

# PAN9019A

## Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module



### [OVERVIEW]

The PAN9019A is a dual band 2.4 GHz and 5 GHz 802.11 a/b/g/n/ac/ax Wi-Fi radio module with integrated Bluetooth BR/EDR/Low Energy (LE) and 802.15.4 radio, specifically designed for highly integrated and cost-effective applications. The independent operation of the three standards enables 802.11ax data rates with High Efficiency (HE) and low-power operation (Bluetooth LE and 802.15.4).

Latest technologies like multiuser MIMO and OFDMA improve the efficiency in large networks, while the 1024-QAM modulation allows high data rates. Integrated power management, a fast dual-core CPU, 802.11i/w security standard support, and high-speed data interfaces deliver the performance for the speed, reliability, and quality requirements of next generation products.

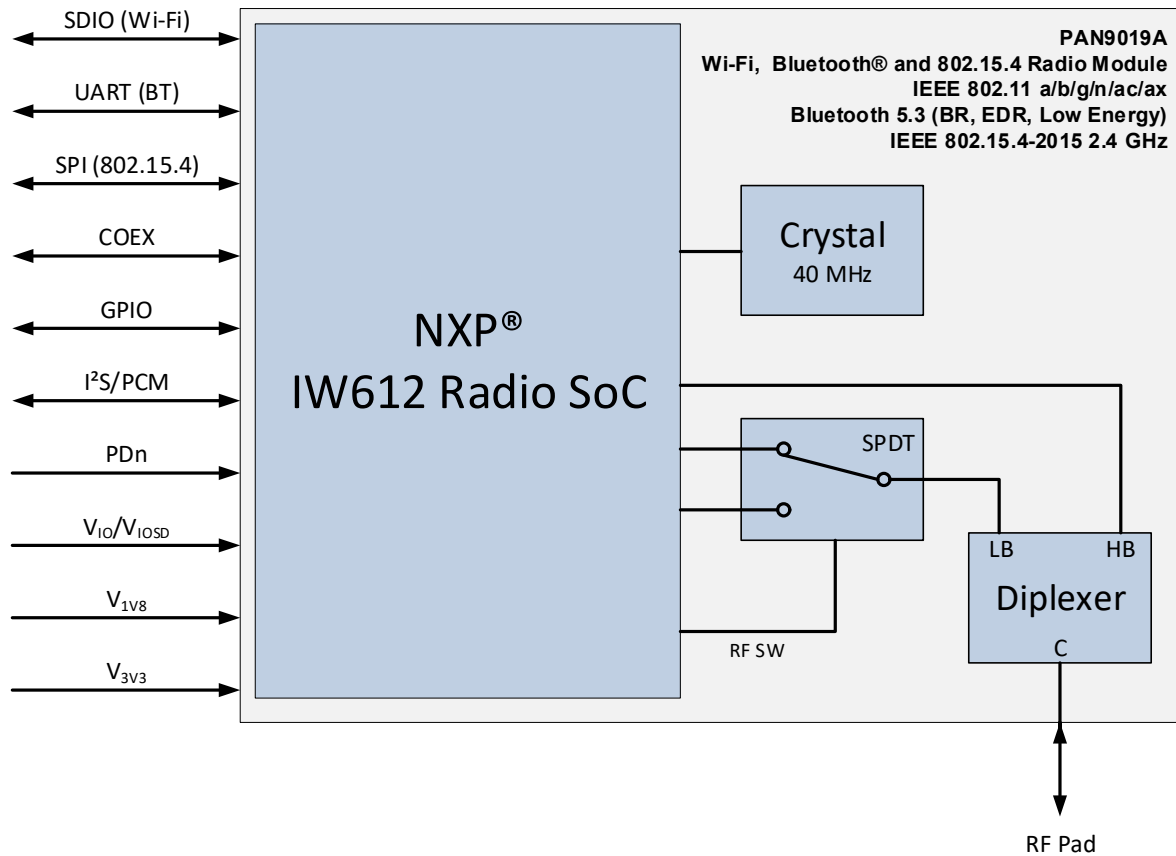
Tx power calibration data and Wi-Fi/Bluetooth/802.15.4 system parameters are pre-stored on the one-time-programmable memory of the PAN9019A during production at Panasonic. Thus, the module reduces design, test, and calibration effort resulting in reduced time-to-market compared to discrete solutions.

Integrating Wi-Fi, Bluetooth, and 802.15.4 wireless connectivity allows high throughput applications for industrial devices and appliances. The combination of Wi-Fi, Bluetooth, and 802.15.4 provides the highest flexibility for connectivity.

### [FEATURES]

- Dual band 2.4 GHz and 5 GHz 802.11 a/b/g/n/ac/ax Wi-Fi, Bluetooth and 802.15.4 combo module
- Supports WPA3 personal and enterprise security
- Authenticated and secured boot
- 802.11e Quality of Service is supported for multimedia application
- IEEE 802.11ax, 1×1 spatial stream with data rates up to 600 Mbps (MCS11, 80 MHz channel bandwidth)
- OFDMA (UL/DL) and MU-MIMO (UL/DL)
- Bluetooth 5.3 (including LE and long range)
- WCI-2 and 5-wire PTA coexistence interfaces
- Generic interfaces include SDIO 3.0, high-speed UART and SPI for host processor connection
- OS driver support for RTOS, Linux®, and Android®

## [BLOCK DIAGRAM]



## [TECHNICAL CHARACTERISTICS]

- Surface Mount Type (SMT): 15.3 mm × 12 mm × 2.5 mm
- NXP® IW612 WLAN 2.4 GHz and 5 GHz, Bluetooth and 802.15.4 single-chip solution inside
- Rx sensitivity: -98 dBm at IEEE 802.11b 1 Mbps
- IEEE 802.11ax 20 MHz, 40 MHz, 80 MHz channel bandwidth
- Power supply: 1.8 V and 3.3 V
- SDIO 1 bit or 4 bit
- Wide temperature range: -40 °C to 85 °C