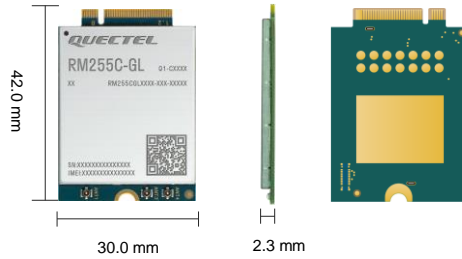


Quectel RM255C-GL

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 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, and is pin-to-pin and size compatible with LTE-A Cat 6 module EM06, Cat 12 modules EM12/ EM12xR/ EM120K, Cat 16 module EM160R-GL and 4G module EM05.

RM255C-GL supports Qualcomm® IZat™ location technology Gen 9VT (GPS, GLONASS, BDS, Galileo). 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 7/ 8/ 8.1/ 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 refinements: DFOTA



5G NR Sub-6 GHz Bands



LTE Cat 4 (DL)



Multi-constellation GNSS (Optional)



Embedded Abundant Protocols



M.2 Form Factor



USB 2.0/PCIe 2.0 High Speed Interface



Quectel Enhanced AT Commands

5G Sub-6		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		TBD
Temperature Range		
Operating Temperature		-30 °C to +75 °C
Extended Temperature		-40 °C to +85 °C
Frequency Bands		
5G NR	SA	n1/ n2/ n3/ n5/ n7/ n8/ n12/ n13/ n14/ n18/ n20/ n25/ n26/ n28/ n30/ n38/ n40/ n41/ n48/ n53 ^② / n66/ n70/ n71/ n77/ n78/ n79
LTE	LTE-FDD	B1/ B2/ B3/ B4/ B5/ B7/ B8/ B12/ B13/ B14/ B17/ B18/ B19/ B20/ B25/ B26/ B28/ B30/ B66/ B71
	LTE-TDD	B34/ B38/ B39/ B40/ B41/ B42/ B43/ B48
GNSS (Optional)		GPS/ GLONASS/ BDS/ Galileo
Certifications		
Regulatory		TBD
Carrier		TBD
Others		RoHS
Data Rates (Max.) ^①		
5G SA Sub-6 (64QAM) (256QAM) (Optional)		223 Mbps (DL)/123 Mbps (UL)
LTE		195 Mbps (DL)/ 105 Mbps (UL)
Interfaces		
USIM		× 2
USB 2.0		× 1
PCIe 2.0		× 1
Antennas		Cellular: ×2 (1T2R & 1T1R); GNSS: × 1
Enhanced Features		
eSIM		○
DTMF*		●
DFOTA*		●
(U)SIM Card Detection		○

NOTE:

- ①: Theoretical only; actual values depend on network conditions.
- ②: Optional.
- *: Under development/In progress.
- : Supported.
- : Optional.
- TBD: To be determined.