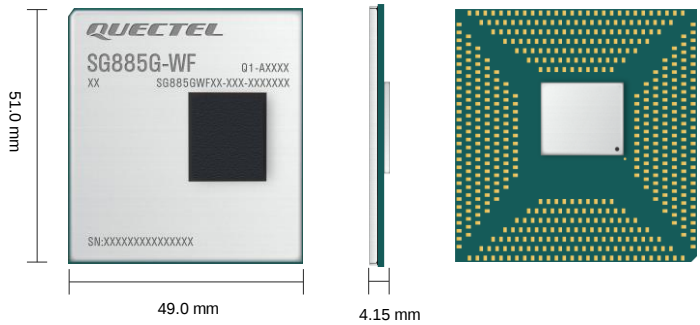


Quectel SG885G-WF

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, edge computing and multimedia functions.

A rich set of interfaces (such as LCM, Camera, touch panel, I2S, PCIe, 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, AR/ VR, intelligent retail, smart safety, etc.



Key Features

- ✓ 1 × Kryo Prime @ 3.2 GHz + 4 × Kryo Gold @ 2.8 GHz + 3 × Kryo Silver @ 2.0 GHz
- ✓ 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
- ✓ Tri-band 2 × 2 MIMO DBS, HBS Wi-Fi 7
- ✓ 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
CPU	1 × Kryo Prime @ 3.2 GHz + 4 × Kryo Gold @ 2.8 GHz + 3 × Kryo Silver @ 2.0 GHz
Memory	8 GB LPDDR5X + 128 GB UFS 4.0
	12 GB LPDDR5X + 256 GB UFS 4.0
	16 GB LPDDR5X + 256 GB UFS 4.0
	16 GB LPDDR5X + 512 GB UFS 4.0
Dimensions (mm)	51.0 × 49.0 × 4.15
Package	LGA
Weight (g)	Approx. 18.6
Temperature Range	
Operating Temperature	-30 °C to +70 °C
Frequency Bands	
WLAN	2.4 & 5 & 6 GHz, 802.11a/ b/ g/ n/ ac/ ax/ be, 2 × 2 MIMO DBS, HBS Wi-Fi 7
Bluetooth	Bluetooth 5.3 (BR/ EDR + BLE)
Certifications	
Carrier	-
Regulatory	SRRC/ FCC/ IC
General Features	
Supply Voltage Range	3.55–4.4 V, Typ. 3.8 V
Power Consumption (Typical)	7 mA ^③ @ sleep state
Interfaces	
Display	• 2 × 4-lane MIPI_DSI • Data rate: up to 2.5 Gbps/lane • 5120 × 2880 @ 60 fps or 3480 × 2160 @ 120 fps or 3360 × 1600 @ 144 fps or 2520 × 1200 @ 240 fps • DisplayPort v1.4 over Type-C with MST (2 × 4K60 10-bit or 1 × 8K30 with DSC)
Camera	• 6 × 4-lane MIPI_CSI, up to 7 cameras • Data rate: up to 2.5 Gbps/lane • 3 × Full ISP + 2 × Lite ISP, 36 MP + 36 MP + 36 MP or 64 MP + 36 or 108M @ 30 fps ZSL
Audio	SWR, Digital Microphone, MI2S interfaces, Hi-Fi I2S
Video	Encoder: 4K @ 120 fps; 8K @ 30 fps
	Decoder: 4K @ 240 fps; 8K @ 60 fps
USB	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
PCIe	× 1, both USB 3.1/ 2.0 are compliant
	× 1 ^①
	• PCIe1: 2-lane, Gen4
	Or
UART	× 2 ^①
	• PCIe2: 2-lane, Gen3
	• PCIe3: 1-lane, Gen3
Vibrator Drive	× 10 Max ^② , including 1 × debug UART
SD Card	× 1
I2C	× 1, SD 3.0
I2S	× 21 Max ^②
Flashlight	× 5 Max ^②
ADC	2 high-current flash LED drivers, which support both flash and torch modes
	× 2
SPI	General-purpose ADC interfaces
Charging Management	× 9 Max ^②
Real Time Clock	Supports battery voltage detection, fuel gauge, battery temperature detection
PWRKEY	Supported
GPIO	× 1
Ethernet 0 ^①	Supported
Ethernet 1 ^①	Supported SGMII/ USXGMII 0
Antenna	Supported SGMII/ USXGMII 1 or RGMII
	× 2, Wi-Fi/ Bluetooth and Wi-Fi MIMO antenna interfaces

Notes:
① : Different OCs support different configurations: 1) supporting PCIe2, PCIe3 and Ethernet functions and 2) supporting PCIe1 only.
② : Include multiplex interfaces.
③ : 7 mA is the typical power consumption in the sleep state for hardware version 2.

