 450' to 900' Outdoor: 3000' with dipole antenna,>20 miles with gain 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 230.4 Kbps, software selectable
Channel Data Rate	460 Kbps
# of Frequency Channels	75
RF Bandwidth	750 KHz
Transmit Power Output	10 mW or 100 mW, software selectable
Receiver Sensitivity	-93 dBm
Supply voltage	3.3 v to 10 v, 5 v nominal

Current Consumption (100mW Transmit Power, 115.2Kbps I/O)	Remote Operation	Sleep Stby Typical Peak (Tx)	< 50µA 22mA 40mA 90mA	Base Operation	Continuous Peak (Tx)	90mA 100mA

Size	80.2mm x 46.5mm x 8.6mm
Weight	35g
Operating Temperature	-30ºC to 70ºC
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 v

Top View

Physical Specifications

Side View