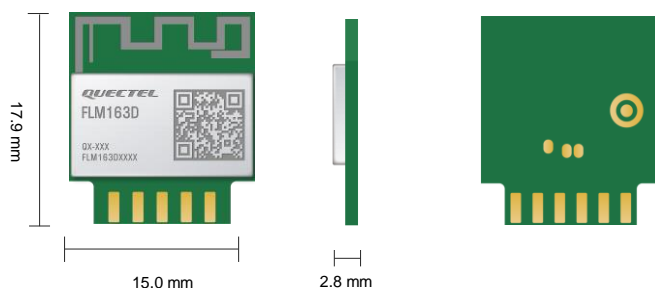




Quectel FLM163D

Wi-Fi 6 & Bluetooth 5.2 Module

Compact DIP Package



FLM163D is a cutting-edge MCU Wi-Fi 6 and Bluetooth module launched by Quectel. It has a built-in 32-bit RISC-V processor with a frequency of up to 320 MHz and supports IEEE 802.11b/g/n/ax protocol and Bluetooth 5.2. The module features built-in 512 KB SRAM and 4 MB flash, complies with WPA-PSK, WPA2-PSK, and WPA3-SAE security standards, integrates the Mbed TLS encryption library, and supports the Secure Boot security startup mechanism.

FLM163D is in a DIP form factor with an ultra-compact size of 17.9 mm × 15.0 mm × 2.8 mm, which optimizes the size and cost for end-products and is compatible with diverse designs.

FLM163D provides 8 GPIO interfaces, which can be multiplexed as UART, PWM, I2C, ADC and other interfaces. It has an operating temperature of -40 ~ +85 °C and is suitable for smart devices such as sockets and converters.

FLM163D integrates the ACK SDK for Matter solution, which enables terminal products to quickly and efficiently access the Amazon Alexa platform and can be interconnected with other smart devices that support the Matter protocol.



Key Features

- ✓ Wi-Fi 6 module, single band (2.4 GHz)
- ✓ Bluetooth 5.2 and Wi-Fi pairing via Bluetooth
- ✓ Built-in PCB antenna
- ✓ Large memory, 512 KB SRAM and 4 MB flash
- ✓ 8 GPIO interfaces, can be multiplexed as UART, I2C, PWM, ADC, etc.



IEEE 802.11b/g/n/ax



Bluetooth 5.2



Secure Boot



ACK SDK for Matter



Mbed TLS
Encryption



-40 °C to +85 °C

Quectel FLM163D

Wi-Fi 6 & Bluetooth 5.2

FLM163D

WLAN Protocol	IEEE 802.11b/g/n/ax
Wi-Fi Frequency Band	2.4 GHz
Wi-Fi Modulation Mode	CCK/ BPSK/ QPSK/ 16QAM/ 64QAM
Wi-Fi Operating Mode	AP/ STA
Bluetooth Protocol	Bluetooth 5.2
Encryption Mode	WPA-PSK/ WPA2-PSK/ WPA3-SAE
Internet Protocol	IPv4/ IPv6
Kernel	RISC-V (up to 320 MHz)
SRAM	512 KB
Flash	4 MB
Dimensions	17.9 mm × 15.0 mm × 2.8 mm
Weight	Approx. 0.83 g

Temperature Range

Operating Temperature -40 °C to +85 °C

Storage Temperature -45 °C to +95 °C

Certification

Regulatory (Planning)

Europe: CE
America: FCC
Canada: IC
China: SRRC
Australia/New Zealand: RCM

Interfaces

Antenna Interface × 1 (Built-in PCB antenna)

Other Interfaces ① UART/ GPIO/ PWM/ ADC, etc.

Electrical Features

Power Supply Voltage 3.0–3.6 V, Typ. 3.3 V

Ordering Code	Flash	Operating Temperature Range	Antenna	Development Board (Only for Debugging)
FLM163DAAMD-0P-04	4 MB	-40 °C to +85 °C	PCB antenna	FLM163DAATB-0P-04

NOTE:

①: See hardware design manual for details of the module interfaces.