PAN9026
WiFi Dual Band (2.4/ 5 GHz) and Bluetooth LE Module

Panasonic

MODULES WIRELESS
Panasonic Industrial Devices Europe GmbH

SUMMARY

The PAN9026 is a dual-band 2.4/5GHz 802.11 a/b/g/n Wi-Fi Radio module with integrated Bluetooth Low Energy, specifically designed for highly integrated and cost-effective applications. The simultaneous and independent operation of the two standards makes high data rates (802.11n) and low-power operation (Bluetooth Low Energy) possible. Integrated power-management, a fast dual-core CPU, 802.11i security standard support and high-speed data interfaces deliver the performance for the speed, reliability and quality requirements of next generation products.

Wi-Fi and Bluetooth system related parameters as well as TX power calibration data are stored in one-time-programmable memory during production at Panasonic. To simplify passing the certification process. Furthermore, the module reduces design, test and calibration effort resulting in reduced time-to-market compared to discrete solutions.

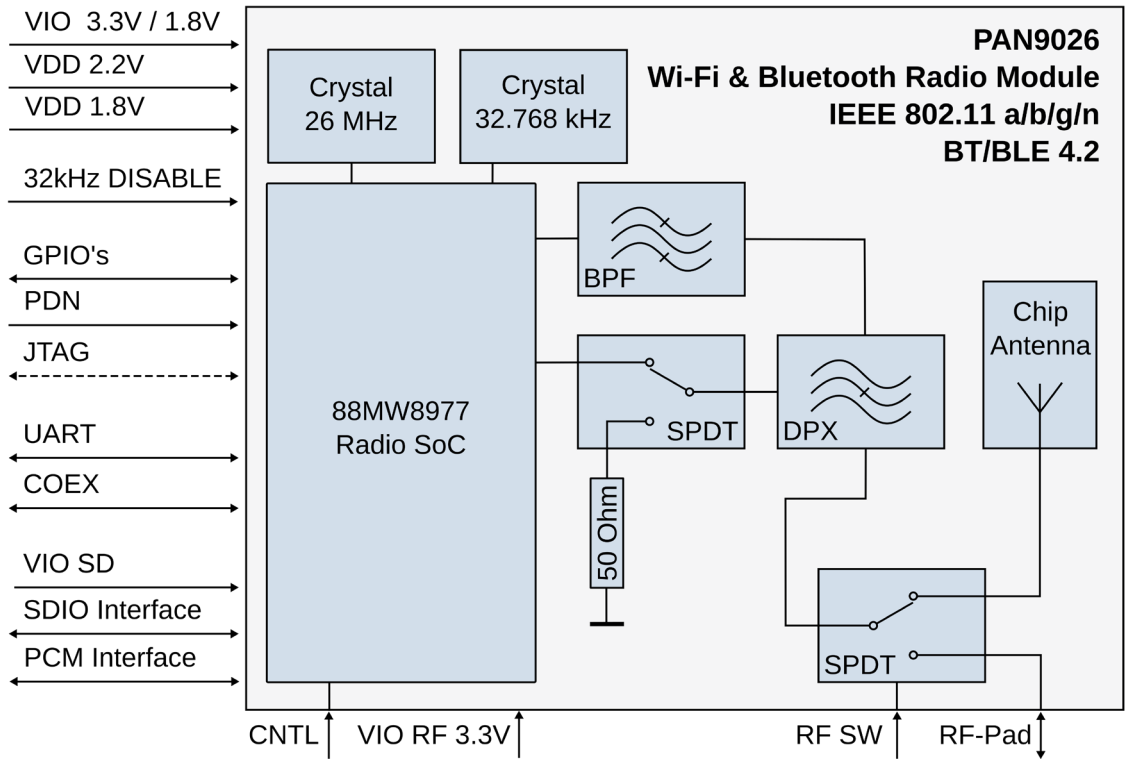
Integrating Wi-Fi and Bluetooth wireless connectivity allows applications such as Smart Energy and home gateways to manage multiple devices and appliances. The combination of WiFi, Bluetooth and Bluetooth low energy provide the highest flexibility for connectivity.

FEATURES

- Dual-band 2.4/5GHz 802.11a/b/g/n Wi-Fi / BT Combo module
- Supports 802.11i security standards through AES, CCMP and others
- For multimedia applications 802.11e Quality of Service is supported
- IEEE 802.11n compliant, 1x1 spatial stream data rates up to MCS7 150Mbps
- Bluetooth 4.2 LE, as well as future Bluetooth 5.0 features
- Dual simultaneous and independent WLAN and Bluetooth operation
- Indoor Location and Navigation with IEEE 802.11mc
- Power Management with sleep clock
- Coexistence interface for arbitration of co-located WLAN, Bluetooth or Mobile Wireless System (e.g. LTE)
- Generic interfaces include SDIO 3.0 and high-speed UART for host processor connection
- Software Linux / Android driver
- Wide temperature range of -30°C up to +85°C

Hardware Status:
Pre Production

BLOCK DIAGRAM



TECHNICAL CHARACTERISTICS

- Surface Mount Type (SMT) 17.5 x 10.0 x 2.6 mm³
- Marvell® 88W8977 WLAN 2.4/5 GHz and Bluetooth single-chip solution inside
- TX Power +17dBm @ 802.11b
- RX Sensitivity -98 dBm @ 802.11b DSSS 1Mbps
- IEEE 802.11n 20MHz and 40MHz channel bandwidth
- Long and Short Guard Interval support
- Power Supply 3.3V, 2.2V, 1.8V
- Current Consumption Wi-Fi typical 400mA @ TX and 70 mA @ RX
- SDIO 1bit or 4bit