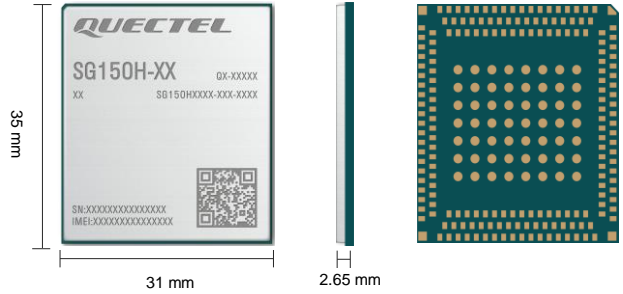


# Quectel SG150H Series

## Multi-mode Smart LTE Module with Wi-Fi & Bluetooth



SG150H is Quectel’s new generation of multi-mode Smart LTE Cat 4 module with built-in Linux OS, high cost performance and small size. Based on dual-core ARM Cortex-A53 64-bit processor with built-in Mali T820 MP1 GPU, it is ideal for both industrial and consumer applications requiring high data rates and multimedia functions. SG150H is available in two variants: SG150H-EU and SG150H-AU.

SG150H combines high-speed wireless connectivity with embedded multi-constellation and high-sensitivity GNSS (GPS/ BDS/ GLONASS) receiver for positioning.

A rich set of interfaces (such as LCM, Camera, Touch Panel, MIC, (U)SIM, SDIO, PWM, UART, USB, I2C and SPI) extend the applicability of the module to a wide range of M2M applications, including POS machines, portable payment terminals, public network walkie-talkies, gas scooter dashboards, mobile devices, car recorders, vending machines, barcode scanners, Infrared meters, HD cameras and GPS navigators, etc.



## Key Features

- ✓ Exceptional application and system performance based on the dual-core Cortex-A53 64-bit processor
- ✓ Enhanced mobile rendering APIs for image and video applications via Mali T820 MP1 GPU
- ✓ Worldwide LTE, WCDMA/ GSM/ GPRS/ EDGE coverage
- ✓ Integrated Wi-Fi/ Bluetooth/ GNSS
- ✓ Supports VGA display and 5 MP Camera
- ✓ Packaged in small size to facilitate product design



Dual-core ARM Cortex-A53  
64-bit Processor



Mali T820 MP1



Bluetooth 2.1  
(BR/ EDR + BLE)



Smart LTE Cat 4  
Max. 75 Mbps (DL)  
Max. 50 Mbps (UL)



IEEE 802.11  
b/ g/ n



LGA  
Package



GPS/ BDS or  
GPS/ GLONASS



Powerful Multimedia  
Functions

# Quectel SG150H Series

LTE Cat 4	SG150H-EU	SG150H-AU
Region/ Operator	EMEA	Latin America/ Australia
CPU	SL8521E, dual-core ARM Cortex-A53 64-bit CPU @ 1.3 GHz	SL8521E, dual-core ARM Cortex-A53 64-bit CPU @ 1.3 GHz
Memory	4 Gb NAND + 2 Gb LPDDR2	4 Gb NAND + 2 Gb LPDDR2
OS	Linux	Linux
Dimensions (mm)	31 × 35 × 2.65	31 × 35 × 2.65
Package	LGA	LGA
Weight (g)	4.95	4.95
Temperature Range		
Operating Temperature	-30 °C to +75 °C	-30 °C to +75 °C
Frequency Bands		
LTE-FDD	B1/ 3/ 5/ 7/ 8/ 20	B1/ 2/ 3/ 4/ 5/ 7/ 8/ 28
LTE-TDD	B38/ 40/ 41	-
WCDMA	B1/ 5/ 8	B1/ 2/ 4/ 5/ 8
GSM/EDGE	900/ 1800 MHz	850/ 900/ 1800/ 1900 MHz
WLAN	2.4 GHz, 802.11b/ g/ n	2.4 GHz, 802.11b/ g/ n
Bluetooth	Bluetooth 2.1 + EDR/ 4.2 BLE	Bluetooth 2.1 + EDR/ 4.2 BLE
GNSS	GPS/ BDS or GPS/ GLONASS	GPS/BDS or GPS/ GLONASS
Certifications		
Carrier	TBD	TBD
Regulatory	Global: GCF* Europe: CE	Brazil: Anatel
Others	-	-
Data Rate		
LTE-FDD (Mbps)	75 (DL)/ 50 (UL)	75 (DL)/ 50 (UL)
LTE-TDD (Mbps)	65 (DL)/ 30 (UL)	-
WCDMA (kbps)	384 (DL)/ 384 (UL)	384 (DL)/ 384 (UL)
EDGE (kbps)	296 (DL)/ 236.8 (UL)	296 (DL)/ 236.8 (UL)
GPRS (kbps)	107 (DL)/ 85.6 (UL)	107 (DL)/ 85.6 (UL)
Enhanced Features		
(U)SIM Detection	●	●
Dual SIM Dual Standby	●	●
Firmware Upgrade via OTA	●	●

Notes:

- \*: under development/ in progress/ planning.
- : supported.

# Quectel SG150H Series

LTE Cat 4	General Features
<b>Interfaces</b>	
LCM	× 2 <ul style="list-style-type: none"><li>• SPI: QVGA with up to 320 × 240</li><li>• MIPI: VGA with up to 640 × 480</li></ul>
Camera	× 1, support 2-lane MIPI CSI, up to 5 MP
Touch Panel	Capacitive touch panel, I2C controls
Audio	<ul style="list-style-type: none"><li>• 2 MIC input</li><li>• 1 speaker output</li></ul>
USB 2.0	× 1, compliant with USB 2.0, support USB OTG
(U)SIM	× 2
UART	× 3, one of them supports hardware flow control
SD Card	× 2, one generic SDIO and one SDIO shared with SPI LCD
ADC	× 2
I2C	× 3
SPI	× 2, one generic SPI and one SPI LCD
PWM	× 2
GPIO	× 16
Antenna	× 3 (Main antenna, GNSS antenna, Wi-Fi/ Bluetooth antenna )
<b>Electrical Features</b>	
Supply Voltage Range	3.5–4.2 V, typ. 3.8 V
Power Consumption	300 μA @ power off; 3 mA @ sleep mode