

# Quectel FC20

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



FC20 is a new series of Wi-Fi and BT module featuring high performance and low cost. Designed in ultra-compact 16.6mm × 13.0mm × 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.

Combining advantages such as compact form factor, low power consumption, extended temperature range and stable SDIO interface, FC20 is typically used in combination with Quectel EC25, EC21 or EC20 R2.0 modules to serve a wide range of M2M applications, such as automotive, security, industrial PDA, MiFi, and medical.



### 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



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

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### Variants for the Global

#### 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

WLAN Standard: 802.11b/g/n

Modulation Mode: DBPSK, DQPSK, CCK,

BPSK, QPSK, 16QAM, 64QAM

### Data

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

### Interfaces

SDIO × 1 (SDIO 3.0)

Reset × 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

### General Features

#### Encryption Mode:

WEP, TKIP, AES, WPA-PSK, WPA2-PSK

AP (Max Access Point): 16

Operator Mode: AP, STA\*

#### Supply Voltage Range:

3.14V~3.46V, 3.3V Typ.

1.71V~1.89V, 1.8V Typ.

#### Temperature Range:

-40°C ~ +85°C

#### Dimension:

16.6mm × 13.0mm × 2.1mm

Weight: 0.81g

\* Under Development