

# Quectel AF20

## Wi-Fi & BT\* Module with Ultra-compact LGA Package



Quectel AF20 is a cost-effective Wi-Fi & BT\* module with high performance. The ultra-compact 17.2mm × 15.2 mm × 2.2mm profile makes it a perfect choice for size sensitive applications. The compact and unified form factor can also help customers reduce product sizes and cut costs.

Surface-mount technology (SMT) makes AF20 an ideal solution for durable and rugged designs. The compact LGA package makes sure AF20 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, AF20 is typically used in combination with Quectel automotive grade LTE module AG35 to serve a wide range of M2M applications, especially automotive industry application.



### Key Benefits

- ✓ Ultra-compact Wi-Fi & BT\* module
- ✓ Support BT 4.2\* technology
- ✓ Support IEEE802.11a/b/g/n/ac standards
- ✓ Easier soldering and testing process with LGA package
- ✓ Stable and reliable SDIO communication interface
- ✓ Fast time-to-market: simple design minimizes design-in time and development efforts



Ultra-compact Size



LGA Package



IEEE 802.11 a/b/g/n/ac



BT 4.2\*



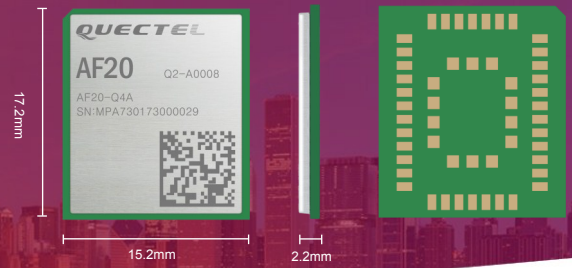
SDIO Interface



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

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### Variant for the Global

#### Function:

2.4GHz + 5GHz Wi-Fi, BT 4.2\*

#### WLAN Standard:

IEEE 802.11a/b/g/n/ac

#### BT Standard:

BT 4.2 BLE\*

#### Modulation Mode:

DBPSK/DQPSK/CCK/BPSK/

QPSK/16QAM/64QAM/256QAM

### Data

802.11a: Max 54Mbps

802.11b: Max 11Mbps

802.11g: Max 54Mbps

802.11n: Max 135Mbps

802.11ac: Max 433Mbps

BT 4.2\*: Max 60Mbps

### Interfaces

SDIO 3.0: × 1

Wi-Fi Enable Control: × 1

BT Enable Control\*: × 1

PCM: × 1

UART: × 1

Antenna: Wi-Fi & BT\* Antenna

### Electrical Characteristics

#### Receiving Sensitivity:

-90dBm @802.11a/6Mbps

-78dBm @802.11a/54Mbps

-93dBm @802.11b/1Mbps

-88dBm @802.11b/11Mbps

-87dBm @802.11g/6Mbps

-75dBm @802.11g/54Mbps

-88dBm @802.11n/HT20 MCS0

-70dBm @802.11n/HT40 MCS7

-90dBm @802.11ac/VHT20 MCS0

-61dBm @802.11ac/VHT80 MCS9

#### Transmitting Power:

15dBm @802.11a/6Mbps

11dBm @802.11a/54Mbps

18.5dBm @802.11b/1Mbps

18.5dBm @802.11b/11Mbps

17dBm @802.11g/6Mbps

16dBm @802.11g/54Mbps

16.5dBm @802.11n/HT20 MCS0

13.5dBm @802.11n/HT40 MCS7

14.5dBm @802.11ac/VHT20 MCS0

6dBm @802.11ac/VHT80 MCS9

### General Features

#### Encryption Mode:

WEP/TKIP/AES/WPA-PSK/WPA2-PSK

AP (Access Point): Max. 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: 17.2mm × 15.2mm × 2.2mm

Weight: 1.26g

\* Under Development