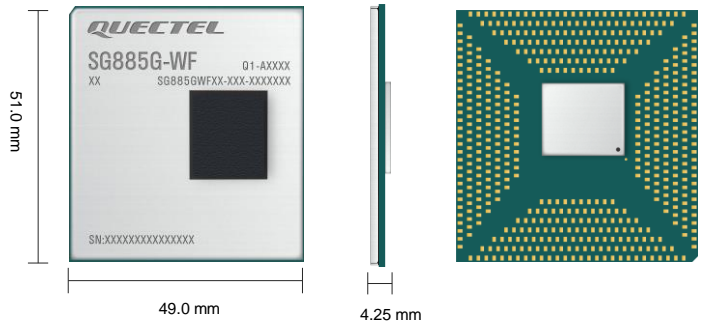


Quectel SG885G-WF

Smart Module with Wi-Fi & Bluetooth



SG885G-WF is Quectel’s new generation of flagship Android Smart module. Based on Qualcomm’s flagship IoT chipset QCS8550 with built-in octa-core high-performance Kryo™ CPU, Adreno™ 740 GPU, Adreno 1295 DPU, Adreno 8550 VPU, Hexagon™ DSP, and Spectra™ ISP, the module supports Wi-Fi 7, Bluetooth 5.3 and 2 × 2 Wi-Fi MIMO technology. Featuring powerful performance and rich multimedia functions, it is ideal for both industrial and consumer applications requiring high computing power, AI and multimedia functions.

A rich set of interfaces (such as LCM, Camera, I2S, UART, USB, I2C, SPI, etc.) extend the applicability of the module to a wide range of M2M applications, including video conference systems, live streaming devices, gaming, edge computing, robots, drones, AR/ VR, intelligent retail, smart safety, etc.



Key Features

- ✓ Kryo™ CPU
- ✓ Adreno™ 740 GPU
- ✓ Hexagon™ DSP + Hexagon Vector eXtensions (HVX) + Hexagon Matrix eXtensions (HMX)
- ✓ Spectra™ ISP
- ✓ Adreno 8550 VPU
- ✓ Adreno 1295 DPU
- ✓ Neural processing unit
- ✓ Security processing
- ✓ IEEE 802.11be, 2 × 2 Wi-Fi MIMO
- ✓ Bluetooth 5.3
- ✓ Video encoder: 4K @ 120 fps; 8K @ 30 fps
Video decoder: 4K @ 240 fps; 8K @ 60 fps
- ✓ Computing power of up to 48 TOPS



Qualcomm Kryo™ CPU



Qualcomm Adreno™ 740 GPU



Android OS



PCIe Interface



IEEE 802.11 a/ b/ g/ n/ ac/ ax/ be



Bluetooth 5.3 (BR/EDR + BLE)



VPU Multimedia Processing Engine

Quectel SG885G-WF

Wi-Fi & Bluetooth		SG885G-WF
Region/Operator	Global	
OS	Android 13*	
Memory	12 GB LPDDR5X + 256 GB UFS 4.0 (default) 8 GB LPDDR5X + 128 GB UFS 4.0 (optional)	
Dimensions (mm)	51.0 × 49.0 × 4.25	
Package	LGA	
Weight (g)	18.6	
Temperature Range		
Operating Temperature	-30 °C to +75 °C	
Frequency Bands		
WLAN	2.4 & 5 & 6 GHz, Wi-Fi 7, 802.11a/ b/ g/ n/ ac/ ax/ be, 2 × 2 Wi-Fi MIMO	
Bluetooth	Bluetooth 5.3 (BR/ EDR + BLE)	
Certifications		
Carrier	-	
Regulatory*	SRRC/ FCC/ IC	
Others	TBD	
General Features		
Supply Voltage Range	3.55-4.4 V, Typ. 3,8 V	
Power Consumption (Typical)	TBD	
Interfaces		
Display	2 × 4-lane MIPI DSI 5120 × 2880 @ 60 fps (8 lanes) DisplayPort v1.4 over Type-C with MST (2 × 4K60 10-bit or 1 × 8K30 with DSC) 6 × 4-lane MIPI CSI	
Camera	3 × Full ISP + 2 × Lite ISP Max. 108 MP @ 30 fps ZSL	
Audio	SWR, Digital Microphone, MI2S interfaces, HIFI I2S Encoder: 4K @ 120 fps; 8K @ 30 fps Decoder: 4K @ 240 fps; 8K @ 60 fps	
Video	Native encode support for H.265 Main 10, H.265 Main, H.264 high formats Native decode support for H.265 Main 10, H.265 Main, H.264 High, and VP9 profile 2	
USB	× 1, both USB 3.1/ 2.0 are compliant	
PCIe (Optional)	<ul style="list-style-type: none"> ● PCIe1: 2-lane, Gen4^① ● PCIe2: 2-lane, Gen3^① ● PCIe3: 1-lane, Gen3^① 	
UART	× 1, debug UART	
Vibrator Drive	× 1	
SD Card	× 1, SD 3.0	
I2C	× 10	
I2S	× 2	
Flashlight	3 high-current flash LED drivers, which support both flash and torch modes	
ADC	× 2 General-purpose ADC interfaces	
SPI	× 5	
Charging Management	Supports battery voltage detection, fuel gauge, battery temperature detection	
Real Time Clock	Supported	
PWRKEY	× 1	
GPIO	Supported	
Ethernet 0 ^①	Supported SGMII/ USXGMII 0	
Ethernet 1 ^①	Supported SGMII/ USXGMII 1 or RGMII	
Antenna	× 2, Wi-Fi/ Bluetooth and Wi-Fi MIMO antenna interfaces	

Notes:

*: under development. TBD: To be determined.

① : PCIe 2, PCIe 3, and Ethernet functions cannot be used simultaneously with PCIe 1.