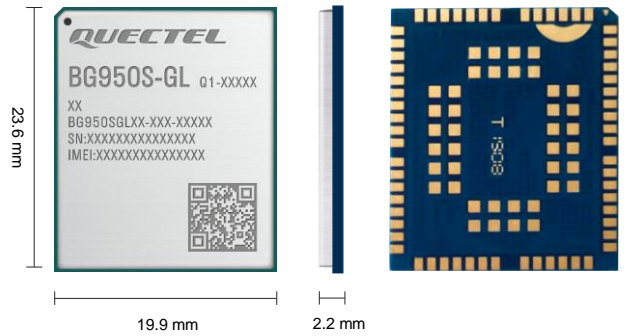




Quectel BG950S-GL

Ultra-Compact LTE Cat M1/ NB2 Module



BG950S-GL is 5G-ready ultra-compact LPWA modules compliant with 3GPP E-UTRA Release 14 specification, and 3GPP Release 15-17 will be supported by software upgrade easily. The module supports LTE Cat M1/ NB2 bands, SRD* (Short Range Device) communication in Sub 1GHz and 2.4GHz bands, and integrated SIM (iSIM). Besides, it features ultra-low power consumption implemented by SONY ALT1350 processor and integrated RAM and Flash, which help reduce the current consumption to rather low levels in various modes, including PSM, eDRX etc. It is further integrated with a GNSS engine that supports GPS and GLONASS satellite systems and a cellular-based positioning engine that supports QuecLocator®.

With an ultra-compact SMT form factor of 23.6 mm × 19.9 mm × 2.2 mm and a high integration level, the module enables integrators and developers to design applications easily leveraging its low power consumption and compact structure design. The BG950S-GL's advanced LGA package allows for fully automated manufacturing required for large-scale applications.

A rich set of Internet protocols, industry-standard interfaces and abundant functionalities extend the applicability of the module to a wide range of M2M applications, such as wireless POS, smart metering, tracking, wearable devices, and many more.



Key Features

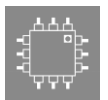
- ✓ Extremely compact LTE Cat M1/ NB2 module with ultra-low power consumption
- ✓ Integrated RAM and Flash
- ✓ Super slim profile in LGA package
- ✓ Support integrated SIM (iSIM)
- ✓ Embedded with abundant Internet service protocols
- ✓ Support QuecLocator® and DFOTA
- ✓ Support QuecOpen® for second development of embedded applications
- ✓ A rich set of external interfaces (including RF control interfaces) that ensure convenient applications
- ✓ Fast time-to-market: reference designs, evaluation tools and timely technical support minimize time and efforts in design and development
- ✓ Robust mounting and interfaces



LTE Cat M1 & Cat NB1/ NB2



LGA Package



iSIM



Abundant Protocols Embedded



DFOTA



Compact Size



Ultra-Low Power Consumption



Quectel Enhanced AT Commands



Integrated RAM and Flash

Quectel BG950S-GL

BG950S-GL	
Region/ Operator	Global
Dimensions (mm)	23.6 × 19.9 × 2.2
Package	LGA
Weight (g)	TBD
Temperature Range	
Operating Temperature	-35 °C to +75 °C
Extended Temperature	-40 °C to +85 °C
Frequency Bands	
LTE-FDD	Cat M1: B1/ 2/ 3/ 4/ 5/ 8/ 12/ 13/ 18/ 19/ 20/ 25/ 26/ 27/ 28/ 66/ 71/ 85 Cat NB2: B1/ 2/ 3/ 4/ 5/ 8/ 12/ 13/ 17/ 18/ 19/ 20/ 25/ 26/ 28/ 66/ 71/ 85
Data Rate (Max.)	
LTE (kbps)	Rel-14 Cat M1*: 588 (DL)/ 1119 (UL) Cat NB2*: 127 (DL)/ 158 (UL)
Certifications	
Carrier	Europe: Vodafone*/ Deutsche Telekom* America: AT&T*/ T-Mobile*/ Verizon* South Korea: KT*/ LGU+*/ KC* Australia: Telstra* Canada: Rogers*/ Telus* Japan: KDDI*/ NTT DOCOMO*
Regulatory	Global: GCF* Europe: CE* North America: PTCRB* America: FCC* Canada: IC* South Korea: KC* Japan: JATE*/ TELEC* Australia/New Zealand: RCM*
Others	RoHS
Interfaces	
UART	× 3
I2C*	TBD
SPI*	TBD
ADC	× 2
(U)SIM	× 1 (Supports 1.8 V only)
GPIO	× 9
GRFC	× 2
NET_STATUS	× 1 (For network status indication)
STATUS	× 1 (For power-on/ off indication)
Antenna	× 2 (For the main antenna and GNSS antenna, respectively)
SMS	
Short Message Service	Point-to-Point MO and MT SMS Cell Broadcast Text and PDU Mode
Enhanced Features	
GNSS*	GPS/ GLONASS
DFOTA*	●
QuecLocator®*	●
QuecOpen®*	●
iSIM*	●
Software Features	
3GPP	3GPP E-UTRA Release 14
AT Commands	3GPP TS 27.007 3GPP TS 27.005 Quectel Enhanced AT Commands
Protocols	TCP/ PPP/ UDP/ SSL/ MQTT/ FTP(S)/ HTTP(S)/ LwM2M/ IPv4/ IPv6/ TLS/ DTLS/ PING/ CoAP/ NITZ
Firmware Upgrade	UART/ DFOTA
Electrical Features	
Output Power (Max.)	23 dBm
Supply Voltage Range	VBAT_BB/ VBAT_RF: 2.2–4.35 V, typ. 3.3 V
Power Consumption (Typical)	TBD

Note:

*: Under development/ planning/ in progress.

●: Supported.