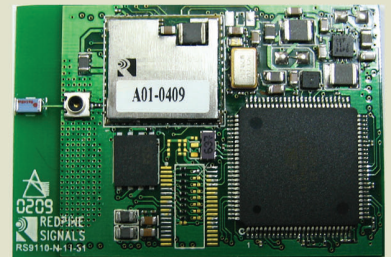




## 802.11n Wi-Fi CCX Tag for RTLS AND RFID

The Find-iT™ module, designated as RS9110-N-11-51, is a complete IEEE 802.11bgn client device that forms the core of RFID tags and RTLS solutions over WLAN. The module, which is certified for the Cisco Compliant Extensions program's Tag specifications v1, includes all the functionality required to implement wireless applications without the need of an external processor, offering a complete foundation for building tags for various implementations of RTLS and RFID. It can be programmed to work in various modes – waking up at periodic intervals to transmit packets, waking up at periodic intervals to receive packets and compute the RSSI for each packet and transmit this information over WLAN. The tag can be programmed to wake up on timeouts or on certain events like data from a sensor (motion, temperature, etc.) or interrupts from an external source. Its on-board ultra low power ATMEL ATXMEGA64 microcontroller implements a small, embedded operating system on which multiple applications can be built. The fully self-contained module includes standards-compliant WLAN functionality with WPA2 security, a network stack that terminates TCP/IP and UDP connections with IPv6 capability, and configuration capability through UART or wireless. The module also includes a built-in antenna, frequency reference, power management, and flashed-in firmware. The module is available in an easy-to-assemble 31mm x 44mm LGA package.



### Main Features

- Ultra low power 802.11b/g/n with RFID/RTLS support
- Compliant to 802.11b/g and single stream draft 802.11n
- Includes all the protocol and configuration functions required for WLAN connectivity in open and WPA/WPA2-PSK secure modes of operation
- Supports automatic roaming, advanced power save modes, and 802.11n aggregation
- Includes an ultra low power microcontroller for applications and network protocol support
- Standard real-time OS for ease of application support
- Real-time clock for wake-up scheduling and time-stamping
- Terminates TCP/IP and UDP connections with IPv6 capability
- Digital and analog interfaces to external sources like sensors, 125kHz receiver, etc.
- Operates directly off a 2.4 V to 3.6 V battery
- Supports Chokepoints
- Configuration through wireless and UART interface
- Fully functional software for sensor telemetry with programmable configurations
- Integrated antenna, frequency reference, and low-frequency clock
- Ultra low power operation, providing 3-year battery life
- Ad-hoc and infrastructure modes for maximum deployment flexibility

### Applications

- Wi-Fi RFID tags
- Real Time Location Systems
- Asset Tracking
- Medical Applications including Patient Monitoring and Tracking etc.

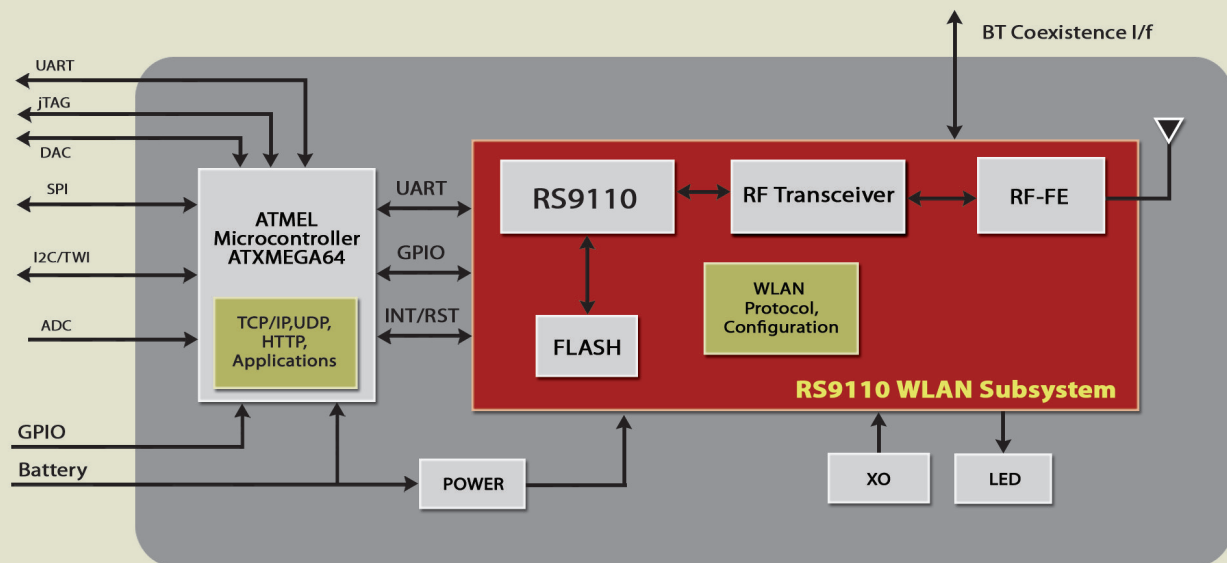
## Specifications

Network Standard Support	IEEE 802.11b/g/h/i, draft 802.11 n/k/r
Data Rates	802.11n: 6.5, 13, 19.5, 26, 39, 52, 58.5, 65 Mbps 802.11a/g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps 802.11b: 1, 2, 5.5, 11 Mbps
Modulation Techniques	OFDM with BPSK, QPSK, 16-QAM, and 64-QAM 802.11b with CCK and DSSS
QoS	WMM and WMM Power Save Support
Wireless Security	802.11i: AES, WEP, WPA, WPA2
Network Protocols	TCP, ARP, UDP, IPv6/IPv4
WLAN Functions	Power save modes, automatic roaming, Ad-hoc and Infrastructure modes
External Interfaces	10-channel ADC, I2C, SPI, push-button, current sense
Debug Interface	JTAG
Configuration	UART, Wireless
Supply Voltage	2.4 - 3.6 V battery
Package	LGA, 31mm x 44mm

## Evaluation Package

Redpine Signals provides a comprehensive evaluation package that includes a board with the module mounted on it, along with standard serial connector, a selection of sensors including pressure, temperature, and motion detection. It also includes a Windows XP based GUI based configuration utility and software upgrade capability, along with detailed documentation.

## RS9110-N-11-51 Wi-Fi Tag System Diagram



## RS9110-N-11-51

For additional information, please contact Sales at Redpine Signals, Inc.:

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