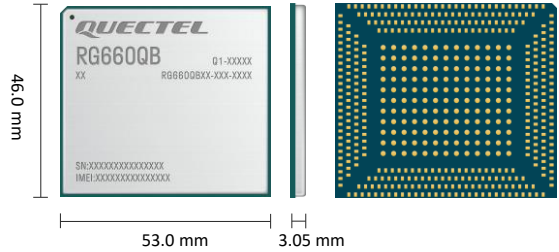


Quectel RG660QB Series

IoT/ eMBB-Optimized 5G Sub-6 GHz LGA Module



Quectel RG660QB series is a series of 5G LGA modules optimized specially for IoT and eMBB applications. Adopting the 3GPP Rel-18 technology, it supports both 5G NSA and SA modes with Option 3x/ 3a/ 3 and Option 2 network architectures, and is backward compatible with the 4G/ 3G networks. The module can meet customers' different application demands for high speed, large capacity, low latency, high reliability, etc.

RG660QB series is an industrial-grade module for industrial and commercial applications only.

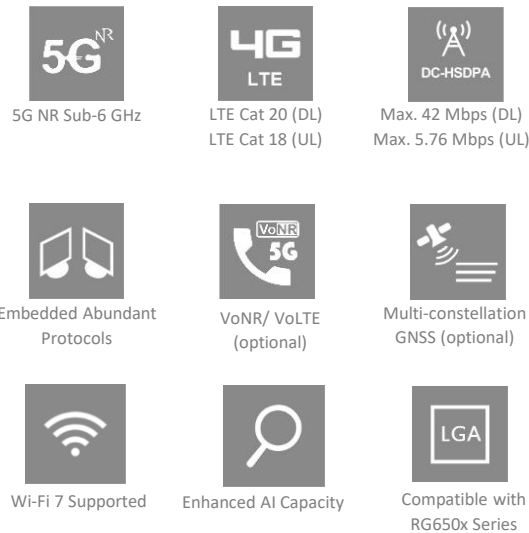
RG660QB series supports Qualcomm® IZat™ location technology Gen9C Lite (GPS, GLONASS, BDS, Galileo and QZSS). The integrated GNSS receiver greatly simplifies product design and provides quicker, more accurate and more dependable positioning capability.

A rich set of Internet protocols, industry-standard interfaces (USB 2.0/ 3.0/ 3.1, PCIe 3.0, PCM, UART, etc.) and abundant functionalities (USB drivers for Windows, Linux and Android) extend the applicability of the module to a wide range of IoT and eMBB applications such as business routers, home gateway, STB, industrial laptops, consumer laptops, industrial PDA, rugged tablet PCs and video transmission.



Key Features

- ✓ 5G/ 4G/ 3G multi-mode module, optimized for IoT and eMBB applications
- ✓ LGA package compatible with RG650x series
- ✓ Wi-Fi 7 supported
- ✓ Enhanced AI capacity
- ✓ Multi-constellation GNSS receiver (optional) for applications requiring fast and accurate fixes in any environment
- ✓ Feature refinements: FOTA and VoNR / VoLTE (optional)



Quectel RG660QB Series

5G Sub-6 GHz	RG660QB-EU	RG660QB-NA
Region/ Operator	EMEA/ APAC/ Brazil	North America
Dimensions (mm)	46.0 × 53.0 × 3.05	46.0 × 53.0 × 3.05
Weight	Approx. 17.4 g	Approx. 17.4 g
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-18 NSA/ SA operation, Sub-6 GHz
	5G NR NSA	3GPP Rel-18 NSA/ SA operation, Sub-6 GHz
5G	5G NR SA	n1/ 3/ 5/ 7/ 8/ 20/ 26/ 28/ 38/ 40/ 41/ 71 ^② / 75/ 76 [*] / 77/ 78
	DL 4 × 4 MIMO	n2/ 5/ 7/ 12/ 13 [*] / 14/ 25/ 26/ 29 [*] / 30/ 38/ 41/ 48/ 66/ 70 [*] / 71/ 77/ 78
	UL 2 × 2 MIMO	n2/ 5/ 7/ 12/ 13/ 14/ 25/ 26/ 29/ 30/ 38/ 41/ 48/ 66/ 70/ 71/ 77/ 78
	DL 4 × 4 MIMO	n2/ 5/ 7/ 12/ 13/ 14/ 25/ 26/ 29/ 30/ 38/ 41/ 48/ 66/ 70/ 71/ 77/ 78
	UL 2 × 2 MIMO	n2/ 7/ 25/ 38/ 41/ 48/ 66/ 70/ 77/ 78
LTE	LTE Category	Cat 20 (DL)/ Cat 18 (UL)
	LTE	Cat 20 (DL)/ Cat 18 (UL)
	DL 4 × 4 MIMO	B2/ 4/ 5/ 7/ 12/ 13/ 14/ 17/ 25/ 26/ 29/ 30/ 38/ 41/ 42/ 43/ 48/ 66/ 71
WCDMA	B1/ 5/ 8	-
GNSS (optional)	GPS/ GLONASS/ BDS/ Galileo/ QZSS	GPS/ GLONASS/ BDS/ Galileo/ QZSS
Certifications		
Regulatory/ Conformance	Global: GCF [*] Europe: CE [*] Australia/ New Zealand: RCM	Global: GCF [*] North America: PTCRB [*] America: FCC [*] Canada: IC [*]
Carrier	TBD	America: Verizon [*] / AT&T [*] / T-Mobile [*]
Others	RoHS	RoHS
Data Rates (Max.) ^①		
5G SA Sub-6 GHz	7.01 Gbps (DL)/ 2.5 Gbps (UL)	7.01 Gbps (DL)/ 2.5 Gbps (UL)
5G NSA Sub-6 GHz	5.47 Gbps (DL)/ 730 Mbps (UL)	5.47 Gbps (DL)/ 730 Mbps (UL)
LTE	2.0 Gbps (DL)/ 211 Mbps (UL)	2.0 Gbps (DL)/ 211 Mbps (UL)
WCDMA	42 Mbps (DL)/ 5.76 Mbps (UL)	-
Interfaces		
(U)SIM	1.8/ 3.0 V × 1; 1.8 V × 1 (eSIM external)	1.8/ 3.0 V × 1; 1.8 V × 1 (eSIM external)
UART	× 3	× 3
USB 2.0/ 3.0/ 3.1	× 1	× 1
PCIe 3.0	2-Lane × 2, 1-Lane × 1	2-Lane × 2, 1-Lane × 1
USXGMII	× 2	× 2
PCM	× 2	× 2
I2C	× 2	× 2
SPI	× 2	× 2
ADC	●	●
RESET_N	●	●
GPIO (QuecOpen®)	●	●
Antenna	Sub-6 GHz: × 8; GNSS: × 1	Sub-6 GHz: × 8; GNSS: × 1

NOTE:
1. ①: The presented data rates are theoretical only, and actual values depend on network conditions.
2. ②: n71 cannot operate concurrently with n5/26 .
3. ③: B71 cannot operate concurrently with B5.

4. * : Under development/planning/ in progress.
5. ● : Supported.
6. TBD: To Be Determined.



Quectel RG660QB Series

5G Sub-6 GHz	RG660QB-EU	RG660QB-NA
Audio		
Audio	Digital Audio VoLTE/ VoNR (optional)	Digital Audio VoLTE/ VoNR (optional)
Enhanced Features		
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
GNSS Driver	Android 4.x–16.x	Android 4.x–16.x
RIL Driver	Android 4.x–16.x	Android 4.x–16.x
USB MBIM Driver ^④	Windows 10/ 11; Linux 3.18–6.7	Windows 10/ 11; Linux 3.18–6.7
USB GobiNet Driver	Linux 2.6–3.4	Linux 2.6–3.4
USB QMI_WWAN Driver	Linux 3.4–6.7	Linux 3.4–6.7
USB RNDIS Driver	Windows 10/ 11; Linux 2.6–6.11	Windows 10/ 11; Linux 2.6–6.11
PCIe MHI Driver	Linux 3.10–6.12	Linux 3.10–6.12
Electrical Features		
Supply Voltage Range	3.3–4.4 V, typ. 3.8 V	3.3–4.4 V, typ. 3.8 V
Output Power	5G NR: - Class 1.5 (29 dBm +2/ -3 dB) for n38/ 41/ 77/ 78 - Class 2 (26 dBm +2/ -3 dB) for n1/ 3/ 7/ 38/ 40/ 41/ 77/ 78 - Class 3 (23 dBm ±2 dB) for other Sub-6 GHz bands LTE: - Class 2 (26 dBm +2/ -3 dB) for B38/ 41/ 42/ 43 - Class 3 (23 dBm ±2 dB) for other LTE bands WCDMA: - Class 3 (23 dBm ±2 dB)	5G NR: - Class 1.5 (29 dBm +1/ -3 dB) for n38/ 41/ 77/ 78 - Class 2 (26 dBm +2/ -3 dB) for n2/ 7/ 25/ 38/ 41/ 66/ 77/ 78 - Class 3 (23 dBm ±2 dB) for other Sub-6 GHz bands LTE: - Class 2 (26 dBm +2/ -3 dB) for B38/ 41/ 42/ 43 - Class 3 (23 dBm ±2 dB) for other LTE bands
Power Consumption	TBD	TBD

NOTE:
1. ●: Supported.
2. TBD: To Be Determined.
3. ④: Optional (a license is required to use this driver).

