Quectel FC41D

Stand-alone Wi-Fi&Bluetooth Module
Compact LCC Package
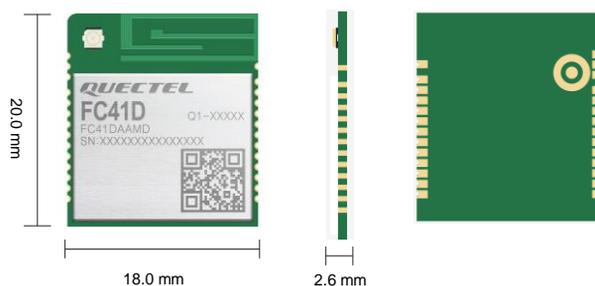
20.0 mm

18.0 mm   2.6 mm

FC41D is a stand-alone Wi-Fi & Bluetooth 5.2 module newly launched by Quectel, which is of industrial standard, high cost performance and low cost. With a compact size of 20.0 mm × 18.0 mm × 2.6 mm, FC41D is an ideal Wi-Fi&Bluetooth solution for size-sensitive applications, and helps customers reduce product size and optimize application design cost.

The surface-mount technology enhances its durability and robustness. The LCC package ensures the easy embedding of the module into size-constrained applications, and provides reliable connectivity with these applications. The advanced package allows for largescale automated manufacturing which has strict requirements on cost and efficiency.

Based on stand-alone Wi-Fi&Bluetooth chip, FC41D can support the secondary development by customers. Combined with its ultra-compact size, low power consumption, ultra-wide temperature range and high reliability, FC41D can meet the requirements of low flow control and data acquisition applications such as smart home and industrial control.

Key Features

- ✔ Support Bluetooth 5.2
- ✔ Support Wi-Fi (2.4 GHz), 1 × 1 SISO
- ✔ Support IEEE 802.11 b/g/n standards
- ✔ Easier soldering and testing process with LCC package
- ✔ Support secondary development
- ✔ Faster time to market: simple design minimizes design-in time and development efforts
- ✔ Support pin antenna, IPEX antenna, PCB antenna (Optional)

Ultra-compact Size

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

IEEE 802.11 b/g/n

Bluetooth 5.2

Wi-Fi&Bluetooth	FC41D
Region	Global
Function	2.4 GHz Wi-Fi, Bluetooth 5.2
WLAN	IEEE 802.11 b/g/n
Bluetooth	Bluetooth 5.2
Modulation Mode	CCK/BPSK/QPSK/16QAM/64QAM
Temperature Range	
Operating Temperature Range	-40 °C to +85 °C
Storage Temperature Range	-45 °C to +95 °C
Data Rate	
802.11b	Max. 11 Mbps
802.11g	Max. 54 Mbps
802.11n	Max. 72 Mbps
Bluetooth 5.2	Max. 2 Mbps
Interfaces	
UART	× 2
I2C	× 1
PWM	× 1
GPIO	× 4
Antenna Interfaces	× 1 （Pin antenna, IPEX antenna and PCB antenna are optional）
Supply Voltage	
Power Supply Voltage	3.3 V
I/O Power Supply Voltage	3.3 V
General Features	
Encryption Mode	WPA3
Working Mode	AP/ STA
Dimension	20.0 mm × 18.0 mm × 2.6 mm
Weight	1.05 g
RF Performance	

		Receiving Sensitivity Typ. (dBm)	Output Power Typ. (dBm)
2.4 GHz	802.11b/1 Mbps	-96	16
	802.11b/11 Mbps	-87	16
	802.11g/6 Mbps	-91	15
	802.11g/54 Mbps	-74	14
	802.11n/HT20 MCS0	-90	14
	802.11n/HT20 MCS7	-71	13
BLE	1 Mbps	-95	6

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