

Quectel BG96

LTE Cat M1 & Cat NB1 & EGPRS Module



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 a 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, smart 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



LTE Cat M1 & Cat NB1 & EGPRS



LGA Package



Compact Size



Embedded Abundant Protocols



DFOTA

DFOTA*



USB 2.0 High Speed Interface



USB Drivers



Quectel Enhanced AT Commands

Quectel BG96

LTE Cat M1 & Cat NB1 & EGPRS Module



Variant for North America

BG96-NA

Cat M1:

LTE FDD: B2/B4/B12/B13

Variant for the Global

BG96:

Cat M1 & NB1:

LTE FDD: B1/B2/B3/B4/B5/B8/B12/B13/B18/

B19/B20/B26/B28

LTE TDD: B39 (for Cat M1 only)

EGPRS:

850/900/1800/1900

Data

Cat M1:

Max. 375Kbps (DL), Max. 375Kbps (UL)

Cat NB1:

Max. 32Kbps (DL), Max. 70Kbps (UL)

GPRS:

Max. 85.6Kbps (DL), Max. 85.6Kbps (UL)

EDGE:

Max. 236.8Kbps (DL), Max. 236.8Kbps (UL)

SMS *

Point-to-point MO and MT

SMS Cell Broadcast

Text and PDU Mode

Interfaces

USB 2.0 with High Speed up to 480Mbps

UART × 3

Digital Audio (I2S*, not supported by BG96-NA)

ADC × 2 (15 bits)

GPIO × 2 (I2C and UART3 can be re-configured as

extra 4 GPIOs)

(U)SIM Card Interface

NETLIGHT for Network Status Indication

STATUS for Power ON/OFF Indication

Main and GNSS Antenna Interfaces

Enhanced Features

GNSS (Optional): GPS, GLONASS, BeiDou/

Compass, Galileo, QZSS

Firmware Update: via USB and UART interfaces

DFOTA*: Delta firmware upgrade over the air

Electrical Characteristics

Output Power:

TBD

Consumption:

TBD

Sensitivity:

TBD

Software Features

USB Serial:

Windows XP, Windows 7, Windows 8/8.1,

Windows 10, Linux 2.6/3.0,

Android 2.3/4.0/4.2/4.4/5.0/5.1/6.0

Protocols:

PPP/TCP/UDP

General Features

3GPP E-UTRA Release 13

Extended Temperature: -40°C ~ +85°C

Dimensions: 22.5mm × 26.5mm × 2.3mm

Approx. 3.1g

LGA Package

Supply Voltage: 3.3V~4.3V, 3.8V Typ.

3GPP TS27.007, 3GPP TS 27.005 and Quectel

Enhanced AT Commands

* Under development