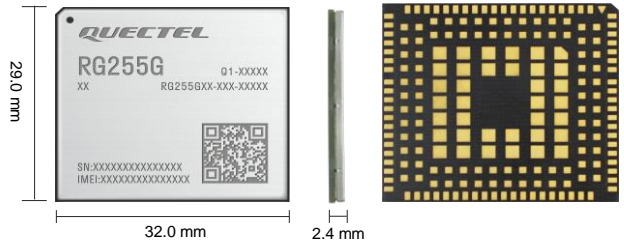


Quectel RG255G Series

5G RedCap Sub-6 GHz LGA Module



Quectel RG255G is a series of 5G Redcap Sub-6 GHz LGA module. Adopting the 3GPP Rel-17 RedCap technology, with features of URLLC/ Slicing, up to 256 QAM DL/ UL and LTE & NR-FR1 (20 MHz), the module supports a theoretical peak data rate of 227 Mbps in the downlink and 122 Mbps in the uplink. The module supports LTE Cat 4 and 5G Sub-6 SA mode, and is backward compatible with Rel-15 and Rel-16 networks. The module is partially compatible with Quectel 4G module EG2x/ EC2x series modules with smaller sizes, which can meet customers' different application demands for medium speed, large capacity, low latency, high reliability, etc., and is convenient for customers to design.

RG255G series module is an industrial-grade module, It can be widely used in smart grid, video network, Internet of Vehicles, POS machines, industrial automation, medium and low-speed FWA and other scenarios.

RG255G series module contains four variants: RG255G-GL, RG255G-EU, RG255G-NA and RG255G-CN. It can support RTOS systems of IoT devices with less RAM and flash memory. The module supports the GNSS function (optional), which integrates a dual- band multi-constellation GNSS (GPS, GLONASS, BDS, Galileo, NavIC and QZSS) receiver. It helps to simplify the product design and can achieve high-precision, fast, and dependable positioning.

A rich set of Internet protocols, industry-standard interfaces (USB 2.0, PCIe 1.0, PCM, UART, SPI, etc.) and abundant functionalities (USB drivers for Windows 8.1/ 10/ 11, Linux and Android) extend the applicability of the module to a wide range of RedCap applications.



Key Features

- ✓ LGA form factor, small size
- ✓ Worldwide 5G/ 4G coverage
- ✓ 5G SA mode, with URLLC/ Slicing features
- ✓ Multi-constellation GNSS receiver available for applications requiring fast and accurate fixes in any environment (optional)
- ✓ Feature refinements: FOTA
- ✓ PCIe 1.0 interface supports EP mode



5G NR Sub-6 GHz



LTE Cat 4



Quectel Enhanced AT Commands



Embedded Abundant Protocols*



LGA Form Factor



Multi-constellation GNSS (Optional)



USB 2.0 High Speed Interface



PCIe 1.0 Interface

Quectel RG255G Series

	RG255G-GL*	RG255G-EU*	RG255G-NA*	RG255G-CN*	
Region/ Operator	Global	EMEA/ APAC ^② / Brazil	North America	China (for CMCC,CT,CU)	
Dimensions (mm)	32.0 × 29.0 × 2.4	32.0 × 29.0 × 2.4	32.0 × 29.0 × 2.4	32.0 × 29.0 × 2.4	
Weight	4.85	TBD	TBD	TBD	
Temperature Range					
Operating Temperature	-30 °C to +75 °C	-30 °C to +75 °C	-30 °C to +75 °C	-30 °C to +75 °C	
Extended Temperature	-40 °C to +85 °C	-40 °C to +85 °C	-40 °C to +85 °C	-40 °C to +85 °C	
Frequency Bands					
5G	5G NR	3GPP Release 17 RedCap SA operation, Sub-6 GHz	3GPP Release 17 RedCap SA operation, Sub-6 GHz	3GPP Release 17 RedCap SA operation, Sub-6 GHz	
	5G NR SA	n1/ 2/ 3/ 5/ 7/ 8/ 12/ 13/ 14/ 18/ 20/ 25/ 26/ 28/ 30/ 38/ 40/ 41/ 48/ 66/ 71/ 77/ 78/ 79(Optional)	n1/ 3/ 5/ 7/ 8/ 20/ 28/ 38/ 40/ 41/ 77/ 78	n2/ 5/ 7/ 12/ 13/ 14/ 25/ 26/ 30/ 38/ 41/ 48/ 66/ 71/ 77/ 78	n1/ 5/ 8/ 28/ 41/ 78/ 79(Optional)
LTE	LTE-FDD	B1/ 2/ 3/ 4/ 5/ 7/ 8/ 12(17)/ 13/ 14/ 18/ 19/ 20/ 25/ 26/ 28/ 30/ 66/ 71	B1/ 3/ 5/ 7/ 8/ 20/ 28/ 71	B2/ 4/ 5/ 7/ 12/ 13/ 14/ 17/ 25/ 26/ 30/ 66/ 71	B1/ 3/ 5/ 7/ 8
	LTE-TDD	B34/ 38/ 39/ 40/ 41/ 42/ 43/ 48	B38/ 40/ 41/ 42/ 43	B38/ 41/ 42/ 43/ 48	B38/ 39/ 40/ 41
GNSS (Optional)	GPS/ GLONASS/ BDS/ Galileo/ NavIC/ QZSS	GPS/ GLONASS/ BDS/ Galileo/ NavIC/ QZSS	GPS/ GLONASS/ BDS/ Galileo/ NavIC/ QZSS	GPS/ GLONASS/ BDS/ Galileo/ NavIC/ QZSS	
Certifications					
Regulatory	PTCRB*/GCF*/FCC*/IC*	CE*/ RCM*/ GCF*	FCC*/ IC*/ PTCRB*	CCC*/NAL*	
Carrier	TBD	TBD	TBD	TBD	
Others	RoHS	RoHS	RoHS	RoHS	
Data Rates (Max.) ^①					
5G SA Sub-6 GHz (256QAM)	227 Mbps (DL)/ 122 Mbps (UL)	227 Mbps (DL)/ 122 Mbps (UL)	227 Mbps (DL)/ 122 Mbps (UL)	227 Mbps (DL)/ 122 Mbps (UL)	
LTE(64QAM)	150 Mbps (DL)/ 75 Mbps (UL)	150 Mbps (DL)/ 75 Mbps (UL)	150 Mbps (DL)/ 75 Mbps (UL)	150 Mbps (DL)/ 75 Mbps (UL)	
Interfaces					
(U)SIM	× 2	× 2	× 2	× 2	
UART	× 2	× 2	× 2	× 2	
USB 2.0	× 1	× 1	× 1	× 1	
PCIe 1.0* (EP mode)	× 1	× 1	× 1	× 1	
I2C*	× 1	× 1	× 1	× 1	
SPI*	× 1	× 1	× 1	× 1	
ADC	× 2	× 2	× 2	× 2	
RESET_N	●	●	●	●	
GPIOs	●	●	●	●	
Antennas	Cellular: × 2; GNSS: × 1	Cellular: × 2; GNSS: × 1	Cellular: × 2; GNSS: × 1	Cellular: × 2; GNSS: × 1	
Enhanced Features					
FOTA*	●	●	●	●	
(U)SIM Card Detection*	●	●	●	●	
Drivers					
USB Serial Driver*	Windows 8.1/ 10/ 11; Linux 2.6–6.7; Android 4.x–14.x	Windows 8.1/ 10/ 11; Linux 2.6–6.7; Android 4.x–14.x	Windows 8.1/ 10/ 11; Linux 2.6–6.7; Android 4.x–14.x	Windows 8.1/ 10/ 11; Linux 2.6–6.7; Android 4.x–14.x	
RIL Driver*	Android 4.x–14.x	Android 4.x–14.x	Android 4.x–14.x	Android 4.x–14.x	
PCIe MHI Driver*	Linux 5.15–6.7	Linux 5.15–6.7	Linux 5.15–6.7	Linux 5.15–6.7	
USB MBIM Driver	Windows 10/ 11; Linux 3.18–6.7	Windows 10/ 11; Linux 3.18–6.7	Windows 10/ 11; Linux 3.18–6.7	Windows 10/ 11; Linux 3.18–6.7	
USB ECM Driver*	Windows 10/ 11; Linux 2.6–6.7	Windows 10/ 11; Linux 2.6–6.7	Windows 10/ 11; Linux 2.6–6.7	Windows 10/ 11; Linux 2.6–6.7	
USB NCM Driver	Windows 11; Linux 3.4–6.7	Windows 11; Linux 3.4–6.7	Windows 11; Linux 3.4–6.7	Windows 11; Linux 3.4–6.7	
USB RNDIS Driver	Windows 8.1/ 10/ 11; Linux 2.6–6.7	Windows 8.1/ 10/ 11; Linux 2.6–6.7	Windows 8.1/ 10/ 11; Linux 2.6–6.7	Windows 8.1/ 10/ 11; Linux 2.6–6.7	
Electrical Features					
Supply Voltage Range	3.3–4.3 V, typ. 3.8 V	3.3–4.3 V, typ. 3.8 V	3.3–4.3 V, typ. 3.8 V	3.3–4.3 V, typ. 3.8 V	
Power Consumption	TBD	TBD	TBD	TBD	

NOTE:

- ①: Theoretical only; actual values depend on network conditions.
- *: Under development/ planning.
- ②: Excl. China/Japan.
- : Supported.
- TBD: To be determined.