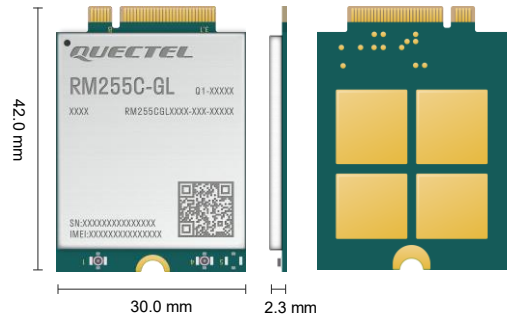


Quectel RM255C-GL

5G RedCap Sub-6 GHz M.2 Module



Quectel RM255C-GL is a 5G Sub-6 GHz M.2 module. Adopting the 3GPP Rel-17 technology, 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 GHz SA mode, and is backward compatible with Rel-15 and Rel-16 networks. With M.2 form factor, it is pin-to-pin compatible with Quectel 5G modules RM5x0N/ RM50xQ series, and is pin-to-pin and size compatible with LTE-A Cat 6 module EM06 series, Cat 12 modules EM12/ EM12xR/ EM120K series, Cat 16 module EM160R-GL and 4G module EM05 series.

RM255C-GL supports Qualcomm® IZat™ location technology Gen 9VT (GPS, GLONASS, BDS, Galileo, QZSS and 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, 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, small size
- ✓ Worldwide 5G/ LTE coverage
- ✓ 5G SA mode
- ✓ Multi-constellation GNSS receiver available for applications requiring fast and accurate fixes in any environment (Optional)
- ✓ Feature refinement: DFOTA

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

5G RedCap Sub-6 GHz		RM255C-GL
Region/Operator		Global
Dimensions (mm)		30.0 × 42.0 × 2.3
Weight (g)		Approx. 6
Supply Voltage Range		3.135–4.4 V, typ. 3.7 V
Power Consumption		101 μA @ Power off 2.83 mA @ Sleep mode 21.97 mA @ Idle state
Temperature Range		
Operating Temperature		-30 °C to +75 °C
Extended Temperature		-40 °C to +85 °C
Frequency Bands		
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
LTE	LTE-FDD	B1/ 2/ 3/ 4/ 5/ 7/ 8/ 12/ 13/ 14/ 17/ 18/ 19/ 20/ 25/ 26/ 28/ 30/ 66/ 71
	LTE-TDD	B34/ 38/ 39/ 40/ 41/ 42/ 43/ 48
GNSS (Optional)		GPS/ GLONASS/ BDS/ Galileo/ NaVIC*/ QZSS
Certifications		
Regulatory		CE/ RCM /FCC/ IC/ GCF/ PTCRB
Carrier		AT&T ^② / Verizon ^② / T-Mobile ^②
Others		RoHS
Data Rates (Max.) ^①		
5G SA Sub-6 GHz		223 Mbps (DL)/123 Mbps (UL)
LTE		200 Mbps (DL)/ 105 Mbps (UL)
Interfaces		
(U)SIM		× 2
USB 2.0		× 1
PCIe 2.0		× 1
Antennas (Sub-6 GHz/GNSS)		ANT1_MAIN ANT4_DRX/GNSS L1 ANT5_GNSS L1&L5 (optional)
Enhanced Features		
eSIM		○
DFOTA		●
(U)SIM Card Detection		○

NOTE:

- ①: Theoretical only; actual values depend on network conditions.
- ②: Based on actual business case.
- * : Under development/In progress.
- : Supported; ○: Optional.