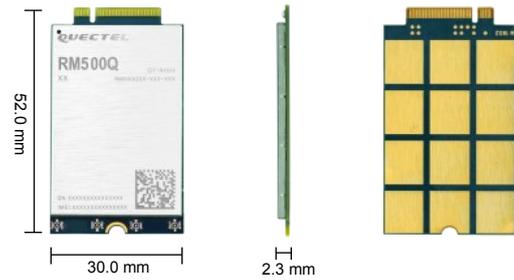


Quectel RM500Q-GL

IoT/eMBB-Optimized
5G Sub-6GHz M.2 Module



Quectel RM500Q-GL is a 5G module optimized specially for IoT/eMBB applications. Adopting the 3GPP Rel. 15 LTE technology, it supports both 5G NSA and SA modes. Designed in an M.2 form factor, RM500Q-GL is compatible with Quectel LTE-A Cat 6 module EM06, Cat 12 module EM12 and Cat 20 module EM20, which will facilitate customers to migrate from LTE-A to 5G.

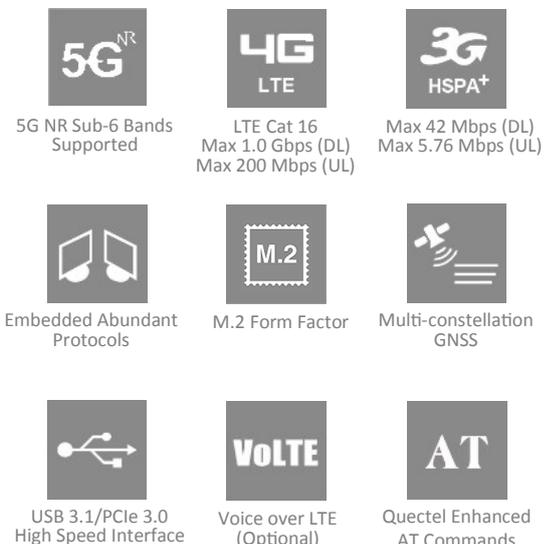
The global version RM500Q-GL nearly covers all the mainstream carriers worldwide. The module supports Qualcomm® IZat™ location technology Gen8C Lite (GPS, GLONASS, BeiDou/Compass and Galileo). The integrated GNSS receiver greatly simplifies product design and provides quicker, more accurate and more dependable positioning capability.

A rich set of Internet protocols, industry-standard interfaces and abundant functionalities (USB/PCIe drivers for Windows 7/8/8.1/10, Linux, Android) extend the applicability of the module to a wide range of M2M and IoT applications such as industrial router, home gateway, STB, industrial laptop, consumer laptop, industrial PDA, rugged tablet PC, video surveillance and digital signage.



Key Benefits

- ✓ 5G/4G/3G multi-mode module with M.2 form factor, optimized for IoT and eMBB applications
- ✓ Worldwide 5G and LTE-A coverage
- ✓ Both NSA and SA modes supported
- ✓ Multi-constellation GNSS receiver available for applications requiring fast and accurate fixes in any environment
- ✓ Feature refinements: DFOTA and VoLTE (Optional)



Rev.: V1.0 | Status: Preliminary

Quectel RM500Q-GL

RM500Q-GL	
Region/Operator	Global
Dimensions (mm)	52.0 × 30.0 × 2.3
Temperature Range	
Operation Temperature	-20 °C to +60 °C
Extended Temperature	-40 °C to +85 °C
Frequency Bands	
5G NR	n1/n2/n3/n5/n7/n8/n12/n20/n25/n28/n38/n40/n41/n48/n66/n71/n77/n78/n79
LTE-FDD	B1/B2/B3/B4/B5/B7/B8/B9/B12/B13/B14/B17/B18/B19/B20/B25/B26/B28/B29/B30/B32/B66/B71
LTE-TDD	B34/B38/39/B40/B41/B42/B43/B48
LAA	B46
WCDMA	B1/B2/B3/B4/B5/B6/B8/B19
GNSS	GPS/GLONASS/BeiDou (Compass)/Galileo
Certifications	
Carrier	TBD
Regulatory	Global: GCF Europe: CE North America: FCC/IC/PTCRB China: CCC
Others	RoHS/WHQL
Data Transmission ^①	
5G SA Sub-6 Data Rate (Mbps)	DL 2.1 Gbps; UL 900 Mbps
5G NSA Sub-6 Data Rate (Mbps)	DL 2.5 Gbps; UL 650 Mbps
LTE Data Rate (Mbps)	DL 1.0 Gbps; UL 200 Mbps
WCDMA Data Rate (Mbps)	DL 42 Mbps; UL 5.76 Mbps
Interfaces	
(U)SIM	x 2
UART	x 1
USB 2.0	x 1
USB 3.0/3.1	x 1
PCIe 3.0	x 1
Audio Digital (PCM)	x 1
Voice	
VoLTE	Digital Audio and VoLTE (Voice over LTE) (Optional)
Enhanced Features	
e-SIM	External e-SIM supported
DFOTA*	●
(U)SIM Card Detection	●
Drivers	
USB Serial Driver	Windows 7/8/8.1/10, Linux 2.6–5.4, Android 4.x/5.x/6.x/7.x/8.x/9.x/10
GNSS Driver	Android 4.x/5.x/6.x/7.x/8.x/9.x/10
RIL Driver	Android 4.x/5.x/6.x/7.x/8.x/9.x/10
NDIS Driver	Windows 7/8/8.1/10
MBIM Driver	Windows 7/8/8.1/10, Linux 3.18–5.4
GobiNet Driver	Linux 2.6–5.4
QML_WWAN Driver	Linux 3.4–5.4
Electrical Features	
Supply Voltage Range	3.135–4.4 V, 3.7 V Typ.
Power Consumption	TBD @Power off TBD @Sleep, Typ. TBD @Idle

Notes:

- * means under development.
- means supported.
- ① means the data transmission is theoretical and depends on network condition.