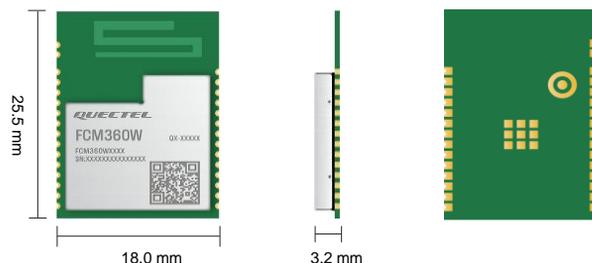


Quectel FCM360W

Wi-Fi 6 & BLE 5.1 Module Compact LCC Package



FCM360W is a cutting-edge MCU Wi-Fi and BLE module launched by Quectel. It boasts a high-performance processor with a frequency of up to 240 MHz and supports IEEE 802.11b/g/n/ax protocol and BLE 5.1. The module features built-in 512 KB SRAM and 4 MB/ 8 MB flash, ensuring efficient performance. In addition, it complies with WPA-PSK, WPA2-PSK and WPA3-SAE security standards, providing 128-bit AES encryption for added security.

FCM360W is in an LCC form factor with an ultra-compact package size of 25.5 mm × 18.0 mm × 3.2 mm, which optimizes the size and cost for end-products and is compatible with diverse designs.

FCM360W supports up to 18 GPIOs for UART, SPI, I2C*, I2S, ADC and PWM functions in QuecOpen® solution, and many low power consumption modes and keep-alive mechanism, which provides flexibility and versatility for a range of applications, especially in smart homes and industrial IoT scenarios.

FCM360W has a user-friendly protocol stack and large memory, which allows for multi-channel SSL connections and local cache of large amounts of data, making it especially suitable for photovoltaic inverters, energy storage batteries and other smart devices that require long-term data monitoring and storage.



Key Features

- ✓ Wi-Fi 6 module, 2.4 GHz Wi-Fi band, 1 × 1 antenna
- ✓ BLE 5.1 and Wi-Fi pairing via Bluetooth
- ✓ Large memory, 512 KB SRAM and 4 MB/ 8 MB flash
- ✓ 18 GPIOs for UART, SPI, I2C*, I2S, ADC and PWM functions in QuecOpen® solution
- ✓ RF coaxial connector, external antenna pin, PCB antenna (optional)
- ✓ SPI interface available for Ethernet solution



IEEE 802.11b/g/n/ax



BLE 5.1



Large Memory



Compact Size



LCC Form Factor



Multiple Interfaces



Operating Temperature
Range: -40 °C to +85 °C/
-40 °C to +105 °C (Optional)

Quectel FCM360W

Wi-Fi 6 & BLE 5.1		FCM360W	
WLAN Protocol	IEEE 802.11b/g/n/ax		
Wi-Fi Frequency Band	2.4 GHz		
Wi-Fi Modulation Mode	CCK/ BPSK/ QPSK/ 16QAM/ 64QAM		
Wi-Fi Operating Mode	AP/ STA		
Bluetooth Protocol	BLE 5.1		
Encryption Mode	WPA-PSK/ WPA2-PSK/ WPA3-SAE/ AES-128		
Internet Protocol	IPv6		
Kernel	RISC Processor (up to 240 MHz)		
SRAM	512 KB		
Flash ^①	4 MB/ 8 MB		
Dimensions	25.5 mm × 18.0 mm × 3.2 mm		
Weight	Approx. 1.65 g		
Temperature Range			
Operating Temperature Range	-40 °C to +85 °C/ -40 °C to +105 °C (Optional)		
Storage Temperature Range	-45 °C to +95 °C/ -45 °C to +115 °C (Optional)		
Certification			
Regulatory	Europe: CE		
	America: FCC		
	The UK: UKCA		
	Canada: IC		
	China: SRRC		
Australia/New Zealand: RCM			
Interfaces			
Antenna Interface	× 1 (RF coaxial connector, external antenna pin, PCB antenna) (Optional)		
Other Interfaces ^②	UART/ SPI/ I2C*/ I2S/ PWM/ ADC		
Electrical Features			
Power Supply Voltage	3.0–3.6 V, Typ. 3.3 V		
RF Performance			
		Receiver Sensitivity	Transmit Power
2.4 GHz	802.11b/1 Mbps	-92 dBm ±2 dB	17 dBm ±2 dB
	802.11b/11 Mbps	-86 dBm ±2 dB	17 dBm ±2 dB
	802.11g/6 Mbps	-89 dBm ±2 dB	14 dBm ±2 dB
	802.11g/54 Mbps	-73 dBm ±2 dB	14 dBm ±2 dB
	802.11n/HT20 MCS 0	-89 dBm ±2 dB	14 dBm ±2 dB
	802.11n/HT20 MCS 7	-70 dBm ±2 dB	14 dBm ±2 dB
	802.11n/HT40 MCS 0	-87 dBm ±2 dB	13 dBm ±2 dB
	802.11n/HT40 MCS 7	-67 dBm ±2 dB	13 dBm ±2 dB
	802.11ax/HT20 MCS 0	-89 dBm ±2 dB	14 dBm ±2 dB
	802.11ax/HT20 MCS 7	-69 dBm ±2 dB	14 dBm ±2 dB
BLE	1 Mbps	-90 dBm ±2 dB	6 dBm ±2 dB
	2 Mbps	-89 dBm ±2 dB	6 dBm ±2 dB

Ordering Code	Flash	Operating Temperature Range	Antenna	Development Board (Only for Debugging)
FCM360WAAMD-1X-04	4 MB	-40 °C to +85 °C	1 st RF coaxial connector	-
FCM360WAAMD-0L-04	4 MB	-40 °C to +85 °C	External antenna pin	FCM360WAATB-0L-04
FCM360WAAMD-0P-04	4 MB	-40 °C to +85 °C	PCB antenna	FCM360WAATB-0P-04
FCM360WAAMD-0P-08	8 MB	-40 °C to +85 °C	PCB antenna	FCM360WAATB-0P-08
FCM360WABMD-1X-04	4 MB	-40 °C to +105 °C	1 st RF coaxial connector	-

NOTE:

- ①: Contact Quectel sales if you need a flash of other specifications.
- ②: See hardware design manual for details of the module interfaces.
- *: Under development.