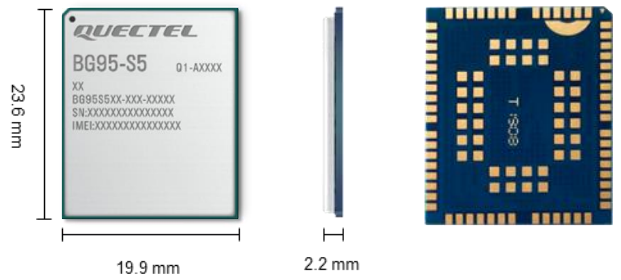


Quectel BG95-S5

3GPP NTN Satellite Communication Module



BG95-S5 is a 3GPP NTN (Non-Terrestrial Network) satellite communication module which supports 3GPP Rel-17 (IoT-NTN) at S-band (B256/ B23) and L-Band (B255*) frequencies for satellite communications, also with multi-mode supporting LTE Cat M1/ Cat NB2/ EGPRS and integrated GNSS. With an ultra-compact form factor of 23.6 mm × 19.9 mm × 2.2 mm, it is a perfect choice for size sensitive applications.

With a cost-effective SMT form factor of 23.6 mm × 19.9 mm × 2.2 mm and high integration level, BG95 enables integrators and developers to easily design their applications and take advantage from the module's low power consumption and mechanical intensity. Its advanced LGA package allows fully automated manufacturing for high-volume applications. A rich set of Internet protocols, industry-standard interfaces and abundant functions extend the applicability of the module to a wide range of M2M applications such as wireless POS, smart metering, tracking, wearable devices, etc.



Key Features

- ✓ NTN Satellite communication module
- ✓ IoT-NTN/ LTE Cat M1/ Cat NB2/ EGPRS module with Ultra-low power consumption
- ✓ Integrated RAM/ flash in the baseband chipset
- ✓ Compact SMT form factor ideal for size-constrained applications with tight space
- ✓ Fast time-to-market: reference designs, evaluation tools and timely technical support minimize design-in time and development efforts
- ✓ Abundant embedded Internet service protocols
- ✓ Robust mounting and interfaces



Compact Size



B23/B256/B255*



Quectel Enhanced AT Commands



LGA Package



Ultra-low Power Consumption



Integrated RAM/ Flash in Chipset



Embedded Internet Service Protocols

Quectel BG95-S5

Satellite Communication		BG95-S5	
Region/ Operator	Global		
General Features			
Package	LGA		
Dimensions (mm)	23.6 × 19.9 × 2.2		
Temperature Range			
Operating Temperature	-35 °C to +75 °C		
Extended Temperature	-40 °C to +85 °C		
Frequency Bands			
IoT-NTN	S-Band: B23/ B256 L- Band: B255*		
LTE-FDD	Cat M1: B1/ 2/ 3/ 4/ 5/ 8/ 12/ 13/ 18/ 19/ 20/ 25/ 26/ 27/ 28/ 66/ 85 Cat NB2: B1/ 2/ 3/ 4/ 5/ 8/ 12/ 13/ 18/ 19/ 20/ 25/ 28/ 66/ 71/ 85		
EGPRS	GSM 850/ EGSM 900/ DCS 1800/ PCS 1900		
GNSS	GPS/ GLONASS/ BeiDou/ Galileo/ QZSS		
Data Transmission			
IoT-NTN Data Rate(kbps)	TBD		
LTE-M Data Rate (kbps)	Cat M1: Max. 588 kbps (DL)/ Max. 1119 kbps (UL)		
NB-IoT Data Rate (kbps)	Cat NB2: Max. 127 kbps (DL)/ Max. 158.5 kbps (UL) Cat NB1: Max. 32 kbps (DL)/ Max. 70 kbps (UL)		
EDGE Data Rate (kbps)	Max. 296 (DL) Max. 236.8 (UL)		
GPRS Data Rate (kbps)	Max. 107 (DL) Max. 85.6 (UL)		

Note:

1. *: Under development/ planning.

Quectel BG95-S5

Satellite Communication		BG95-S5
Interfaces		
(U)SIM		× 1
UARTS		× 3
USB		× 1
PCM		× 1
I2C		× 1
Antenna		× 2
GPIO		× 9
GRFC*		× 2
SMS		
SMS		Point-to-point MO/MT SMS Cell Broadcast Text and PDU Mode
Enhanced features		
DFOTA		●
SoftSIM		*
Software Features		
Protocols		PPP/TCP/UDP/SSL/TLS/FTP(S)/HTTP(S)/NITZ/NTP/PING/MQTT/LwM2M/CoAP/IPv6
USB Serial Driver		Windows 7/8/8.1/10/11, Linux 2.6–5.15, Android 4.x–12.x
GNSS/RIL Driver		Android 4.x–12.x
Certification		
Satellite		Skylo*
Regulatory		Europe: CE* North America: FCC* Canada: IC* South Korea: KC* Australia, New Zealand: RCM*
Carrier		AT&T*, Verizon*, T-Mobile*
Electrical Characteristics		
Supply Voltage Range		3.3–4.3 V, typical 3.8 V
GPIO Voltage		1.8V
Maximum Output Power		Power Class 3 23 dBm
Power Consumption		TBD

Note:

1. *: Under development/ planning.

2. ●: Supported; ○: Optional.