Quectel BG96
LTE Cat M1 &
LTE Cat NB1 Module

4G LTE — LTE Cat M1 & LTE Cat NB1

LGA — LGA Package

Embedded Abundant Protocols *

Compact Size

USB 2.0 High Speed Interface

DFOTA — DFOTA *

USB Drivers

AT — Quectel Enhanced AT Commands

Key Benefits

- LTE Cat M1 and LTE Cat NB1 modules with ultra low power consumption
- Compact SMT form factor ideal for small end products with tight space
- Easy drop-in migration to GSM/GPRS/HSPA/LTE Cat 1 and Cat 4 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
- Robust mounting and interfaces
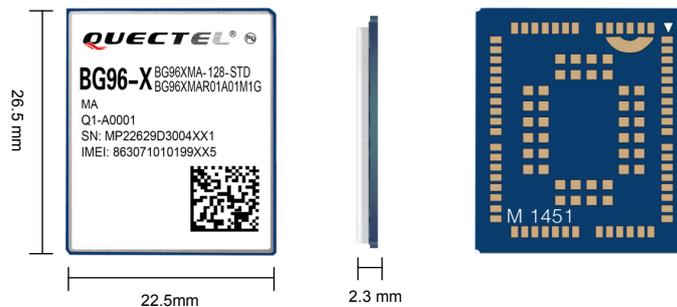
QUECTEL ®
Build a Smarter World

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 EG95, NB-IoT module BC95, UMTS/HSPA module UG95/UG96 and GSM/GPRS module M95.

With cost-effective SMT form factor of 22.5 × 26.5 × 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, Windows CE, Linux, Android/eCall*) extend the applicability of the module to a wide range of M2M applications such as wireless POS, metering, tracking, etc.

HSDPA 7.2Mbps

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LTE Cat NB1 Module

26.5 mm

22.5mm   2.3 mm

BG96-X BG96XMA-128-STD
BG96XMAR01A01M1G
MA
Q1-A0001
SN: MP22629D3004XX1
IMEI: 863071010199XX5

M 1451

General Features

Frequency Bands	**BG96-V** LTE FDD: B4/B13
	BG96-NA LTE FDD: B2/B4/B12/B13
	BG96-AU LTE FDD: B3/B5/B28
	BG96-EC LTE FDD: B3/B8/B20
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	TBD
Control via AT commands	3GPP TS27.007, 27.005 and other enhanced AT Commands

Specifications

SMS *	Point-to-point MO and MT SMS Cell Broadcast Text and PDU Mode
Data	Max. 375kbps
Protocols *	TCP/UDP/PPP/MMS/HTTP/HTTPS/SMTP/ SMTPS/FTP/NTP/NITZ/PING/SSL

Special Features

Drivers USB Serial	Windows XP, Windows 7, Linux2.6/3.0, Android 2.3/4.0/4.2/4.4/5.0/5.1/6.0
GNSS (Optional)	GPS, GLONASS, BeiDou/Compass, Galileo, ZSS
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	2.0 High Speed
UART	× 1, Full Functions
I2C	× 1
USIM	1.8V/3.0V
NETLIGHT	Network Status Indication
STATUS	Power ON/OFF Status Indication

∗ Under development