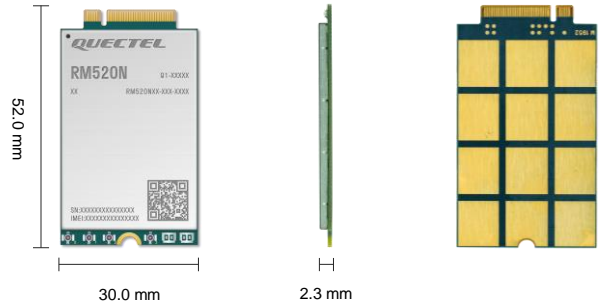




Quectel RM520N-GL

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



Quectel RM520N-GL is a 5G module optimized specially for IoT/eMBB applications. Adopting the 3GPP Rel-16 technology, it supports both 5G NSA and SA modes. Designed in an M.2 form factor, RM520N-GL is compatible with Quectel 5G module RM50xQ-AE, LTE-A Cat6 module EM06, Cat 12 modules EM12-G/EM12xR-GL and Cat 16 module EM160R-GL, which facilitates customers' migration from LTE-A to 5G.

RM520N-GL is an industrial-grade module for industrial and commercial applications only.

The Global version RM520N-GL nearly covers all the mainstream carriers worldwide. The module supports Qualcomm® IZat™ location technology Gen9C Lite (GPS, GLONASS, BeiDou/Compass and Galileo). The integrated GNSS receiver greatly simplifies the 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 and PCIe drivers for Windows 7/8/8.1/10, Linux, Android) extend the applicability of the module to a wide range of eMBB 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 Features

- ✓ 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)



5G NR Sub-6 Bands Supported



DL: LTE Cat 19
UL: LTE Cat 18



DL: max. 42 Mbps
UL: max. 5.76 Mbps



Embedded Abundant Protocols



M.2 Form Factor



Multi-constellation GNSS



USB 3.1/PCIe 4.0 Super Speed Interface



Voice over LTE (Optional)



Quectel Enhanced AT Commands

Version: 1.0.0 | Status: Preliminary

Quectel RM520N-GL

5G Sub-6		RM520N-GL
Region/Operator		Global
Dimensions (mm)		30.0 × 52.0 × 2.3
Weight (g)		TBD
Supply Voltage Range		3.135–4.4 V, typical 3.7 V
Power Consumption		TBD @ Power down TBD @ Sleep TBD @ USB 2.0, Idle TBD @ USB 3.0, Idle
Temperature Range		
Operation Temperature		-30 °C to +75 °C
Extended Temperature		-40 °C to +85 °C
Frequency Bands		
5G NR	NSA	n1/n2/n3/n5/n7/n8/n12/n13/n14/n20/n25/n26/n28/n29/n30/n38/n40/n41/n48/n66/n71/n75/n76/n77/n78/n79
	SA	n1/n2/n3/n5/n7/n8/n12/n13/n14/n20/n25/n26/n28/n29/n30/n38/n40/n41/n48/n66/n71/n75/n76/n77/n78/n79
LTE	LTE-FDD	B1/B2/B3/B4/B5/B7/B8/B12/B13/B14/B17/B18/B19/B20/B25/B26/B28/B29/B30/B32/B66/B71
	LTE-TDD	B34/B38/B39/B40/B41/B42/B43/B48
	LAA	B46 (only support 2 × 2 MIMO)
UMTS	WCDMA	B1/B2/B4/B5/B8/B19
GNSS		GPS/GLONASS/BeiDou (Compass)/Galileo
Certifications		
Regulatory		Global: GCF Europe: CE North America: PTCRB America: FCC Canada: IC Japan: JATE/TELEC Australia/New Zealand: RCM
Carrier		TBD
Others		RoHS/WHQL
Data Rate (Max.) ^①		
5G SA Sub-6		DL 2.4 Gbps; UL 900 Mbps
5G NSA Sub-6		DL 3.3 Gbps; UL 600 Mbps
LTE		DL 1.6 Gbps; UL 200 Mbps
WCDMA		DL 42 Mbps; UL 5.76 Mbps
Interface		
(U)SIM		x 1
USB 2.0		x 1
USB 3.0/3.1		x 1
PCIe 4.0		x 1
PCM		x 1
Antenna		Sub-6/GNSS x 4
Voice		
Digital Audio & VoLTE		○
Enhanced Features		
eSIM*		○
DTMF*		●
DFOTA*		●
(U)SIM Card Detection		●

Notes:

- ①: The presented data rates are theoretical only, and the actual value depends on network conditions.
- : Supported; ○: Optional.
- *: Under development/in progress.
- TBD: To Be Determined.