QUECTEL

Quectel FCM740D

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

20.3 mm

15.8 mm

2.7 mm
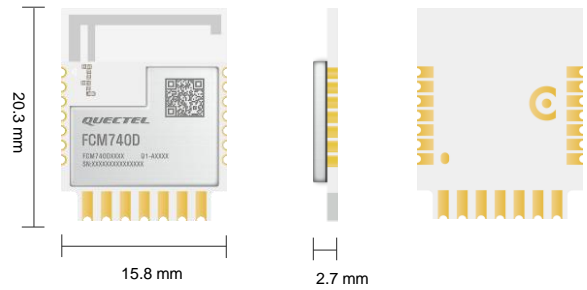
FCM740D is a cutting-edge MCU Wi-Fi and Bluetooth module launched by Quectel. It boasts a high-performance processor with a frequency of up to 120 MHz and supports IEEE 802.11b/g/n protocol and BLE 5.2. The module features built-in 256 KB SRAM and 4 MB flash, ensuring efficient performance. In addition, it complies with WPA-PSK, WPA2-PSK and WPA3-SAE security standards.

FCM740D is in LCC + DIP form factor with an ultra-compact size of 20.3 mm × 15.8 mm × 2.7 mm, which optimizes the size and cost for end-products and is compatible with diverse designs.

The module supports UART and GPIO interfaces by default. In the case of multiplexing, it can support PWM and ADC etc. With a variety of low-power modes and long connection keep-alive mechanisms, it can be flexibly and widely used in smart home, industrial IoT, consumer electronics and other application scenarios to meet various product needs. It is especially suitable for small-sized smart lighting and other applications. IoT devices with high temperature, such as light bulbs, light strips, smart sockets.

FCM740D 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 1st RF coaxial connector

✔ BLE 5.2 and Wi-Fi pairing via Bluetooth

✔ Large memory, 256 KB SRAM and 4 MB flash

✔ Wide operating temperature range: -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

Wi-Fi 6 & BLE 5.2	FCM740D
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/ STA + AP
Bluetooth Protocol	BLE 5.2
Encryption Mode	WPA-PSK/ WPA2-PSK/ WPA3-SAE
Internet Protocol	IPv4
Kernel	ARM968 (up to 120 MHz)
SRAM	256 KB
Flash	4 MB [①]
Dimensions	20.3 mm × 15.8 mm × 2.7 mm
Weight	Approx. 1.06 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
Interfaces	
Antenna Interface	× 1 (PCB antenna or 1st RF coaxial connector) (Optional)
Other Interfaces [②]	UART/ GPIO/ PWM/ ADC
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	-90 dBm ±2 dB	15 dBm ±2 dB
	802.11g/54 Mbps	-73.5 dBm ±2 dB	14 dBm ±2 dB
	802.11n/HT20 MCS 0	-89 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

Model	Ordering Code	Dimensions	Antenna	Development Board (Only for Debugging)
FCM740D	FCM740DAAMD-0P-04	20.3 mm × 15.8 mm × 2.7 mm	PCB antenna	FCM740DAATB-0P-04
FCM740D	FCM740DAAMD-1X-04	20.3 mm × 15.8 mm × 2.7 mm	1st RF coaxial connector	FCM740DAATB-1X-04

NOTE:

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

QUECTEL