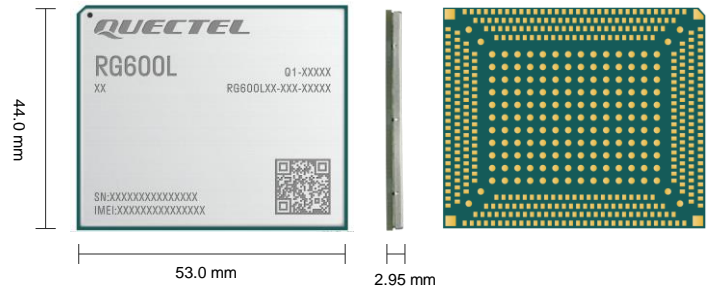


Quectel RG600L Series

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



Quectel RG600L series is a 5G Sub-6 GHz LGA module optimized specially for IoT and eMBB applications. By adopting the 3GPP Rel-15 technology, the module supports both 5G NSA and SA modes.

RG600L series is an industrial-grade module for industrial and commercial applications only.

RG600L series has built-in rich network protocols, integration of multiple industrial standard interfaces, and supports of multiple drivers and software functions, and is integrated with network hardware accelerator and VPN hardware accelerator, which extend the applicability of the module to a wide range of IoT and eMBB applications such as 5G wireless router, CPE, MiFi, industrial router, home gateway, etc.



Key Features

- ✓ 5G Sub-6 GHz LGA module with 4G (LTE Cat 19), optimized for IoT and eMBB applications
- ✓ Worldwide 5G, LTE-A and WCDMA coverage
- ✓ Supports 5G NSA and SA modes
- ✓ Supports 5G 2CC Carrier Aggregation
- ✓ Spectrum multiplexing and significantly increased network capacity enabled with TM9



Max. 4.67 Gbps (DL)
Max. 1.25 Gbps (UL)



Max. 1.6 Gbps (DL)
Max. 211 Mbps (UL)



Max. 42 Mbps (DL)
Max. 11.5 Mbps (UL)



Embedded Abundant
Protocols



LGA
Form Factor



USB 3.0 Interface



VoLTE/ VoNR
(Optional)



Quectel
Enhanced API



PCIe 3.0 Interface

Quectel RG600L Series

5G Sub-6	RG600L-EU	RG600L-JP
Region/ Operator	EMEA/ APAC ^① / Brazil	Japan
Dimensions (mm)	53.0 × 44.0 × 2.95	53.0 × 44.0 × 2.95
Temperature Range		
Operating Temperature	-30 °C to +70 °C	-30 °C to +70 °C
Extended Temperature	-40 °C to +85 °C	-40 °C to +85 °C
Frequency Bands		
5G NR NSA	n1/ 3/ 5/ 7/ 8/ 20/ 28/ 38/ 40/ 41/ 71 ^② / 75 ^② / 76 ^② / 77/ 78	n1/ 3/ 28/ 38/ 41/ 77/ 78/ 79
5G NR SA	n1/ 3/ 5/ 7/ 8/ 20/ 28/ 38/ 40/ 41/ 71 ^② / 75 ^② / 76 ^② / 77/ 78	n1/ 3/ 28/ 38/ 41/ 77/ 78/ 79
5G DL CA	Supports 2CC CA	Supports 2CC CA
5G DL 4 × 4 MIMO	n1/ 3/ 7/ 28/ 38/ 40/ 41/ 75 ^② / 76 ^② / 77/ 78	n1/ 3/ 38/ 41/ 77/ 78/ 79
5G UL 2 × 2 MIMO	n40/ 41/ 77/ 78	n41/ 77/ 78/ 79
LTE-FDD	B1/ 3/ 5/ 7/ 8/ 20/ 28/ 32 ^② / 71 ^②	B1/ 3/ 5/ 8/ 12/ 17/ 18/ 19/ 21/ 26/ 28
LTE-TDD	B38/ 40/ 41/ 42/ 43	B38/ 41/ 42
LTE-LAA	-	-
LTE DL 4 × 4 MIMO LTE-FDD	B1/ 3/ 7/ 28/ 32 ^②	B1/ 3
LTE DL 4 × 4 MIMO LTE-TDD	B38/ 40/ 41/ 42/ 43	B38/ 41/ 42
LTE DL CA	Supports 5CC CA	Supports 5CC CA
WCDMA	B1/ 5/ 8	-
GNSS	-	-
Certifications		
Carrier	TBD	-
Regulatory	Global: GCF Europe: CE Australia/ New Zealand: RCM	JP: JATE/ TELEC
Others	RoHS	RoHS
Data Rates ^③		
5G SA Sub-6 GHz	4.67 Gbps (DL)/ 1.25 Gbps (UL)	4.67 Gbps (DL)/ 1.25 Gbps (UL)
5G NSA Sub-6 GHz	4.67 Gbps (DL)/ 836 Mbps (UL)	4.67 Gbps (DL)/ 836 Mbps (UL)
LTE	1.6 Gbps (DL)/ 211 Mbps (UL)	1.6 Gbps (DL)/ 211 Mbps (UL)
HSPA+	42 Mbps (DL)/ 11.5 Mbps (UL)	-
UMTS	384 Kbps (DL)/ 384 Kbps (UL)	-
Interfaces		
Antenna	Cellular: × 8	Cellular: × 8
(U)SIM	× 2 (Dual SIM Single Standby)	× 2 (Dual SIM Single Standby)
UART	× 3 (including 1 Bluetooth UART)	× 3 (including 1 Bluetooth UART)
USB 2.0/ 3.0	× 1	× 1
SGMII	× 2	× 2
PCIe 3.0	× 2	× 2
SPI	× 2	× 2
PCM	× 2	× 2
I2C	× 4	× 4
ADC	× 3	× 3
DBI-C	× 1	× 1
Audio		
Voice (Optional)	Digital Audio and VoLTE/ VoNR	Digital Audio and VoLTE/ VoNR
Enhanced Features		
DTMF	●	●
FOTA	●	●
(U)SIM Card Detection	●	●

Note:

- ①: Excl. China/ Japan.
- ②: Optional.
- TBD: To Be Determined.
- ③: Theoretical only; actual values depend on network conditions.
- : Supported.

Quectel RG600L Series

5G Sub-6	RG600L-EU	RG600L-JP
Electrical Features		
Supply Voltage Range	3.3–4.3 V, typ. 3.8 V 100 μ A @ Power down	3.3–4.3 V, typ. 3.8 V
Power Consumption	6.5 mA @ Sleep 125 mA @ Idle (USB connected)	TBD
Transmitting Power	Class 3 (23 dBm \pm 2 dB) for WCDMA bands Class 3 (23 dBm \pm 2.7 dB) for LTE bands Class 2 (26 dBm +2/-3 dB) for LTE B41/ 42/ 43 Class 3 (23 dBm \pm 2.7 dB) for 5G NR bands Class 2 (26 dBm +2/-3 dB) for 5G NR n40/ 41/ 77/ 78, (Note: n40 @ UL MIMO) Class 1.5 (29 dBm +2/-3 dB) for 5G NR n41/ 77/ 78 UL MIMO (TX Diversity)	Class 3 (23 dBm \pm 2 dB) for LTE bands Class 2 (26 dBm +2/-3 dB) for LTE HPUE B41 Class 3 (23 dBm \pm 2 dB) for 5G NR bands Class 2 (26 dBm +2/-3 dB) for 5G NR HPUE n41/ 77/ 78/79 Class 1.5 (29 dBm +2/ -3 dB) for 5G NR HPUE n41/ 77/ 78 /79

Note:
TBD: To Be Determined.