

Wireless Specifications

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| Network Standard Support | IEEE 802.11 a/b/g/n, 802.11j†, 802.11d/e/i, 802.11w†, 802.1X, 802.11k†, 802.11v†, 802.11r†, 802.11h† Bluetooth v2.1 EDR, v4.0 802.15.4-2009 (2.4GHz) |
| Data Rates | 802.11n: from 6.5 Mbps to 150 Mbps (MCS 0-7) 802.11a/g: from 6 Mbps to 54 Mbps 802.11b: from 1 Mbps to 11 Mbps Bluetooth: 1, 2, 3Mbps 802.15.4-2009: 250Kbps |
| Modulation Techniques | OFDM with BPSK, QPSK, 16-QAM, 64-QAM 802.11b with CCK and DSSS Bluetooth: GFSK, DQPSK, 8DPSK 802.15.4-2009: DSSS |
| 802.11n Advanced Features | 1-SS, 40MHz bandwidth, Greenfield Preamble, Short-GI, 1 spatial stream STBC, RIFS, A-MSDU, A-MPDU, Aggregation with Block-ack, A-MSDU inside A-MPDU and Virtual AP support |
| Bluetooth Advanced Features† | Scatternet, Adaptive Frequency Hopping, Interlaced scanning, 15 active slaves in proprietary mode, hold, sniff and park modes |
| ZigBee Advanced Features | CCM* security, orphan scanning, coordinator realignment |
| Wi-Fi modes | Wi-Fi client, Access point, Wi-Fi Direct |
| Bluetooth Modes | Master, slave, scatternet† |
| ZigBee Modes | ZigBee Coordinator†, Router†, End device |
| QoS | WMM and WMM Power Save Support |
| Host Interfaces | USB 2.0, SPI, UART |
| Other Peripherals/Interfaces | I2C, I2S, SPI, QSPI, USART, GPIO, JTAG, Analog(ADC/DAC) and Ultra-low-power peripherals. |
| Supply Voltage | 3.0-3.6V, 1.8-3.6V |
| Operating Temperature | Industrial Grade -40°C to +85°C |
| Software and Regulatory Certification | Wi-Fi Alliance Compliance (802.11bgn, WPA, WPA2 Personal and Enterprise, WMM, WMM-PS, WPS, Wi-Fi Direct™, Voice-Personal ^β , Protected management frames†), Cisco CCX v5†, Bluetooth-SIG Qualification†, Worldwide Regulatory Compliance: FCC (IDs are XF6-RS9113SB, XF6-RS9113DB) IC (IDs are 8407A-RS9113SB, 8407A-RS9113DB) CE/ETSI, TELEC†, SRRC† |
| Typical Transmit Power(+/-2 dBm) | Wi-Fi: 17.5 dBm for 802.11b DSSS 17.5 dBm for 802.11g/n OFDM 12 dBm for 802.11a/g/n OFDM Bluetooth: 15 dBm ZigBee : 15 dBm |
| Rx sensitivity (+/- 1dBm) | Wi-Fi: 1Mbps -97 dBm (< 8% PER) 54 Mbps -76.5 dBm (< 10% PER) MCS7(20MHz) -73 dBm (< 10% PER) MCS7(40MHz) -69.5 dBm (< 10% PER) Bluetooth: 1 Mbps -94 dBm 2 Mbps -92 dBm 3 Mbps -84 dBm BTLE(1Mbps) -91 dBm ZigBee: 250 Kbps -102 dBm (< 8% PER) |

†: These features are not supported by current software releases. Contact Repine Signals Sales (sales@redpinesignals.com) for details.

‡: These certifications are in progress at this time. Contact Redpine Signals Sales (sales@redpinesignals.com) for more details and for certifications not listed here.

β: Applicable to n-Link® modules only

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

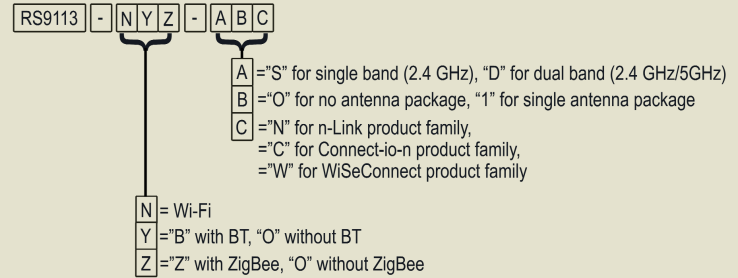
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Device Ordering Information

The device numbering is based on the following naming convention. All the devices are labeled as RS9113-XYZ-ABC Where,



Examples:

- RS9113-NBZ-S0N will refer to single band n-Link module with no antenna and integrated Wi-Fi, Bluetooth and Zigbee.
- RS9113-N00-D1C will refer to a dual band Connect-io-n module with embedded single antenna and integrated Wi-Fi.
- RS9113-NB0-S0W will refer to a single band WiSeConnect module with no antenna and integrated Wi-Fi and Bluetooth.

Module Reference Design

Redpine offers form-factor SPI, USB2.0, UART and SDIO reference designs along with software for manufacture testing and diagnostics. For details on availability please contact sales