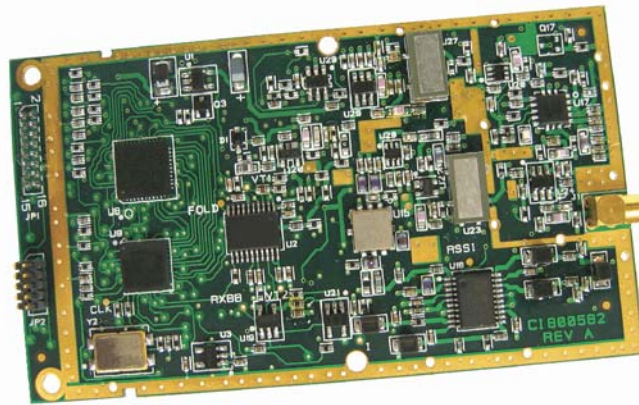


WIT934

900MHz Spread Spectrum Wireless Industrial
Transceiver



Preliminary

Integration Guide



CIRRONET™

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Important Regulatory Information

**Cirronet Product FCC ID: HSW-934
IC 4492A-934**

Note: This unit has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at their expense.

FCC s MPE Requirements

Information to user/installer regarding FCC s Maximum Permissible Exposure (MPE) limits.

Notice to WIT934 users/installers using the following fixed antenna:

2dBi Cirronet OMNI092

The field strength radiated by this antenna, when connected to a transmitting WIT934, does not exceed FCC mandated RF exposure limits.

For Portable (body worn) use this unit is below the FCC Maximum Permissible Exposure limits for distances less than 2.5 cm for the 'General Population'

When used as an Access Point or Mobile, with a higher transmitter time, this unit is below the FCC Maximum Permissible Exposure limits for 20 cm for the 'General Population'

The antenna used for this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Changes or modifications not expressly approved by the party responsible may void the users ability to operate the equipment.

1.1 Technical Specifications

1.1.1 Ordering Information

WIT934M OEM Module, Serial connector pins down - Standard

1.1.2 Power Specifications

Vcc Input Range: 3.3v to 10.0v (500mW requires 5.0Vcc)
 Operating Temperature Range: -40°C to +70°C

Current Consumption (@5V, max transmit power & 115.2Kbps I/O)

Mode	Remote	Base Station
Standby	43mA	N/A
Typical Average	<100mA	125mA
Peak (Tx)	600mA	600mA

1.1.3 RF Specifications

FCC Certification	Part 15.247, no license required
Rated RF Power	+24 dBm
Line-of-site Range	20+ miles with omni antenna
Frequency Range	902 to 927 MHz
Number of Channels	37
Receiver Sensitivity	-103dBm for 10 ⁻⁵ BER
Channel Data Rate	172.8Kbps
IF Adjacent Channel Rejection	>55dB

1.1.4 Mechanical Specifications

Weight	35g
Dimensions (including shield)	80.2 x 46.5 x 8.6mm (refer to section 7.6 for mechanical drawing)
RF Connector:	
WIT	Huber/Suhner: 85 MMCX 50-0-1
Mating	Huber/Suhner: 11 MMCX-50-2-3 (straight) Huber/Suhner: 16 MMCX-50-2-2 (rt. angle)
Data/Power Connector:	
WIT	Samtec: DIS5-108-51-L-D
Mating	Samtec: CLP-108-02-G-D (PCB mount) Samtec: FFSD-08 (IDC cable)

When connecting to the WIT934, make sure that all of the inputs (TXD, CFG, RTS and SLEEP) are terminated for proper operation.

1.2 Approved Antennas

The WIT934 is designed to ensure that no antenna other than the one fitted shall be used with the device. The table below lists the antennas which can be purchased directly from Cirronet.

Description	Gain	Part Number	Coupling
2dB Omnidirectional	2dB	OMNI092	Male Rev TNC

1.3 Use of the WIT934 in Portable or Remote Applications

When using the WIT934 in a portable or body worn application the unit is operated as a 'remote' to the 'base' (or Access Point) and has a duty cycle of 7.4%. This meets the requirements of the FCC Maximum Permissible Exposure limits for distances less than 2.5 cm for the 'General Population'

1.4 Use of the WIT934 in Access Point or Base Applications

When using the WIT934 in an Access Point or base application the unit is operated at a higher duty cycle of 21%. The unit can not be body worn and the antenna must be 20 cm away from 'General Population' Operation is best in a high location to access all the remotes or portable units. Operating as an Access Point or base the WIT934 meets the requirements of a Mobile device per the FCC Maximum Permissible Exposure limits for distances of 20 cm for the 'General Population'