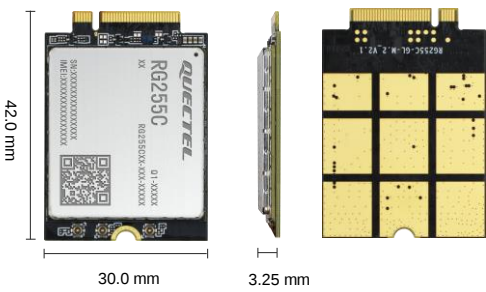


Quectel RG255C-GL M.2

5G RedCap Sub-6 GHz M.2 Module



Quectel RG255C-GL M.2 is a 5G Sub-6 GHz M.2 module. Adopting the 3GPP Rel-17 RedCap technology, with features of 5G LAN^{*}/ URLLC/ Slicing, the module supports a theoretical peak data rate of 223 Mbps in the downlink and 123 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 can meet customers' different application demands for medium speed, large capacity, low latency, high reliability, etc., and is convenient for customers to design.

RG255C-GL M.2 module supports Qualcomm® IZat™ location technology Gen 9VT (GPS, GLONASS, BDS, Galileo, QZSS & NavIC^{*}). The integrated GNSS receiver greatly simplifies product design and provides quicker, more accurate and more dependable positioning capability.

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



Key Features

- ✓ M.2 form factor
- ✓ Worldwide 5G/ LTE coverage
- ✓ 5G SA mode with features of 5G LAN^{*}/ URLLC/ Slicing
- ✓ Multi-constellation GNSS receiver available for applications requiring fast and accurate fixes in any environment (Optional)
- ✓ Feature refinements: DFOTA and VoNR/VoLTE (Optional)
- ✓ PCIe 2.0 interface for Wi-Fi/Bluetooth

 5G NR Sub-6 GHz Bands	 LTE Cat 4 (DL)	 Multi-constellation GNSS (Optional)
 Embedded Abundant Protocols	 M.2 Form Factor	 USB 2.0 High Speed Interface
 PCIe 2.0 High Speed Interface	 VoNR/ VoLTE (Optional)	 Quectel Enhanced AT Commands

5G RedCap Sub-6		RG255C-GL M.2
Region/Operator		Global
Dimensions (mm)		30 × 42 × 3.25
Weight (g)		8.4
Temperature Range		
Operating Temperature		-30 °C to +75 °C
Extended Temperature		-40 °C to +85 °C
Frequency Bands		
5G NR	5G NR	3GPP Rel-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/ 70/ 71/ 77/ 78/ 79
	DL 2 × 2 MIMO	n1/ 2/ 3/ 5/ 7/ 8/ 12/ 13/ 14/ 18/ 20/ 25/ 26/ 28/ 30/ 38/ 40/ 41/ 48/ 66/ 70/ 71/ 77/ 78/ 79
LTE	LTE-FDD	B1/ 2/ 3/ 4/ 5/ 7/ 8/ 12/ 13/ 14/ 17/ 18/ 19/ 20/ 25/ 26/ 28/ 30/ 66/ 70/ 71
	LTE-TDD	B34/ 38/ 39/ 40/ 41/ 42/ 43/ 48
	DL 2 × 2 MIMO	B1/ 2/ 3/ 4/ 5/ 7/ 8/ 12/ 13/ 14/ 17/ 18/ 19/ 20/ 25/ 26/ 28/ 30/ 34/ 38/ 39/ 40/ 41/ 42/ 43/ 48/ 66/ 70/ 71
GNSS (Optional)		GPS/ GLONASS/ BDS/ Galileo/ QZSS/ NavIC*
Certifications		
Regulatory		CE ^② / FCC ^② / IC ^② / RCM ^② / GCF ^③ / PTCRB ^③
Carrier		AT&T ^③ / T-Mobile ^③ / Verizon ^{④⑤} / Boost_Mobile(DISH)
Others		RoHS
Data Rates (Max.) ^①		
5G SA Sub-6		223 Mbps (DL)/ 123 Mbps (UL)
LTE		195 Mbps (DL)/ 105 Mbps (UL)
Interfaces		
USIM		× 2
USB 2.0		× 1
PCIe 2.0		× 1
RESET#		× 1
PCM		× 1
Antennas		Cellular: ×2; GNSS: × 1
Voice* (optional)		
Voice		Digital Audio and VoNR/VoLTE
Enhanced Features		
eSIM		○
DTMF		●
DFOTA		●
(U)SIM Card Detection		○
Drivers		
USB Serial Driver		Windows 10/11; Linux 2.6–6.7; Android 4.x–14.x
RIL Driver		Android 4.x–14.x
PCIe MHI Driver		Linux 3.10–6.7
USB MBIM Driver ^⑥		Windows 10/11; Linux 3.18–6.7
USB RNDIS Driver		Windows 10/11; Linux 2.6–6.7
USB GobiNet Driver		Linux 2.6–6.7
USB QMI_WWAN Driver		Linux 3.4–6.7
Electrical Features		
Supply Voltage Range		3.135–4.4 V, typ. 3.7 V
Power Consumption		Typical 2.9 mA @ Sleep Typical 28 mA @ Idle

NOTE:

- ①: Theoretical only; actual values depend on network conditions.
- ②: CE, FCC, IC and RCM can only provide certification reports.
- ③: AT&T, T-Mobile, GCF and PTCRB can reuse RG255C-GL certification results.
- ④: Verizon requires Delta testing based on RG255C-GL to obtain Variant certification.
- ⑤: Arrange testing based on actual business opportunity.

- ⑥: Optional (a license is required to use this driver).
- *: Under development/In progress.
- : Supported; ○: Optional.
- TBD: To be determined.