



Expanding Wireless Horizons

## RS9110-N-11-25: 802.11ABGN SERIAL-TO-WI-FI MODULE

The RS9110-N-11-25 module from Redpine's Connect-io-n™ family of products is a complete dual band (2.4/5 GHz) IEEE 802.11abgn Wi-Fi client device with a standard serial or SPI interface to a host processor or data source. It integrates a MAC, Baseband processor, dual band RF transceiver with power amplifier and diplexer, a frequency reference and an antenna or antenna connector and all WLAN protocol and configuration functionality in embedded firmware to provide an 802.11n WLAN solution for a variety of applications. No WLAN driver functionality is required on the host processor. Based on the Redpine Signals' RS9110 SoC which includes an embedded processor, it is designed to provide standards compliant wireless connectivity to devices and systems that have a serial port and implement a TCP/IP stack. As a wireless serial modem, the RS9110-N-11-25 handles SLIP packets, and originates and terminates UDP connections, enabling a variety of M2M applications at low cost and small footprint. It uniquely provides connectivity in the single stream 802.11n mode, preserving overall network throughput in the emerging enterprise environments.

### Features

- Compliant to 802.11a/b/g and single stream 802.11n
- 2.4/5 GHz, 802.11n RF transceiver with power amplifier
- Highly integrated 2.4 GHz/5 GHz transceiver with direct conversion architecture
- Does not require any WLAN driver on the host processor
- Includes all the protocol and configuration functions required for
- WLAN connectivity in open and WPA/WPA2-PSK secure modes of operation
- Host interface through Serial Interface and SPI
- Terminates UDP and SLIP connections and offers transparent serial modem functionality
- Configuration through AT commands
- Bluetooth Coexistence support
- Ultra low power operation with power save modes
- Ad-hoc and infrastructure modes for maximum deployment flexibility
- Single supply 3.1 to 3.6 V operation

### Applications

- Seamless Wi-Fi Connectivity for Application Processors
- Point of Sale Terminals
- Metering
- Security Cameras & Surveillance Equipment
- Warehousing
- Logistics and Freight Management
- Digital Picture Frames
- Several Medical Applications including Patient Monitoring, Remote Diagnostics, etc.

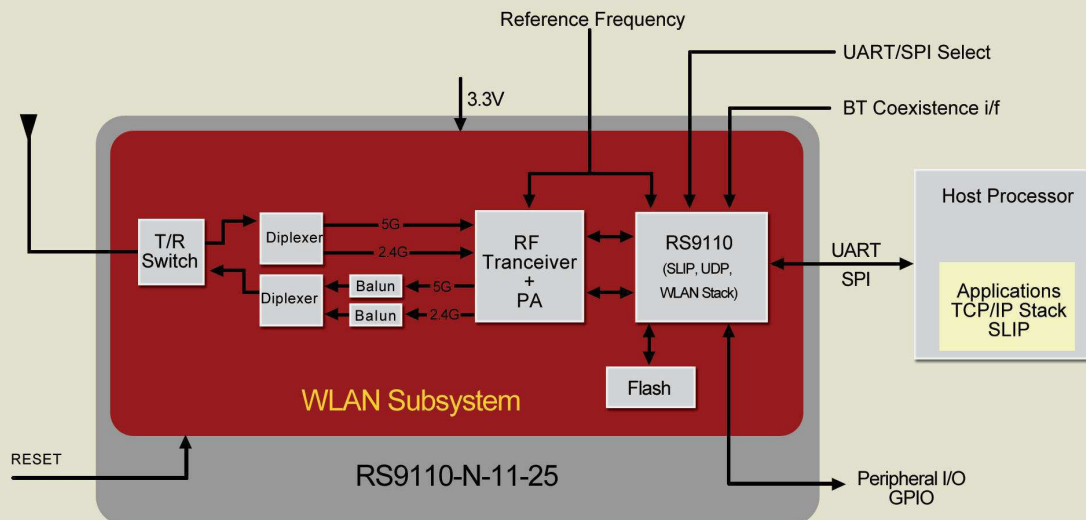
## Specifications

Network Standard Support	IEEE 802.11a/b/g/n/h/i/j
Data Rates	802.11n: 6.5, 13, 19.5, 26, 39, 52, 58.5, 65 Mbps 802.11g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps 802.11b: 1, 2, 5.5, 11 Mbps
Frequency Band	2.412 - 2.484 GHz (Low Band) 4.900 - 5.850 GHz (High band)
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, TKIP, WEP, WPA, and WPA2
802.11n Features	MCS 0-7, STBC, RIFS, Greenfield Protection, A-MSDU, A-MPDU Aggregation with Block-ackHost Interfaces SPI, UART
Host Interfaces	SPI, UART
NetworkProtocols	ARP, UDP, SLIP
WLAN Functions	Power save modes, automatic roaming, Ad-hoc and Infrastructure modes
Supported UART baud rates	Supports standard baud rates from 9600bps to 3.6Mbps
Configuration	AT commands (for UART)
Operating Temperature	Industrial Grade -40°C to +85°C
Supply Voltage	3.1 - 3.6 V
Dimensions	28 mm x 40 mm

## Evaluation Package

Redpine Signals provides a comprehensive evaluation package that includes a board with the module mounted on it, along with standard serial connector, UART level shifters, frequency reference, antenna and 5 V power supply connection. It also includes a Windows XP GUI based configuration utility and software upgrade capability, along with detailed documentation.

## RS9110-N-11-25 DIAGRAM



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