

Quectel BG96

LTE Cat M1 & Cat NB1 & EGPRS Module

LTE



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LGA Package



Compact Size



Embedded Abundant Protocols *



DFOTA *



USB 2.0 High Speed Interface



USB Drivers



Quectel Enhanced AT Commands



BG96 is a series of LTE Cat M1 and Cat NB1 module offering a maximum data rate of 375kbps downlink and uplink. It features ultra-low power consumption, and provides pin-to-pin compatibility with Quectel LTE module EG91, Cat NB1 (NB-IoT) module BC95, UMTS/HSPA modules UG95/UG96 and GSM/GPRS module M95.

With cost-effective SMT form factor of 22.5mm × 26.5mm × 2.3mm and high integration level, BG96 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.

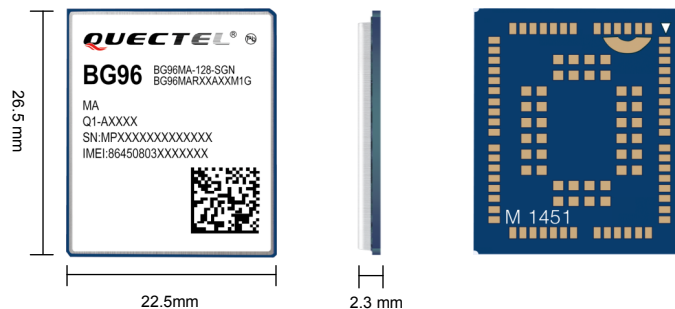
A rich set of Internet protocols, industry-standard interfaces (USB/UART/I2C/Status Indicator) and abundant functionalities (USB drivers for Windows XP, Windows 7/8/10, Linux and Android) extend the applicability of the module to a wide range of M2M applications such as wireless POS, metering, tracking, etc.

Key Benefits

- ☞ LTE Cat M1 & Cat NB1 & EGPRS module with ultra-low power consumption
- ☞ Compact SMT form factor ideal for size-constrained applications with tight space
- ☞ Support powerful ThreadX which can host customers' applications
- ☞ Easy drop-in migration to GSM/GPRS/HSPA/LTE modules
- ☞ Super slim profile in LGA package
- ☞ Fast time-to-market:
Reference designs, evaluation tools and timely technical support minimize design-in time and development efforts

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General Features

Frequency Bands	Cat M1 & NB1: B1/B2/B3/B4/B5/B8/B12/B13/B18/B20/B26/B28/B39(TDD) EGPRS: 850/900/1800/1900
LTE Version	3GPP E-UTRA Release 13
Supply Voltage Range	3.3V~4.3V, 3.8V typ.
Operation Temperature	-40°C ~ +85°C
Dimensions	22.5mm × 26.5mm × 2.3mm
Weight	Approx. 3.1g
Control via AT commands	3GPP TS 27.007, 3GPP TS 27.005 and Quectel enhanced AT Commands

Software Specifications

SMS *	Point-to-point MO and MT SMS Cell Broadcast Text and PDU Mode
Data	Cat M1: Max. 375kbps(DL)/375kbps(UL) Cat NB1: Max. 32kbps(DL)/70kbps(UL) GPRS: Max. 85.6kbps(DL)/85.6kbps(UL) EDGE: Max. 236.8kbps(DL)/236.8kbps(UL)
Protocols	PPP/ TCP/ UDP
USB Drivers	Windows XP, Windows 7/8/10, Linux 2.6/3.0, Android 2.3/4.0/4.2/4.4/5.0/5.1/6.0

Enhanced Features

GNSS (Optional)	GPS, GLONASS, BeiDou/Compass, Galileo, QZSS
Firmware Update	Firmware update via USB and UART interfaces
DFOTA *	Delta firmware upgrade over the air

Electrical Characteristics

Output Power	TBD
Consumption	TBD
Sensitivity	TBD

Interfaces

USB	USB 2.0, High Speed
UART	× 3 (Main, Debug and NMEA UART interfaces)
I2C	× 1
ADC	× 2 (15 bits)
GPIO	× 2 (I2C and NMEA can be re-configured as extra 4 GPIOs)
USIM	1.8V/3.0V
NETLIGHT	Network Status Indication
STATUS	Power ON/OFF Status Indication

* Under development