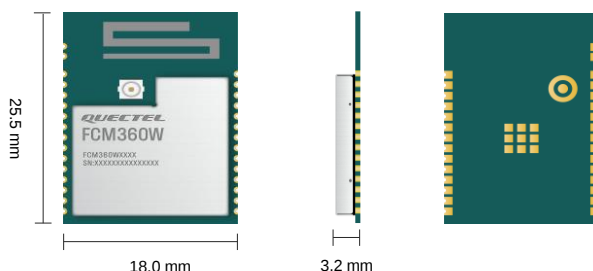


Quectel FCM360W

Wi-Fi 6 & Bluetooth 5.1 Module Compact LCC Package



FCM360W is a cutting-edge MCU Wi-Fi and Bluetooth 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 Bluetooth 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-PSK security standards, providing 128-bit AES encryption for added security.

FCM360W is in a 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 multiple interfaces including UART, SPI, I2C, I2S, ADC and PWM, and many low power consumption modes and keep-alive mechanism, which provide flexibility and versatility for a range of applications, especially in smart homes and industrial IoT scenarios.

FCM360W supports the QuecOpen® solution, and has a user-friendly protocol stack and large memory. This 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, single band (2.4 GHz) Wi-Fi, 1 × 1 antenna
- ✓ Bluetooth 5.1 and Bluetooth pairing
- ✓ Large memory, 512 KB SRAM and 4 MB/ 8 MB flash
- ✓ Multiple interfaces, 19 GPIOs
- ✓ UART, SPI, I2C, I2S, ADC and PWM
- ✓ RF coaxial connector, external antenna pin, PCB antenna (optional)
- ✓ SPI interface available for Ethernet solution*



IEEE 802.11b/g/n/ax



Bluetooth 5.1



Large Memory



Compact Size



LCC Form Factor



Multiple Interfaces



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

Quectel FCM360W

Wi-Fi 6 & Bluetooth 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		Bluetooth 5.1	
Encryption Mode		WPA-PSK/ WPA2-PSK/ WPA3-PSK/ AES-128	
Internet Protocol		IPv6	
Kernel		RISC Processor (up to 240 MHz)	
SRAM		512 KB	
Flash ①		4 MB/ 8MB	
Dimension		25.5 mm × 18.0 mm × 3.2 mm	
Weight		1.65 g	
Temperature Range			
Operating Temperature Range		-40 °C to +85 °C	
Storage Temperature Range		-45 °C to +95 °C	
Certification			
Regulatory		Europe: CE* America: FCC* China: SRRC* Canada: IC* 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	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	-

NOTE:

1. ①: Contact Quectel sales if you need a flash of other specifications.

2. ②: See hardware design documents for details of the module interfaces.

3.*: under development or ongoing.



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