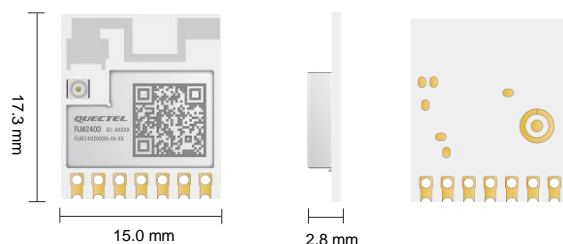


Quectel FLM240D

Wi-Fi 4 & BLE 5.2 Module Compact DIP + LCC Package



FLM240D is a cutting-edge MCU Wi-Fi and Bluetooth module launched by Quectel. It boasts a high-performance processor with a frequency of up to 120 MHz and supports IEEE 802.11b/g/n protocol and BLE 5.2. The module features built-in 256 KB RAM, 2 MB or 4 MB flash, ensuring efficient performance. In addition, it complies with WPA-PSK, WPA2-PSK and WPA3-SAE security standards.

FLM240D is in DIP + LCC form factor with an ultra-compact package size of 17.3 mm × 15.0 mm × 2.8 mm, which optimizes the size and cost for end-products and is compatible with diverse designs.

The module supports ADC and PWM functions in QuecOpen® solution, and many low power consumption modes and keep-alive mechanism, which provide flexibility and versatility for a range of applications, especially in smart homes, industrial IoT, consumer electronics and other application scenarios to meet various product needs. It is especially suitable for small-sized, high-temperature IoT devices, such as light bulbs, light strips, smart sockets.

The module supports the QuecOpen® solution and standard AT commands, has a compact protocol stack, which can realize efficient product development for customers.



Key Features

- ✓ Wi-Fi 4 module, single band (2.4 GHz) Wi-Fi, 1 × 1 antenna
- ✓ PCB antenna or RF coaxial connector (Optional)
- ✓ BLE 5.2 and Wi-Fi pairing via Bluetooth
- ✓ Large memory, 256 KB RAM, 2 MB or 4 MB flash
- ✓ Wide operating temperature: -40 °C to +105 °C
- ✓ High stability, high reliability and full compatibility



IEEE 802.11b/g/n



BLE 5.2



Large Memory



Compact Size



Operating Temperature
Range: -40 °C to +105 °C

Quectel FLM240D

Wi-Fi 4 & BLE 5.2	FLM240D
WLAN Protocol	IEEE 802.11b/g/n
Wi-Fi Frequency Band	2.4 GHz
Wi-Fi Modulation Mode	CCK/ BPSK/ QPSK/ 16QAM/ 64QAM
Wi-Fi Operating Mode	AP/ STA
Bluetooth Protocol	BLE 5.2
Encryption Mode	WPA-PSK/ WPA2-PSK/ WPA3-SAE
Internet Protocol	IPv4
Kernel	ARM968 (up to 120 MHz)
RAM	256 KB
Flash	2 MB/ 4 MB ^①
Dimension	17.3 mm × 15.0 mm × 2.8 mm
Weight	Approx. 0.85 g
Temperature Range	
Operating Temperature	-40 °C to +105 °C
Storage Temperature	-45 °C to +115 °C
Certification	

Regulatory	Europe: CE America: FCC Canada: IC China: SRRC Australia/New Zealand: RCM
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Interfaces	
Antenna Interface	× 1 (PCB antenna or RF coaxial connector) (optional)
Other Interfaces ^②	GPIO/ ADC/ PWM

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

RF Performance		Receiver Sensitivity	Transmit Power
2.4 GHz	802.11b/1 Mbps	-97 dBm ±2 dB	16 dBm ±2 dB
	802.11b/11 Mbps	-88 dBm ±2 dB	16 dBm ±2 dB
	802.11g/6 Mbps	-91 dBm ±2 dB	15 dBm ±2 dB
	802.11g/54 Mbps	-74 dBm ±2 dB	14 dBm ±2 dB
	802.11n/HT20 MCS 0	-91 dBm ±2 dB	14 dBm ±2 dB
	802.11n/HT20 MCS 7	-71 dBm ±2 dB	13 dBm ±2 dB
BLE	1 Mbps	-95 dBm ±2 dB	6 dBm ±2 dB

Ordering Code	Flash	Operating Temperature Range	Antenna	Development Board (Only for Debugging)
FLM240DAAMD-0P-04	4 MB	-40 °C to +105 °C	PCB antenna	FLM240DAATB-0P-04
FLM240DAAMD-0P-02	2 MB	-40 °C to +105 °C	PCB antenna	FLM240DAATB-0P-04
FLM240DAAMD-4X-04	4 MB	-40 °C to +105 °C	4th generation RF coaxial connector	FLM240DAATB-0P-04

NOTE:

- ①: Contact Quectel sales if you need a flash of other specifications.
- ②: See hardware design manual for details of the module interfaces.