

IN Your Future

PAN W602 WiFi 6 & Bluetooth® 5.4 Module

OVERVIEW

The PAN W602-1 is a single band 2.4 GHz companion module with integrated Bluetooth® Low Energy (LE) for cost-effective projects and is based on the chipset CC3301 from Texas Instruments.

The PAN W602-2 is a dual band 2.4 & 5 GHz companion module with integrated Bluetooth® Low Energy (LE) for projects which require more data rates or less interferences and is based on the chipset CC3351 from Texas Instruments.

The companion modules connects via SDIO or SPI for Wi-Fi and HS UART or SPI for Bluetooth to any Linux or FreeRTOS driven host platform to enable seamless wireless communication.

In a compact form factor the module either comes with an integrated chip antenna or the option to connect an external antenna via the bottom pad.



Module Features

- Integrated Antenna or Bottom Pad Version
- **Surface Mount Type (SMT) Dimensions [mm]:**
Bottom Pad: 8.8 x 10 x 1.8
Integrated Antenna: 8.8 x 15.25 x 1.8
- **Temperature Range (°C):** -40 to 85
- **Host Interface:**
WiFi: SDIO
Bluetooth: SDIO or UART
- **Coexistence:** 3-wire or 1-wire PTA for external coexistence with additional 2.4-GHz radios

SOC FEATURES

- Single & Dual band (2.4 GHz & 5 GHz) 802.11 a/b/g/n/ac/ax Wi-Fi
- Bluetooth® 5.4 Low Energy (1M, 2M, LE Coded PHY)
- Wi-Fi Multirole support: Access Point & Station
- WPA3 Personal and Enterprise (Station mode)
- Wi-Fi 6 features: Target wake time (TWT), OFDMA, MU-MIMO (Downlink), and Basic Service Set Coloring
- Application throughput up to 50Mbps
- FW authentication and anti-rollback protection

TECHNICAL CHARACTERISTICS

Max. output power WiFi	+16 dBm at 1Mbps DSSS
Typical sensitivity WiFi	-98 dBm at 1Mbps DSSS
Max. output power Bluetooth	Up to +10 dBm
Typical sensitivity Bluetooth	-102 dBm at LE Coded PHY
Typical current consumption	Tx:115mA (Vmain) + 215mA (Vpa) @802.11ax (HE MCS7) 2.4 GHz, Rx:62mA 2.4 GHz, Tx:175mA (Vmain) + 190mA (Vpa) @802.11ax HE MCS7) 5 GHz, Rx:110mA 5 GHz, Low Power Shutdown Mode: 313 µA (2.4GHz) and 348µA (5 GHz)
Voltage range	1.8 V for core and I/O, and 3.3 V for RF power amplifier

CERTIFICATIONS

EUROPE (CE RED), UNITED KINGDOM (UKCA), USA (FCC), CANADA (ISED),

SOFTWARE

Supported OS: Linux, FreeRTOS with Texas Instrument's Sitara Processors, Zephyr (Beta Release Available)

PART NUMBERS

Partnumber	Module Name	Description
ENWF9211A1KF	PAN W602-1C	WiFi 6 Single band (2.4 GHz) & Bluetooth® 5.4 Module based on CC3301 with integrated Chip antenna
ENWF9211C1KF	PAN W602-1B	WiFi 6 Single band (2.4 GHz) & Bluetooth® 5.4 Module based on CC3301 with RF Bottom Pad
ENWF9215A1KF	PAN W602-2C	WiFi 6 Dual band (2.4 & 5 GHz) & Bluetooth® 5.4 Module based on CC3351 with integrated Chip antenna
ENWF9215C1KF	PAN W602-2B	WiFi 6 Dual band (2.4 & 5 GHz) & Bluetooth® 5.4 Module based on CC3351 with RF Bottom Pad
ENWF9215AMKF	PAN W602-2C M2E EVD	M.2 Key E Card with dual band variant can be used for evaluation of the -1C and -2C variant
ENWF9215CMKF	PAN W602-2B M2E EVD	M.2 Key E Card with dual band variant can be used for evaluation of the -1B and -2B variant

BLOCK DIAGRAM

