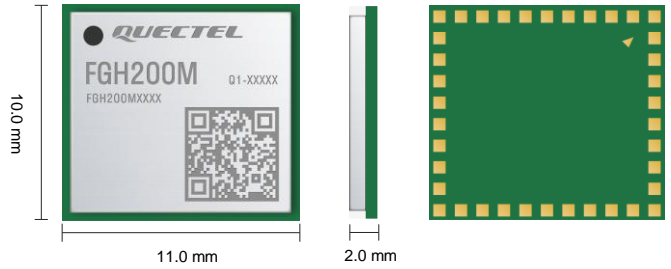


Quectel FGH200M

Wi-Fi HaLow Module Compact LGA Package



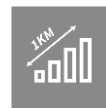
FGH200M is a long-range, low-power Wi-Fi HaLow module launched by Quectel, which complies with the IEEE 802.11ah standard. Wi-Fi HaLow is an open, standard Wi-Fi technology operating in the license-exempt Sub-1 GHz range.

FGH200M operates in the 850–950 MHz working frequency band with a channel width of 1/2/4/8 MHz. It supports USB 2.0, SDIO and SPI interfaces, with a maximum output power of 26 dBm and a theoretical maximum physical rate of 43.3 Mbps. Operating in the Sub-1 GHz band, the module delivers enhanced penetration performance and broader coverage while supporting low power consumption and large-scale device connectivity. Theoretically, a single AP (access point) can support connections for up to 8,191 IoT devices, making it well-suited for applications requiring massive IoT deployments.

With its ultra-compact package size of 11.0 mm × 10.0 mm × 2.0 mm, FGH200M optimizes and effectively reduces end-product size and design cost, and fully meets the demands of size-sensitive applications.

Key Features

- ✓ Wi-Fi HaLow module, 850–950 MHz frequency band
- ✓ Encryption mode: AES, SHA-256, SHA-384, SHA-512, WPA3, OWE
- ✓ Long-range transmission, low-power consumption, large capacity, and good penetration performance
- ✓ Faster time-to-market via simple design



Long-range
(1 km)



Low Power
Consumption



Large Capacity



Good Penetration
Performance



Ultra-compact
Size



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

Quectel FGH200M

Wi-Fi HaLow		FGH200M		
WLAN Protocol	IEEE 802.11ah			
Wi-Fi Frequency Band	850–950 MHz			
Wi-Fi Antenna	1 × 1			
Wi-Fi Modulation Mode	BPSK/ QPSK/ 16QAM/ 64QAM/ 256QAM			
Encryption Mode	AES, SHA-256, SHA-384, SHA-512, WPA3, OWE			
Wi-Fi Operating Mode	AP/ STA			
Dimensions	11.0 mm × 10.0 mm × 2.0 mm			
Weight	Approx. 0.51 g			
Temperature Range				
Operating Temperature Range	-40 °C to +85 °C			
Physical Rate (Max.)				
802.11ah	43.3 Mbps			
Interfaces				
SDIO 2.0/ SPI	× 1			
USB 2.0	× 1			
Wi-Fi Antenna Interface	× 1			
Electrical Features				
Power Supply Voltage	VBAT: 3.0–3.6 V, typ. 3.3 V			
I/O Power Supply Voltage	VDD_IO: 2.25–3.6 V, typ. 3.3 V			
Certifications				
Regulatory (Planning)	Europe: CE America: FCC Canada: IC Australia/New Zealand: RCM			
Wi-Fi Performance				
	Receiver Sensitivity (Typ.)	Transmit Power (Typ.)		
MCS 0 (1 MHz)	TBD	TBD		
MCS 0 (2 MHz)	TBD	TBD		
MCS 0 (4 MHz)	TBD	TBD		
MCS 0 (8 MHz)	TBD	TBD		
MCS 7 (1 MHz)	TBD	TBD		
MCS 7 (2 MHz)	TBD	TBD		
MCS 7 (4 MHz)	TBD	TBD		
MCS 7 (8 MHz)	TBD	TBD		
MCS 9 (1 MHz)	TBD	TBD		
MCS 9 (4 MHz)	TBD	TBD		
MCS 9 (8 MHz)	TBD	TBD		
MCS 10 (1 MHz)	TBD	TBD		
Model				
FGH200M	Ordering Code	Antenna	Max. Physical Rate	Development Board (Only for Debugging)
FGH200M	FGH200MAAMD	One Wi-Fi antenna	43.3 Mbps	FGH200MAAM2