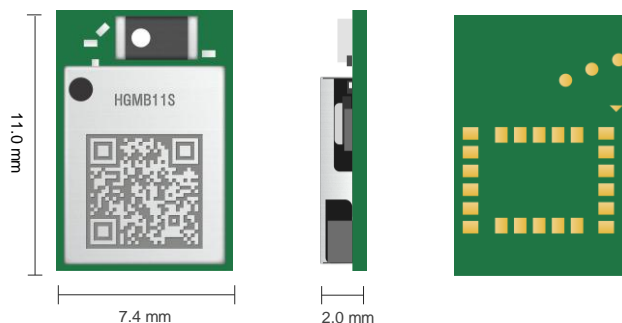


# Quectel HGMB11S

## BLE 5.4 Module Compact LGA Package



HGMB11S is a high-performance and ultra-compact MCU Bluetooth module launched by Quectel. It boasts an ARM Cortex-M33 processor with a frequency of up to 76.8 MHz and supports BLE 5.4. The module features built-in 32 KB RAM and 512 KB flash, ensuring efficient performance.

HGMB11S is in a LGA form factor with an ultra-compact size of 11.0 mm × 7.4 mm × 2.0 mm, which optimizes the size and cost for end-products and is compatible with diverse designs.

HGMB11S features an ultra-compact design and is equipped with an SMD ceramic antenna for better performance, making it widely suitable for electronic cigarettes, power tools, and other small-sized Bluetooth devices.



## Key Features

- ✓ BLE 5.4
- ✓ 32 KB RAM, 512 KB flash
- ✓ 18 GPIOs which can be multiplexed for various interfaces including ADC, USART, I2C, PDM, SPI and PWM
- ✓ Operating temperature range: -40 °C to +85 °C
- ✓ Max. transmit power: 8 dBm
- ✓ SMD ceramic antenna



BLE 5.4



LGA Package



Ultra-compact Size



Multiple Interfaces



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

# Quectel HGMB11S

BLE 5.4		HGMB11S			
Bluetooth Protocol	BLE 5.4				
Security Features	AES128/256, SHA-1, SHA-2, ECC, ECDSA, ECDH, TRNG, secure boot				
Operating Mode	BLE (Bluetooth Low Energy)				
Bluetooth Antenna	SMD ceramic antenna				
Kernel	ARM Cortex-M33 (up to 76.8 MHz)				
RAM	32 KB				
Flash	512 KB				
Dimensions	11.0 mm × 7.4 mm × 2.0 mm				
Weight	Approx. 0.27 g				
Temperature Range					
Operating Temperature Range	-40 °C to +85 °C				
Storage Temperature Range	-45 °C to +95 °C				
Certifications					
Regulatory	<b>Europe:</b> CE <b>America:</b> FCC <b>Canada:</b> IC <b>China:</b> SRRC <b>Australia/New Zealand:</b> RCM				
Others	Bluetooth				
Interfaces					
Interfaces <sup>Ⓞ</sup>	18 GPIOs (Multiplexed for various interfaces including ADC, USART, I2C, I2S, PDM, SPI and PWM)				
Electrical Features					
Power Supply Voltage	1.71–3.8 V, typ. 3.3 V				
Bluetooth Performance					
		Receiver Sensitivity		Transmit Power	
BLE	1 Mbps	97 dBm ±2 dB		8 dBm ±2 dB	
	2 Mbps	93 dBm ±2 dB		8 dBm ±2 dB	
	500 kbps	101 dBm ±2 dB		6 dBm ±2.5 dB	
	125 kbps	106 dBm ±2 dB		6 dBm ±2.5 dB	
Ordering Code					
HGMB11SAAMD-0C	Flash	Transmit Power	Operating Temperature Range	Antenna	Development Board (Only for Debugging)
	512 KB	8 dBm ±2 dB	-40 °C to +85 °C	SMD ceramic antenna	HGMB11SAATB-0C

## NOTE:

Ⓞ: See hardware design manual for details of the module interfaces.