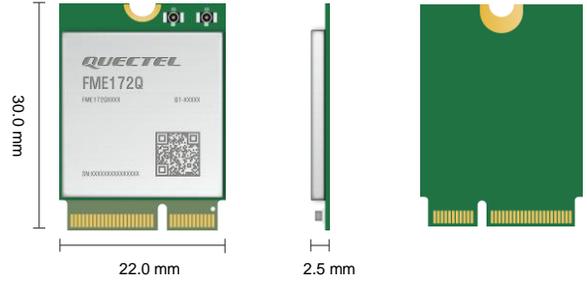


Quectel FME172Q

2.4/ 5/ 6 GHz Wi-Fi Bands

2 × 2 MIMO

Wi-Fi 7 & Bluetooth 6.0 Module



FME172Q is a highly integrated module supporting Wi-Fi 7 and Bluetooth 6.0.

With 4K-QAM and 320 MHz bandwidth, FME172Q delivers a peak data rate of 5.8 Gbps. Meanwhile, it supports ultra-low latency for real-time response. FME172Q supports 320 MHz enhanced Multi-Link Single Radio (eMLSR) technology, bringing faster data rate, much lower latency and higher network reliability to users.

FME172Q features dual-mode Bluetooth, supports LE Audio, and is compatible with 2 Mbps Bluetooth Low Energy (BLE) and BLE long-range communication. It also supports high-accuracy distance measurement (HADM) for precise location tracking.

The higher data rate, lower latency and enhanced network reliability makes FME172Q suitable for OTT, high-definition video, AR/VR, etc.



Key Features

- ✓ 2.4 GHz/ 5 GHz/ 6 GHz Wi-Fi bands and Bluetooth 6.0
- ✓ 4096 QAM
- ✓ 320 MHz enhanced Multi-Link Single Radio (eMLSR)
- ✓ Ultra-low latency
- ✓ Multi-User Multiple Input Multiple Output
- ✓ Wide operating temperature range: -30 °C to +85 °C



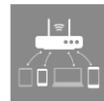
Bluetooth 6.0



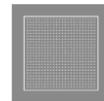
eMLSR



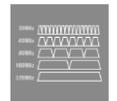
Ultra-low Latency



MU-MIMO



4K-QAM



320 MHz Bandwidth

Quectel FME172Q

Wi-Fi 7 & Bluetooth 6.0	FME172Q
WLAN Protocol	IEEE 802.11a/b/g/n/ac/ax/be
Wi-Fi Frequency Band	2.4 GHz/ 5 GHz/ 6 GHz
Wi-Fi Antenna	2 × 2 MIMO
Wi-Fi Modulation Mode	DBPSK/ DQPSK/ CCK/ BPSK/ QPSK/ QAM/ OFDMA
2.4 GHz Channel Bandwidth	20 MHz/ 40 MHz
5 GHz Channel Bandwidth	20 MHz/ 40 MHz/ 80 MHz/ 160 MHz
6 GHz Channel Bandwidth	20 MHz/ 40 MHz/ 80 MHz/ 160 MHz/ 320 MHz
Encryption Mode	WPA2/ WPA3
Wi-Fi Operating Mode	AP/ STA
Bluetooth Protocol	Bluetooth 6.0
Dimensions	22.0 mm × 30.0 mm × 2.5 mm
Weight	TBD
Temperature Range	
Operating Temperature	-30 °C to +85 °C
Physical Rate (Max.)	
802.11a	54 Mbps
802.11b	11 Mbps
802.11g	54 Mbps
802.11n	300 Mbps
802.11ac	1732 Mbps
802.11ax	2400 Mbps
802.11be	5800 Mbps
Interfaces	
PCIe 3.0	× 1 (for Wi-Fi)
PCM*	× 1 (for Bluetooth audio)
UART	× 1 (for Bluetooth)
Wi-Fi/Bluetooth Antenna Interfaces	× 2 (4 th generation RF coaxial connector)
Electrical Features	
Power Supply Voltage	VBAT: 3.0–3.6 V, Typ. 3.3 V VDD_IO: 1.71–1.89 V, Typ. 1.8 V Max. current at Tx mode:
Power Consumption	TBD @ VBAT
Certifications	
Regulatory (Planning)	Europe: CE America: FCC

Model	Ordering Code	Antenna
FME172Q	FME172QAAMD	Two antennas

NOTE:

*: Under development.