



Expanding Wireless Horizons

RS9110-N-11-26: 802.11ABGN WIRELESS DEVICE SERVER

The RS9110-N-11-26 module from Redpine's Connect-io-n™ family of products is a complete dual band (2.4/5 GHz) IEEE 802.11abgn based wireless device server that directly provides a wireless interface to any equipment with a serial or SPI interface for data transfer. It integrates a MAC, baseband processor, dual band RF transceiver with power amplifier and diplexer, frequency reference and antenna or antenna connector; and all WLAN protocol functionality, networking stack in embedded firmware to make an 802.11n WLAN solution for a variety of applications. No WLAN or networking functionality is required on the host system or data source. Based on the Redpine Signals' RS9110 SoC that includes an embedded processor, it is designed to provide standards compliant wireless connectivity in Open and secure modes to devices and systems such as industrial equipment, medical electronic systems, POS equipment, sensor networks and metering equipment, M2M communications, and remote configuration applications. As a wireless serial modem, the RS9110-N-11-26 originates and terminates TCP and 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, WEP and WPA/WPA2-PSK secure modes of operation
- Payload data through Serial Interface and SPI
- Terminates TCP and UDP connections, and offers transparent serial modem functionality
- Configuration through AT Commands and SPI frames
- 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
- Industrial M2M communications
- Point of Sale Terminals
- Metering
- Security Cameras & Surveillance Equipment
- Warehousing
- Digital Picture Frames
- Logistics and Freight Management
- Several Medical Applications including Patient Monitoring, Remote Diagnostics, etc.

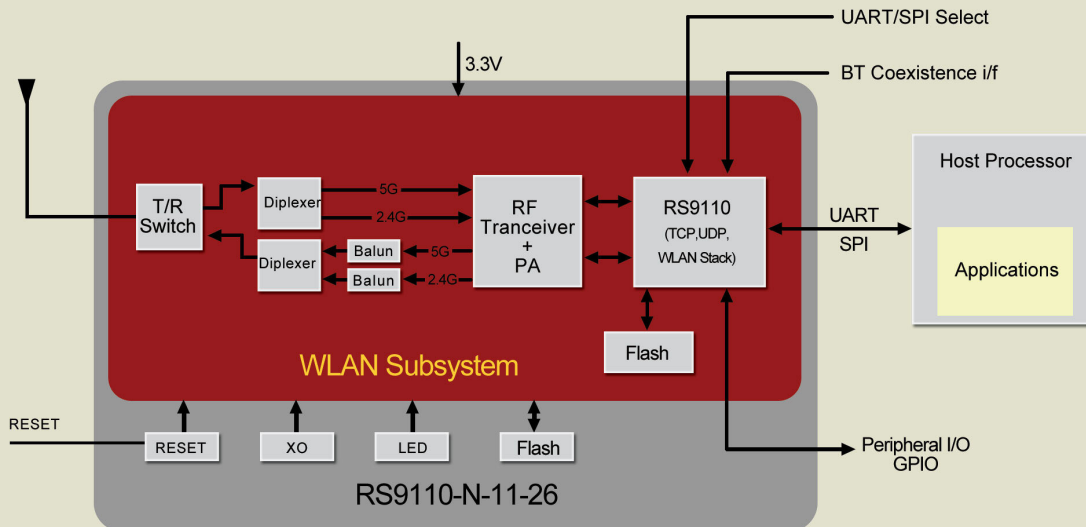
Specifications

Network Standard Support	IEEE 802.11a/b/g/n/i
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
Wireless Security	802.11i: AES, TKIP, WEP, WPA and WPA2
Host Interfaces	SPI, UART
Network Protocols	TCP, UDP, IPv4, ARP, ICMP, DHCP Client
WLAN Functions	Power save modes, automatic roaming, auto-rate 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	-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-11-26 DIAGRAM



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