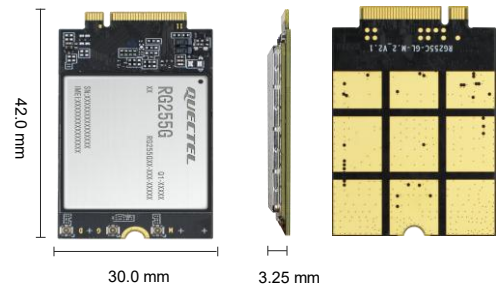


Quectel RG255G Series M.2

5G RedCap Sub-6 GHz M.2 Module



Quectel RG255G Series M.2 module is a 5G RedCap Sub-6 GHz M.2 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 3GPP 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.

RG255G Series M.2 module is an industrial-grade module for industrial and commercial applications only.

RG255G Series M.2 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*, 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)

 5G NR Sub-6 GHz Bands	 LTE Cat 4	 Quectel Enhanced AT Commands
 Embedded Abundant Protocols*	 M.2 Form Factor	 Multi-constellation GNSS (Optional)
 USB 2.0 High Speed Interface	 PCIe 1.0* Interface	

Quectel RG255G Series M.2

5G RedCap Sub-6	RG255G-GL M.2	RG255G-NA M.2
Region/ Operator	Global	North America
Dimensions (mm)	30 × 42 × 3.25	30 × 42 × 3.25
Weight (g)	Approx. 8.05	Approx. 8.05
Temperature Range		
Operating Temperature	-30 °C to +75 °C	-30 °C to +75 °C
Extended Temperature	-40 °C to +85 °C	-40 °C to +85 °C
Frequency Bands		
5G NR	3GPP Rel-17 RedCap SA operation, Sub-6 GHz	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/ 71/ 77/ 78/ 79 (Optional)/ 85	n2/ 5/ 7/ 12/ 13/ 14/ 25/ 26/ 30/ 38/ 41/ 48/ 66/ 71/ 77/ 78/ 85
DL 2 × 2 MIMO	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)/ 85	n2/ 5/ 7/ 12/ 13/ 14/ 25/ 26/ 30/ 38/ 41/ 48/ 66/ 71/ 77/ 78/ 85
LTE		
LTE-FDD	B1/ 2/ 3/ 4/ 5/ 7/ 8/ 12 (17)/ 13/ 14/ 18/ 19/ 20/ 25/ 26/ 28/ 30/ 66/ 71	B2/ 4/ 5/ 7/ 12/ 13/ 14/ 17/ 25/ 26/ 30/ 66/ 71
LTE-TDD	B34/ 38/ 39/ 40/ 41/ 42/ 43/ 48	B38/ 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/ 71	B2/ 4/ 5/ 7/ 12/ 13/ 14/ 17/ 25/ 26/ 30/ 38/ 41/ 42/ 43/ 48/ 66/ 71
GNSS (Optional)	GPS/ GLONASS/ BDS/ Galileo/ NavIC/ QZSS	GPS/ GLONASS/ BDS/ Galileo/ NavIC/ QZSS
Certifications		
Regulatory/ Conformance	Global: GCF* Europe: CE* North America: PTCRB* America: FCC* Canada: IC* Australia/ New Zealand: RCM*	North America: PTCRB* America: FCC* Canada: IC*
Carrier	TBD	Verizon*/ AT&T*/ T-Mobile*
Others	RoHS	RoHS
Data Rates (Max.) ^①		
5G SA Sub-6	227 Mbps (DL)/ 122 Mbps (UL)	227 Mbps (DL)/ 122 Mbps (UL)
LTE	150 Mbps (DL)/ 75 Mbps (UL)	150 Mbps (DL)/ 75 Mbps (UL)
Interfaces		
USIM	× 2	× 2
USB 2.0	× 1	× 1
PCIe 1.0*	× 1	× 1
RESET#	× 1	× 1
PCM*	× 1	× 1
Antennas	Cellular: ×2; GNSS: × 1	Cellular: ×2; GNSS: × 1
Enhanced Features		
eSIM*	○	○
DTMF*	●	●
FOTA*	●	●
(U)SIM Card Detection	●	●
Drivers		
USB Serial Driver	Windows 10/ 11 Linux 2.6–6.7 Android 4.x–14.x*	Windows 10/ 11 Linux 2.6–6.7 Android 4.x–14.x*
RIL Driver	Android 4.x–16.x	Android 4.x–16.x
PCIe Driver*	Linux 3.10-6.7	Linux 3.10-6.7
USB MBIM Driver	Windows 10/ 11 Linux 4.4–6.12	Windows 10/ 11 Linux 4.4–6.12
USB ECM Driver	Linux 2.6–6.12	Linux 2.6–6.12
USB NCM Driver	Linux 3.4–6.12	Linux 3.4–6.12
USB RNDIS Driver	Windows 10/ 11 Linux 2.6–6.12	Windows 10/ 11 Linux 2.6–6.12
GNSS Driver*	Android 4.x–16.x	Android 4.x–16.x
Electrical Features		
Supply Voltage Range	3.135–4.4 V, typ. 3.7 V	3.135–4.4 V, typ. 3.7 V
Power Consumption	Typical 2.3 mA @ Sleep Typical 23 mA @ Idle	Typical 2.3 mA @ Sleep Typical 23 mA @ Idle

NOTE:

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

