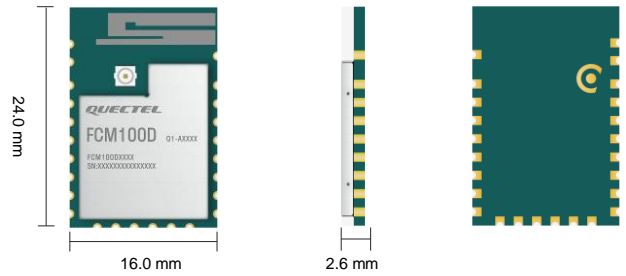


Quectel FCM100D

Wi-Fi 4 & BLE 5.2 Module Compact LCC Package



FCM100D 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 and 2 MB/4 MB flash, ensuring efficient performance. In addition, it complies with WPA-PSK, WPA2-PSK and WPA3-SAE security standards.

FCM100D is in a LCC form factor with an ultra-compact package size of 24.0 mm × 16.0 mm × 2.6 mm, which optimizes the size and cost for end-products and is compatible with diverse designs.

FCM100D supports multiple interfaces including UART, GPIO, ADC, I2C and PWM, and many low power consumption modes and keep-alive mechanism, which provide flexibility and versatility for a range of applications, especially in smart homes and industrial IoT scenarios.

FCM100D supports the QuecOpen® solution and standard AT commands, has a compact protocol stack. FCM100D supports a variety of public cloud services, and can realize efficient product development for customers.



Key Features

- ✓ Wi-Fi 4 module, single band (2.4 GHz) Wi-Fi, 1 × 1 antenna
- ✓ BLE 5.2 and Wi-Fi pairing via Bluetooth
- ✓ Large memory, 256 KB RAM and 2 MB/4 MB flash
- ✓ Supports up to 16 GPIOs for UART, ADC, I2C and PWM functions in QuecOpen® solution
- ✓ 1st generation RF coaxial connector, external antenna pin, PCB antenna (optional)
- ✓ High stability, high reliability and full compatibility



IEEE 802.11b/g/n



BLE 5.2



Large Memory



Compact Size



LCC Form Factor



Multiple Interfaces



Operating Temperature
Range: -40 °C to +85 °C/
-40 °C to +105 °C

Quectel FCM100D

Wi-Fi 4 & BLE 5.2		FCM100D	
WLAN Protocol	IEEE 802.11b/g/n		
Wi-Fi Frequency Band	2.4 GHz		
Wi-Fi Modulation Mode	BPSK/ QPSK/ CCK/ 16QAM/ 64QAM		
Wi-Fi Operating Mode	AP/ STA		
Bluetooth Protocol	BLE 5.2		
Encryption Mode	WPA-PSK/ WPA2-PSK/ WPA3-SAE		
Internet Protocol	IPv6 (Only supported in QuecOpen® solution)		
Kernel	ARM968 (up to 120 MHz)		
RAM	256 KB		
Flash	2 MB/4 MB ①		
Dimensions	24.0 mm × 16.0 mm × 2.6 mm		
Weight	Approx. 1.55 g		
Temperature Range			
Operating Temperature	-40 °C to +85 °C/ -40 °C to +105 °C (optional)		
Storage Temperature	-45 °C to +95 °C/ -45 °C to +115 °C (optional)		
Certification			
Regulatory	Europe: CE America: FCC Canada: IC Brazil: Anatel China: SRRC Australia/New Zealand: RCM		
Interfaces			
Antenna Interface	× 1 (1st generation RF coaxial connector, external antenna pin, PCB antenna) (optional)		
Other Interfaces ②	UART/ GPIO/ ADC/ I2C/ 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	-96 dBm ±2 dB	16 dBm ±2 dB
	802.11b/11 Mbps	-87 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	-90 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)
FCM100DAAMD	2 MB	-40 °C to +85 °C	1st generation RF coaxial connector	-
FCM100DABMD	2 MB	-40 °C to +85 °C	External antenna pin	FCM100DABTB
FCM100DACMD	2 MB	-40 °C to +85 °C	PCB antenna	FCM100DACTB
FCM100DAEMD	4 MB	-40 °C to +105 °C	PCB antenna	FCM100DAETB

NOTE:

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