

WE310F5

Wi-Fi 802.11 b/g/n

Bluetooth® Low Energy 5.3



Product Description

The WE310F5 is a fully integrated, single-band Wi-Fi (802.11 b/g/n) and Bluetooth® Low Energy (BLE5) combination module that provides a low-cost and high-speed wireless connection to an embedded microcontroller over UART, SPI and SDIO interfaces.

The comprehensive software features exposed through AT commands enable faster time to market, even with limited wireless expertise. IoT devices integrating WE310F5 are secured with WPA3 protocol, the next-generation, cutting-edge Wi-Fi security specification. Out-of-the-box support for Firmware Over-the-Air (FOTA) upgrades significantly reduces integration time. WE310F5 also offers multiple provisioning schemes, helping configure the device securely from a smartphone or a laptop.

Key Features

- Fully integrated, single-band Wi-Fi (11n) and Bluetooth® Low Energy 5.3 combination IoT module
- Low-cost, high-speed, serial-to-wireless connection to an MCU over UART, SPI and SDIO interface
- Comprehensive software features
- Low power consumption
- Advanced security features (including WPA3)
- Industrial-grade temperature range (-40 °C to +85 °C)
- Variants with (WE310F5-I) and without (WE310F5-P) antennas
- AWS IoT Core qualified

Target Applications

Industrial/Commercial IoT

- Industrial automation
- Sensor gateways
- Condition-based monitoring
- Security panel
- Energy management
- Inspection camera
- Data logger
- Building automation

Smart Home

- Thermostat
- Air purifier
- Air conditioner
- Security/monitoring camera
- Pet food dispenser

AVAILABLE FOR

North America

EMEA

Japan

Australia

Taiwan

China*

Korea*

Brazil*



WE310F5

Module Wireless Specification

Wi-Fi: 802.11 b/g/n (2.4GHz)
Bluetooth® Low Energy 5.3

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| Solution Architecture | Hosted (AT commands) Standalone (host-less) |
| Host Interface | UART, SPI & SDIO |
| Wi-Fi Modes | AP (access point) 14 STA (clients) Concurrent Mode (AP + STA) Wi-Fi Direct (P2P)* |
| BLE Modes | Central Peripheral Concurrent |
| Security Features | WPA/WPA2 (personal) WPA3 (personal) WPA3 (enterprise)* HTTPS server & client TLS-1.2/TLS-1.3* |
| Coexistence | Inbuilt Wi-Fi Bluetooth® Low Energy |
| Provisioning (Through web-apps and native apps) | Bluetooth® Low Energy enabled Wi-Fi HTTPS enabled Wi-Fi |
| Cloud Agent | Amazon AWS IoT* Microsoft Azure* |
| Wi-Fi Throughput | 25 Mbps |
| Firmware Upgrade | FOTA |
| Dimension | Integrated antenna (WE310F5-I): 18 x 15 mm (LGA package) External antenna (WE310F5-P): 14.3 x 13.1 mm (LGA package) |
| Wi-Fi Tx output power | 18 dBm |
| BLE Tx output power | 8 dBm |
| Operating Temperature | -40 °C to +85 °C (industrial grade) |
| Operating Voltage | 3.3 V Typ |
| Compliance | FCC/IC/RED/RCM/JATE-JBL/TELEC-JRL/NCC/ANATEL/SRRC/WPC-ETA/KCC/UKCA Wi-Fi Alliance Bluetooth® Low Energy-SIG |

*Not available in first release

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