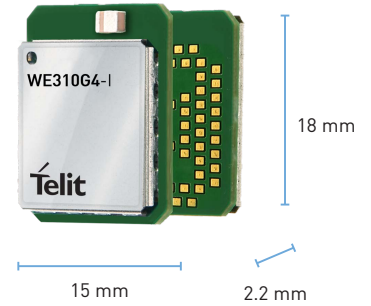
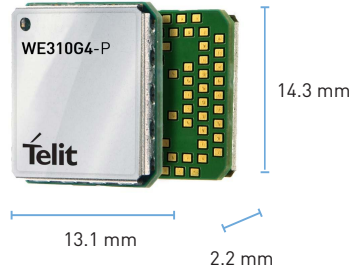


WE310G4

Wi-Fi 802.11 a/b/g/n BLE5



Product Description

The WE310G4 is a fully integrated, dual-band, combination Wi-Fi (802.11 a/b/g/n) and Bluetooth® Low Energy (BLE) 5.0 module. It provides an easy, cost-effective way for manufacturers to add wireless connectivity to their products. The module is based on an integrated dual-core system on chip, composed by:

- A high-performance application processor (running on ARM® Cortex®-M33)
- A low-power MCU (ARM Cortex-M23) for Wi-Fi and BLE

The module also integrates 4MB of internal flash with wide array of peripherals (SDIO, SPI, UART, ADC, PWM, GPIO, I2S, I2C, USB).

The WE310G4 provides a low-cost, high-speed serial-to-Wi-Fi/ BLE connection to an embedded design built on an 8/16/32-bit microcontroller through UART, SPI or SDIO interfaces.

Furthermore, the module can be implemented as a hostless (stand-alone) solution. It offers up to 456 Kb of SRAM dedicated to customer application development.

The WE310G4 is ideal for organizations with limited Wi-Fi/BLE or RF expertise or those seeking a faster time to market. It reduces RF design time and removes testing and certification burdens. The module is IEEE 802.11 a/b/g/n and Bluetooth certified and complies with Wi-Fi Alliance and BT SIG-v5 requirements.

The module is self-contained with full Wi-Fi, BLE and TCP/IP networking stacks. It supports a complete security feature suite with modes that include (among others):

- Secure Boot
- TrustZone-M
- WPA3 Personal and Enterprise
- Upper-layer security protocols (e.g., TLS-1.3/SSL and HTTPS)

The module can be set up (provisioning) from a smartphone or laptop through the innovative Limited AP mode or BLE.

The WE310G4 module is easily designed into embedded systems. It allows customers to develop devices and appliances that connect to other local devices or the internet over Wi-Fi.

Finally, the WE310G4 is pin-to-pin compatible with the Telit WE310F5 (single-band module alternative). This compatibility guarantees effortless hardware and software migration.

Key Features

- Dual-band 2.4 GHz/5 GHz Wi-Fi and BLE5 combination module, based on Realtek RTL8720 SoC
- Ease of system integration, pin-to-pin compatible with WE310F5 (single-band module alternative)
- Low power consumption
- Serial-to-Wi-Fi hosted implementation
- Telit IoT AppZone IDE for hostless customer application development
- Wide range of peripherals (including UART, SPI and SDIO)
- Advanced security features (including WPA3) with integrated crypto hardware
- Industrial-grade temperature range (-40 °C to +85 °C)
- Variants with (WE310G4-I) and without (WE310G4-P) antenna
- Certified modules

AVAILABLE FOR

North America

EMEA

Japan*

China*

Korea*

Taiwan*

Brazil*

Complete, Ready-to-Use Access to the Internet of Things

Target Applications

Smart Home

- Home automation
- Home appliances
- Home security and alarm
- IP cameras/speakers
- Smart lighting

Industrial and commercial

- Industrial automation
- Energy management
- Robotics
- Building automation
- Smart city

Health Care & Medical

- Remote Patient Monitoring
- Healthcare Devices
- Wellness Devices
- Pet/Animal Trackers
- Medical Wearables

Others Applications

- Aftermarket OEM telematics
- Fleet management
- Smart parking
- Printers
- Asset management



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|--|--|--|
| Wireless Specification | Wi-Fi - 802.11 a/b/g/n (2.4 GHz, 5 GHz), BLE-5 (2.4 GHz) | |
| Solution Architecture | Hosted IoT module (AT command) or Standalone (hostless) | |
| Host Interface | UART, SPI, SDIO | |
| Other Interface | I2C, ADC (12-bit), DAC, I2S, SWD, USB, GPIOs | |
| Wi-Fi Modes | Wi-Fi AP (Access Point) STA (Client) Wi-Fi (AP + STA) Concurrent Mode Wi-Fi Direct (P2P)* | |
| BLE Modes | Central Peripheral Concurrent | |
| Security Features | WPA/WPA2 (Personal) WPA3 (Personal/Enterprise)* HTTPS server & client Secure eFuse | HW crypto accelerators TLS-1.2/TLS-1.3* Secure Boot* TrustZone* |
| Coexistence | Built-in Wi-Fi/BLE | |
| Provisioning (Through web-apps and native apps) | BLE-enabled Wi-Fi HTTPS-enabled Wi-Fi | |
| Cloud Agent | Amazon AWS IoT* Microsoft Azure* | |
| Firmware Upgrade | FOTA | |
| Dimension | Integrated antenna (WE310G4-I): 18 x 15 mm (LGA package) – WE310F5-I P2P compatible External antenna (WE310G4-P): 14.3 x 13.1 mm (LGA package) – WE310F5-P P2P compatible | |
| Wi-Fi Tx output power | 18 dBm @ 2.4 GHz 19 dBm @ 5.0 GHz | |
| BLE Tx output power | 8 dBm (TBC) | |
| Internal Flash | 4 MB | |
| Operating Temperature | -40 °C to +85 °C (industrial grade) | |
| Operating Voltage | 3.3 V | |
| Compliance | Wi-Fi Alliance BT SIG | |
| Environmental Compliance | RoHS, REACH | |

* Not available in first release

QUESTIONS? VISIT WWW.TELIT.COM/CONTACT-US

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