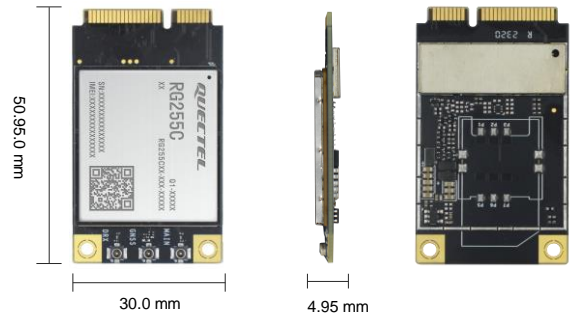


Quectel RG255C Series Mini PCIe

5G RedCap Sub-6 GHz Mini PCIe Module



Quectel RG255C series Mini PCIe is a series of 5G RedCap modules adopting standard PCI Express® Mini Card form factor (Mini PCIe). Adopting the 3GPP Rel-17 RedCap technology, the module supports 5G LAN/ Slicing/ URLLC, etc., with 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 modes, 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.

RG255C series Mini PCIe module contains two variants: RG255C-GL Mini PCIe and RG255C-NA Mini PCIe*. It supports Qualcomm® IZat™ location technology Gen 9VT (GPS, GLONASS, NavIC, 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, PCM, UART, 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

- ✓ Worldwide 5G/ 4G coverage
- ✓ 5G SA mode, 5G LAN/ URLLC/ Slicing supported
- ✓ Multi-constellation GNSS receiver available for applications requiring fast and accurate fixes in any environment (optional)
- ✓ Feature refinements: DFOTA and VoNR/ VoLTE (optional)

 5G^{NR} 5G NR Sub-6 GHz Bands	 4G LTE LTE Cat 4	 AT Quectel Enhanced AT Commands
 Embedded Abundant Protocols	 Mini PCIe Mini PCIe Form Factor	 Multi-constellation GNSS (optional)
 USB 2.0 High Speed Interface	 VoNR 5G Voice over LTE (optional)	

Quectel RG255C Series Mini PCIe

5G Sub-6		RG255C-NA Mini PCIe*	RG255C-GL Mini PCIe
Region/Operator		North America	Global
Dimensions (mm)		30.0 × 50.95 × 4.95	30.0 × 50.95 × 4.95
Weight (g)		TBD	TBD
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 Release 17 RedCap SA operation, Sub-6 GHz	3GPP Release 17 RedCap SA operation, Sub-6 GHz
5G	5G NR SA	n2/ 5/ 7/ 12/ 13/ 14/ 25/ 26/ 30/ 38/ 41/ 48/ 66/ 70/ 71/ 77/ 78	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	n2/ 5/ 7/ 12/ 13/ 14/ 25/ 26/ 30/ 38/ 41/ 48/ 66/ 70/ 71/ 77/ 78	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	B2/ 4/ 5/ 7/ 12/ 13/ 14/ 17/ 25/ 26/ 30/ 66/ 71	B1/ 2/ 3/ 4/ 5/ 7/ 8/ 12/ 13/ 14/ 17/ 18/ 19/ 20/ 25/ 26/ 28/ 30/ 66/ 70/ 71
	LTE-TDD	B38/ 41/ 42/ 43/ 48	B34/ 38/ 39/ 40/ 41/ 42/ 43/ 48
	DL 2 × 2 MIMO	n2/ 5/ 7/ 12/ 13/ 14/ 25/ 26/ 30/ 38/ 41/ 48/ 66/ 70/ 71/ 77/ 78	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/ NavIC	GPS/ GLONASS/ BDS/ Galileo/ NavIC
Certifications			
Regulatory		FCC*/ IC*/ PTCRB*	TBD
Carrier		TBD	TBD
Others		RoHS	RoHS
Data Rates (Max.) ^①			
5G SA Sub-6		223 Mbps (DL)/ 123 Mbps (UL)	223 Mbps (DL)/ 123 Mbps (UL)
LTE		195 Mbps (DL)/ 105 Mbps (UL)	195 Mbps (DL)/ 105 Mbps (UL)
Interfaces			
(U)SIM		× 2	× 2
UART		× 2	× 2
USB 2.0		× 1	× 1
PCM*		× 1	× 1
I2C		× 1	× 1
PERST#		●	●
Antennas		Cellular: × 2; GNSS: × 1	Cellular: × 2; GNSS: × 1
Voice			
Voice		Digital Audio and VoLTE/VoNR (optional)	Digital Audio and VoLTE/VoNR (optional)
Enhanced Features			
eSIM		○	○
DTMF*		●	●
DFOTA		●	●
(U)SIM Card Detection		●	●
Drivers			
USB Serial Driver		Windows 7/8/8.1/10/11; Linux 2.6–6.7; Android 4.x–12.x	Windows 7/8/8.1/10/11; Linux 2.6–6.7; Android 4.x–12.x
RIL Driver		Android 4.x–12.x	Android 4.x–12.x
USB MBIM Driver*		Windows 10/11; Linux 3.18–6.7	Windows 10/11; Linux 3.18–6.7
USB GobiNet Driver		Linux 2.6–6.7	Linux 2.6–6.7
USB QMI_WWAN Driver		Linux 3.4–6.7	Linux 3.4–6.7
Electrical Features			
Supply Voltage Range		3.0–3.6 V, typ. 3.3 V	3.0–3.6 V, typ. 3.3 V
Power Consumption		TBD	TBD

NOTE:

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