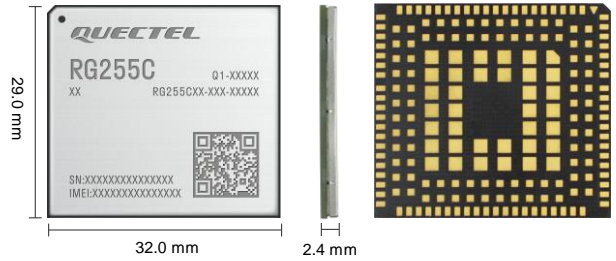


# Quectel RG255C Series

## 5G RedCap Sub-6 GHz LGA Module



Quectel RG255C is a series of 5G Redcap Sub-6 GHz LGA module. Adopting the 3GPP Rel-17 RedCap technology, with features of 5G LAN/ URLLC/ Slicing, the module supports a theoretical peak data rate of 220 Mbps in the downlink and 120 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 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.

RG255C series module is an industrial-grade module for industrial and commercial applications only.

RG255C series module contains three variants: RG255C-GL, RG255C-NA\* and RG255C-EU\*\*. It supports Qualcomm® IZat™ location technology Gen 9VT (GPS, GLONASS, BDS and 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, PCM, UART, SGMII, SPI, etc.) and abundant functionalities (USB drivers for Windows 8/ 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 5G LAN/ URLLC/ Slicing features
- ✓ 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



LTE Cat 4



Quectel Enhanced AT Commands



Embedded Abundant Protocols



LGA Form Factor



Multi-constellation GNSS (optional)



USB 2.0 High Speed Interface



PCIe 2.0 Interface



VoNR/ VoLTE (optional)

# Quectel RG255C Series

|  | RG255C-GL  | RG255C-NA*  | RG255C-EU**  |  |
|--|--|---|--|--|
| <b>Region/Operator</b>                     | Global   | North America   | EMEA/APAC <sup>①</sup> /Brazil                                   |  |
| <b>Dimensions (mm)</b>                     | 29.0 × 32.0 × 2.4                                    | 29.0 × 32.0 × 2.4   | 29.0 × 32.0 × 2.4  |  |
| <b>Weight</b>                              | Approx. 5.2 g  | Approx. 5.2 g   | Approx. 5.2 g  |  |
| <b>Temperature Range</b>                   |  |   |  |  |
| <b>Operating Temperature</b>               | -30 °C to +75 °C                                     | -30 °C to +75 °C  | -30 °C to +75 °C   |  |
| <b>Extended Temperature</b>                | -40 °C to +85 °C                                     | -40 °C to +85 °C  | -40 °C to +85 °C   |  |
| <b>Frequency Bands</b>                     |  |   |  |  |
| <b>5G</b>                                  | <b>5G NR</b>   | <b>3GPP Release 17 RedCap SA operation, Sub-6 GHz</b>   | <b>3GPP Release 17 RedCap SA operation, Sub-6 GHz</b>            |  |
|  | <b>5G NR SA</b>                                      | 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 | n2/ 5/ 7/ 12/ 13/ 14/ 25/ 26/ 30/ 38/ 41/ 48/ 66/ 70/ 71/ 77/ 78 | n1/ 3/ 5/ 7/ 8/ 20/ 28/ 38/ 40/ 41/ 77/ 78 |
| <b>LTE</b>                                 | <b>LTE-FDD</b>                                       | B1/ 2/ 3/ 4/ 5/ 7/ 8/ 12/ 13/ 14/ 17/ 18/ 19/ 20/ 25/ 26/ 28/ 30/ 66/ 70/ 71                  | B2/ 4/ 5/ 7/ 12/ 13/ 14/ 17/ 25/ 26/ 30/ 66/ 71                  | B1/ 3/ 5/ 7/ 8/ 20/ 28/ 71                 |
|  | <b>LTE-TDD</b>                                       | B34/ 38/ 39/ 40/ 41/ 42/ 43/ 48   | B38/ 41/ 42/ 43/ 48  | B38/ 40/ 41/ 42/ 43                        |
| <b>GNSS (Optional)</b>                     | GPS/ GLONASS/ BDS/ Galileo                           | GPS/ GLONASS/ BDS/ Galileo  | GPS/ GLONASS/ BDS/ Galileo                                       |  |
| <b>Certifications</b>                      |  |   |  |  |
| <b>Regulatory</b>                          | CE*/ RCM*/ FCC*/ IC*/ GCF*/ PTCRB*                   | FCC*/ IC*/ GCF*   | TBD  |  |
| <b>Carrier</b>                             | TBD  | TBD   | TBD  |  |
| <b>Others</b>                              | RoHS   | RoHS  | RoHS   |  |
| <b>Data Rates (Max.)<sup>②</sup></b>       |  |   |  |  |
| <b>5G SA Sub-6 GHz (64QAM)</b>             | 150 Mbps (DL)/ 50 Mbps (UL)                          | 150 Mbps (DL)/ 50 Mbps (UL)   | 150 Mbps (DL)/ 50 Mbps (UL)                                      |  |
| <b>5G SA Sub-6 GHz (256QAM) (Optional)</b> | 220 Mbps (DL)/ 120 Mbps (UL)                         | 220 Mbps (DL)/ 120 Mbps (UL)  | 220 Mbps (DL)/ 120 Mbps (UL)                                     |  |
| <b>LTE</b>                                 | 150 Mbps (DL)/ 50 Mbps (UL)                          | 150 Mbps (DL)/ 50 Mbps (UL)   | 150 Mbps (DL)/ 50 Mbps (UL)                                      |  |
| <b>Interfaces</b>                          |  |   |  |  |
| <b>(U)SIM</b>                              | × 2  | × 2   | × 2  |  |
| <b>UART</b>                                | × 2  | × 2   | × 2  |  |
| <b>SGMII</b>                               | × 1  | × 1   | × 1  |  |
| <b>USB 2.0</b>                             | × 1  | × 1   | × 1  |  |
| <b>PCIe 2.0</b>                            | × 1  | × 1   | × 1  |  |
| <b>PCM*</b>                                | × 1  | × 1   | × 1  |  |
| <b>I2C</b>                                 | × 1  | × 1   | × 1  |  |
| <b>SPI</b>                                 | × 1  | × 1   | × 1  |  |
| <b>ADC</b>                                 | ●  | ●   | ●  |  |
| <b>RESET_N</b>                             | ●  | ●   | ●  |  |
| <b>GPIOs (QuecOpen<sup>®</sup>)</b>        | ●  | ●   | ●  |  |
| <b>Antennas</b>                            | Cellular: × 2; GNSS: × 1                             | Cellular: × 2; GNSS: × 1  | Cellular: × 2; GNSS: × 1   |  |
| <b>Voice</b>                               |  |   |  |  |
| <b>Voice</b>                               | Digital Audio and VoNR/VoLTE (optional)              | Digital Audio and VoNR/VoLTE (optional)   | Digital Audio and VoNR/VoLTE (optional)                          |  |
| <b>Enhanced Features</b>                   |  |   |  |  |
| <b>eSIM</b>                                | ○  | ○   | ○  |  |
| <b>DTMF*</b>                               | ●  | ●   | ●  |  |
| <b>DFOTA</b>                               | ●  | ●   | ●  |  |
| <b>(U)SIM Card Detection</b>               | ●  | ●   | ●  |  |
| <b>Drivers</b>                             |  |   |  |  |
| <b>USB Serial Driver</b>                   | Windows 8/8.1/10/11; Linux 2.6–6.5; Android 4.x–13.x | Windows 8/8.1/10/11; Linux 2.6–6.5; Android 4.x–13.x  | Windows 8/8.1/10/11; Linux 2.6–6.5; Android 4.x–13.x             |  |
| <b>RIL Driver</b>                          | Android 4.x–13.x                                     | Android 4.x–13.x  | Android 4.x–13.x   |  |
| <b>PCIe MHI Driver</b>                     | Linux 3.10–6.5                                       | Linux 3.10–6.5  | Linux 3.10–6.5   |  |
| <b>USB NDIS Driver</b>                     | Windows 8/8.1/10/11                                  | Windows 8/8.1/10/11   | Windows 8/8.1/10/11  |  |
| <b>USB MBIM Driver</b>                     | Windows 10/11; Linux 3.18–6.5                        | Windows 10/11; Linux 3.18–6.5   | Windows 10/11; Linux 3.18–6.5                                    |  |
| <b>USB RNDIS Driver</b>                    | Windows 8/8.1/10/11; Linux 2.6–6.5                   | Windows 8/8.1/10/11; Linux 2.6–6.5  | Windows 8/8.1/10/11; Linux 2.6–6.5                               |  |
| <b>USB GobiNet Driver</b>                  | Linux 2.6–6.5  | Linux 2.6–6.5   | Linux 2.6–6.5  |  |
| <b>USB QMI_WWAN Driver</b>                 | Linux 3.4–6.5  | Linux 3.4–6.5   | Linux 3.4–6.5  |  |
| <b>Electrical Features</b>                 |  |   |  |  |
| <b>Supply Voltage Range</b>                | 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  |  |
| <b>Power Consumption</b>                   | TBD  | TBD   | TBD  |  |

**NOTE:**

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