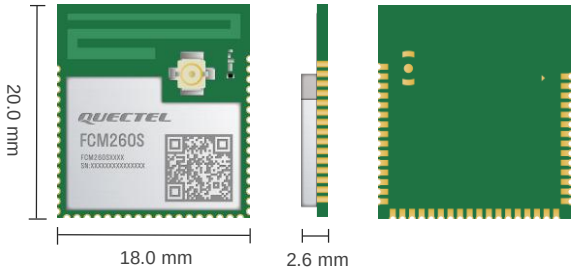
Quectel FCM260S

Wi-Fi 6 & BLE 5.4
Compact LCC Package



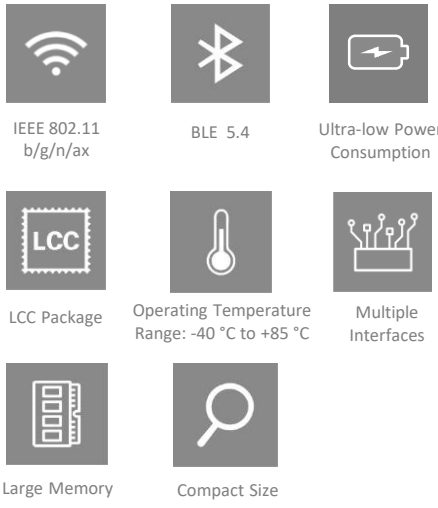
FCM260S is a cutting-edge MCU Wi-Fi and BLE module launched by Quectel. It boasts an ARM Cortex-M4 processor with a frequency of up to 180 MHz and supports IEEE 802.11b/g/n/ax protocol of single band (2.4 GHz) and BLE 5.4. It complies with the WPA, WPA2 and WPA3 security standards, and supports AES128/256/192, SHA256/384/512, HMAC, RNG, CRC, SHA3, AES-GCM, CMAC, TRNG, RSA, ECC, secure boot encryption algorithm.

FCM260S is in an LCC form factor with a compact package size of 20.0 mm × 18.0 mm × 2.6 mm, which optimizes the size and cost for end-products and is compatible with diverse designs. It features built-in 672 KB SRAM and 8 MB flash, ensuring efficient performance. It also offers optional PSRAM expansion for more complex applications.

FCM260S supports up to 35 GPIOs and one JTAG/SWD, which can be multiplexed for various interfaces including UART, SPI, I2C, SDIO, I2S, PWM, ADC, DAC, SSI, etc. in QuecOpen® solution. The module supports PCB antenna/1st generation RF coaxial connector/pin antenna. And it has ultra-low power consumption and features a built-in BPF filter, enhancing the module's performance in harmonic suppression and anti-interference. It is widely used in ultra-low power consumption fields such as door locks, curtains, IPCs and single-phase switches, and provides flexibility and versatility for a range of applications, especially in smart homes and industrial IoT scenarios.

Key Features

- 2.4 GHz, Wi-Fi 6.0 and BLE 5.4
- 672 KB SRAM and 8 MB flash
- PSRAM expansion (optional)
- BPF filter
- Supports UART, SPI, I2C, SDIO, I2S, PWM, ADC, DAC, SSI, etc. under multiplexing
- Operating temperature range: -40 °C to +85 °C
- PCB antenna/1st generation RF coaxial connector/pin antenna (optional)



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Quectel FCM260S

Wi-Fi 6 & BLE 5.4	FCM260S
WLAN Protocol	IEEE 802.11 b/g/n/ax
Wi-Fi Frequency Band	2.4 GHz
2.4 GHz Channel Bandwidth	20 MHz
Wi-Fi Modulation Mode	DBPSK, DQPSK, CCK, BPSK, QPSK, 16QAM, 64QAM, DCM
Encryption Mode	WPA/WPA2/WPA3
Wi-Fi Operating Mode	AP/STA
Bluetooth Protocol	BLE 5.4
Antenna	× 1 (PCB antenna/1st generation RF coaxial connector/pin antenna) (optional)
MCU Core	ARM Cortex-M4 (up to 180 MHz)
SRAM	672 KB
Flash	8 MB
PSRAM Expansion (optional)	8 MB
Dimensions	20.0 mm × 18.0 mm × 2.6 mm
Weight	TBD
Temperature Range	
Operating Temperature Range	-40 °C to +85 °C
Storage Temperature Range	-45 °C to +95 °C
Certifications	
Regulatory (Planning)	**Europe:** CE **America:** FCC **Canada:** IC **China:** SRRC **Japan:** TELEC **Australia/New Zealand:** RCM
Interfaces	
Interfaces ①	35 GPIOs (can be multiplexed as UART, SPI, I2C, SDIO, I2S, PWM, ADC, DAC, SSI, etc.)
Electrical Features	
Power Supply Voltage	1.71–3.63 V, typ. 3.3 V
Bluetooth Performance	

		Receiver Sensitivity	Transmit Power
BLE	**1 Mbps**	-96 dBm ±2 dB	≤ 17 dBm
	2 Mbps	-93 dBm ±2 dB	≤ 17 dBm
	500 kbps	-102.5 dBm ±2 dB	≤ 17 dBm
	125 kbps	-107 dBm ±2 dB	≤ 17 dBm

Ordering Code	Flash	SRAM	Transmit Power	Operating Temperature Range	Antenna	Development Board (Only for Debugging)
FCM260SAAMD-1X-08	8 MB	672 KB	≤ 17 dBm	-40 °C to +85 °C	1st generation RF coaxial connector	FCM260SAATB-1X-08*
FCM260SAAMD-0L-08*	8 MB	672 KB	≤ 17 dBm	-40 °C to +85 °C	Pin antenna	FCM260SAATB-0L-08*
FCM260SAAMD-0P-08	8 MB	672 KB	≤ 17 dBm	-40 °C to +85 °C	PCB antenna	FCM260SAATB-0P-08

NOTE:

1. ①: See hardware design manual for details of the module interfaces.
2. *: Under development.

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