

ISM4319 Wi-Fi 802.11b/g/n SIP Module



Introduction

Inventek Systems would like to announce a low-cost, low-power consumption, small form factor module which supports the IEEE 802.11b/g/n standards. The highly integrated ISM4319 module allows it to be used in portable, embedded, industrial and handheld applications.

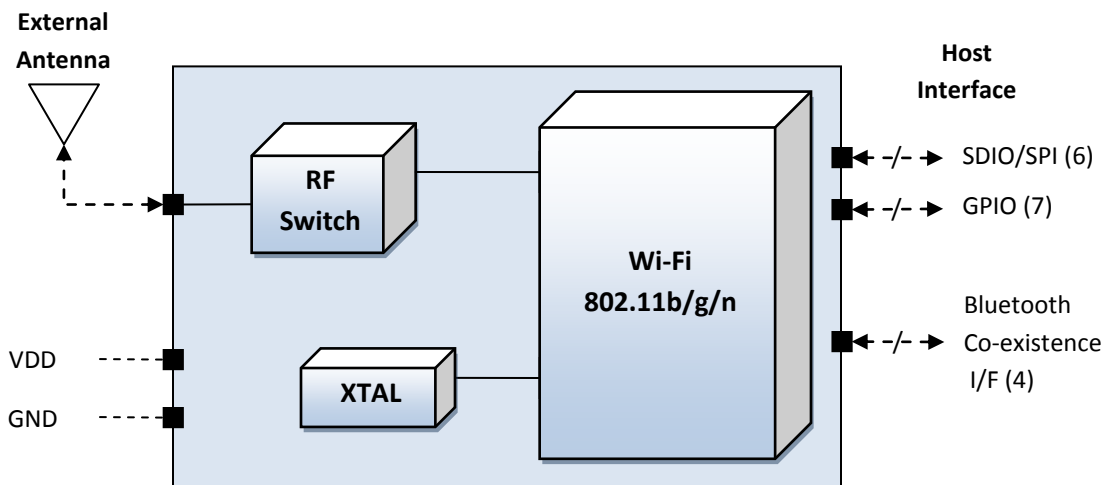
The wireless module complies with IEEE 802.11b/g/n standard and can achieve speeds up to 72.2Mbps for a single 802.11n stream, 54Mbps for IEEE 802.11g, and 11Mbps for IEEE 802.11b to connect to a wireless LAN.

Ordering Information

Device	Description	Ordering Number
ISM4319	Module, Form Factor 1, Commercial Temp	ISM4319F1-T1
ISM4319 EVB	Evaluation Board, SDIO/SPI, ISM4319	ISM4319F1-T1-EVB

Features

- IEEE 802.11n D7.0 (OFDM 72.2 Mbps in single stream with 20MHz, Short GI)
- IEEE 802.11g (OFDM 54 Mbps) and IEEE 802.11b (DSSS 11Mbps)
- IEEE 802.11b (DSSS 11Mbps)
- IEEE 802.11i (security)
- WPA™, WPA2™ (Wi-Fi Protected Access)
- SDIO 4 bit/SDIO 1bit/SPI interface for WLAN
- 4-Wire Bluetooth co-existence handshake interface support.
- Lead Free Design which is compliant with ROHS requirements
- Shielded Module
- Single power supply voltage 3.3V.



Applications

- Industrial Handhelds
- Medical Equipment
- Asset/Inventory Management
- POS Terminals
- Internet Enabled Consumer Devices
- Wi-Fi Enabled Security Camera

Package

- 9.0mm x 9.0mm x 1.4mmmm
- 40-pin LGA, 0.7mm pitch

Power Ratings

- Single supply voltage: 3.3VDC $\pm 5\%$
- 802.11n: TX: 191.0mA, RX: 90.5mA
- 802.11g: TX: 210.8mA, RX: 95.5mA
- 802.11b: TX: 250.8mA, RX: 90.5mA

Temperature Range

- Operating: -10°C to +65°C
- Storage: -40°C to +85°C
- Humidity: 10% to 95%, Non-condensing

Transmit Power

- 802.11n(72Mbps): +13dBm ± 1.5 dBm
- 802.11g(54Mbps): +15dBm ± 1.5 dBm
- 802.11b(11Mbps): +15dBm ± 1.5 dBm

Receiver Sensitivity

- 802.11n(MCS=7): -69dBm, typical
- 802.11g(54Mbps): -72dBm, typical
- 802.11b(11Mbps): -87dBm, typical

Frequency

- 2.400 GHz ~ 2.497 GHz
(2.4 GHz ISM Band)

Modulation

- 802.11g/n: 64-QAM, 16-QAM, QPSK, BPSK
- 802.11b: CCK, DQPSK, DBPSK

Channels

- Ch1 ~ Ch14

Data Rates (Mbps)

- 802.11n(Long): 6.5, 13, 19.5, 26, 39, 52, 58.5, 65
- 802.11n(Short): 7.2, 14.4, 21.7, 28.9, 43.3, 57.8, 65, 72.2
- 802.11g: 6, 9, 12, 18, 24, 36, 48, 54
- 802.11b: 1, 2, 5.5, 11

Security

- WEP (64/128-bit),
- WPA™, WPA2™ (Personal)
- 802.11i (AES, TKIP, 802.1x)

Host Interface

- 4-bit SDIO (100/250Mbps)
- 1-bit SDIO/SPI (25Mbps)

Host OS/Driver Support

- Windows CE 6.x, XP
- Linux 2.6.24 and above

Please check www.inventeksys.com for the latest OS/Driver support.



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