

Quectel FC20

Wi-Fi&BT Module with Ultra-compact LCC Package



Ultra Compact Size



LCC Package



IEEE802.11 a/b/g/n/ac Standards



Bluetooth 4.1*



SDIO Interface



Extended Temperature Range: -40°C ~ +85°C



Wi-Fi&BT Module

Key Benefits

- Ultra-compact Wi-Fi & BT module
- Support BT 4.1 BLE standard
- Support IEEE802.11a/b/g/n/ac standards
- Easier soldering and testing process with LCC package
- Stable and reliable SDIO communication interface
- Fast time-to-market: simple design minimizes design-in time and development efforts

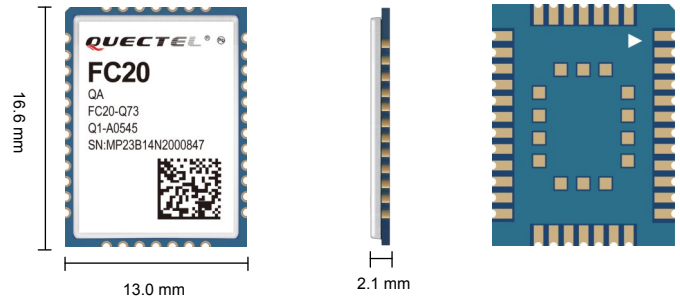
FC20 is a new series of Wi-Fi and BT module featuring high performance and low cost. Designed in ultra-compact 16.6×13.0×2.1mm profile, it optimizes the size and cost for end-products, which fully meets the demands of size sensitive applications. FC20 contains two variants (FC20 and FC20-N) which can be adapted to different application scenarios.

Surface-mount technology (SMT) makes FC20 an ideal solution for durable and rugged designs. The low profile and small size of LCC package make sure FC20 can be easily embedded into size-constrained applications and provide reliable connectivity with these applications. The advanced package allows for large-scale automated manufacturing which has strict requirements on cost and efficiency.

FC20 is typically used in combination with Quectel EC25, EC21 and EC20 R2.0 LTE modules. The compact form factor, low power consumption, extended temperature range and stable SDIO interface make FC20 a best choice for a wide range of M2M applications in fields such as vehicle, security, industrial PDA, MiFi, and medical.

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General Features

FC20	Function	Wi-Fi 2.4GHz+5GHz & Bluetooth 4.1*
	WLAN Standard	802.11a/b/g/n/ac
	BT Standard *	BT 4.1 BLE standard
	Modulation Mode	DBPSK, DQPSK, CCK, BPSK, QPSK, 16QAM, 64QAM, 256QAM
FC20-N	Function	Wi-Fi 2.4GHz only
	WLAN Standard	802.11b/g/n
	Modulation Mode	DBPSK, DQPSK, CCK, BPSK, QPSK, 16QAM, 64QAM
	Encryption Mode	WEP, TKIP, AES, WPA-PSK, WPA2-PSK
	AP (Max Access Point)	16
	Operator Mode	AP STA*
	Supply Voltage Range	3.14 ~3.46V, 3.3V Typ. 1.71 ~ 1.89V, 1.8V Typ.
	Operation Temperature	-40°C ~ +85°C
	Dimension	16.6 × 13.0 × 2.1mm
	Weight	0.81g

I/O Interfaces

SDIO	1 (SDIO 3.0)
Reset	1
Antenna	1 (Wi-Fi & BT Antenna)

Electrical Characteristics

Receiving Sensitivity	TBD @802.11a/6Mbps TBD @802.11a/54Mbps -93dBm @802.11b/1Mbps -86dBm @802.11b/11Mbps -89dBm @802.11g/6Mbps -72dBm @802.11g/54Mbps -88dBm @802.11n/HT20 MCS0 -67dBm @802.11n/HT40 MCS7 -92dBm @802.11ac/HT20 MCS0 -61dBm @802.11ac/HT80 MCS9
Transmitting Power	TBD @802.11a/6Mbps TBD @802.11a/54Mbps 18.5dBm @802.11b/1Mbps 18.4dBm @802.11b/11Mbps 16.8dBm @802.11g/6Mbps 16.1dBm @802.11g/54Mbps 16.7dBm @802.11n/HT20 MCS0 13.4dBm @802.11n/HT40 MCS7 14.6dBm @802.11ac/HT20 MCS0 10.5dBm @802.11ac/HT80 MCS9

Data Transmission

802.11a	Max 54Mbps
802.11b	Max 11Mbps
802.11g	Max 54Mbps
802.11n	Max 150Mbps
802.11ac	Max 433Mbps
BT 4.1*	Max 24Mbps

* Under Development