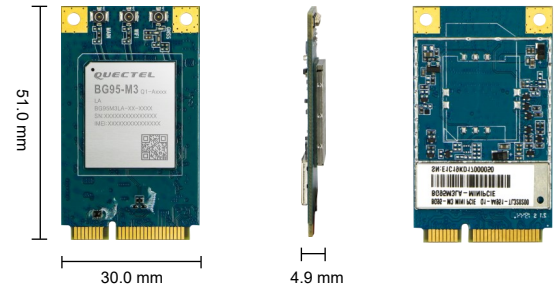




# Quectel BG95-M3 Mini PCIe

## LTE Cat M1 & Cat NB2 & EGPRS Module



BG95-M3 Mini PCIe is a multi-band LTE Cat M1/Cat NB2/EGPRS module adopting standard PCI Express® Mini Card (Mini PCIe) form factor. It offers maximum data rates of 588 kbps downlink and 1119 kbps uplink.

With high integration level and a cost-effective SMT form factor of 51.0 mm × 30.0 mm × 4.9 mm, BG95-M3 Mini PCIe enables integrators and developers to easily design their applications and take advantage of the module's low power consumption and mechanical intensity.

A rich set of Internet protocols, industry-standard interfaces and abundant functionalities (USB drivers for Windows 7/8/8.1/10/11, Linux, etc.) extends the applicability of the module to a wide range of M2M applications such as wireless POS, smart metering, tracking, etc.

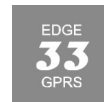


### Key Benefits

- ✓ Multi-band LTE Cat M1/Cat NB2/EGPRS module with global coverage
- ✓ Standard PCI Express® Mini Card (Mini PCIe) form factor, ideal for manufacturers to easily integrate wireless connectivity into their devices
- ✓ Easy migration from Quectel LTE Standard Mini PCIe modules
- ✓ Multi-constellation GNSS receiver available for applications requiring fast and accurate fixes in any environment
- ✓ Fast time-to-market: reference designs, evaluation tools and timely technical support minimize design-in time and development efforts
- ✓ Robust mounting and interfaces



LTE Cat M1 & Cat NB2



EGPRS



Mini PCIe Package



Embedded Abundant Protocols



DFOTA



USB 2.0 Interface



USB Drivers



Quectel Enhanced AT Commands



Multi-constellation GNSS

Version: 1.1 | Status: Released

# Quectel BG95-M3 Mini PCIe

## LTE Cat M1 & Cat NB2 & EGPRS Module

### Variant for the Global

#### BG95-M3 Mini PCIe

##### Cat M1:

B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/  
B25/B26/B27/B28/B66/B85

##### Cat NB2:

B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/  
B25/B28/B66/B71/B85

##### EGPRS:

850/900/1800/1900 MHz

### Data

##### Cat M1:

Max. 588 kbps (DL), Max. 1119 kbps (UL)

##### Cat NB2:

Max. 127 kbps (DL), Max. 158.5 kbps (UL)

##### EDGE:

Max. 296 kbps (DL), Max. 236.8 kbps (UL)

##### GPRS:

Max. 107 kbps (DL), Max. 85.6 kbps (UL)

### Voice

VoLTE For LTE Cat M1

CS Voice for GSM

### SMS

Point-to-Point MO and MT

SMS Cell Broadcast

Text and PDU Mode

### Interfaces

USB 2.0 × 1

UART × 1

I2C × 1 (For Voice Only)

PCM × 1 (For Voice Only)

(U)SIM × 1 (1.8 V Only)

LED\_WWAN# for Network Status Indication

W\_DISABLE# for Disabling RF Function

PERST# for Module Resetting

WAKE# for Waking up a Host

### Enhanced Features

#### GNSS:

GPS, GLONASS, BDS, Galileo, QZSS

#### Firmware Upgrade:

via USB interface

#### DFOTA:

Delta Firmware Upgrade Over the Air

#### Processor:

ARM A7 Processor

### Electrical Characteristics

#### Output Power:

Max. Power: 21 dBm (Power Class 5)

#### Power Consumption:

Power Saving Mode (USB Suspend): 2.47 mA

@ LTE Cat M1 (Typ.):

Sleep (USB Suspend):

3.84 mA @ DRX = 1.28 s

2.74 mA @ eDRX = 81.92 s

Idle (USB Suspend):

24.80 mA @ DRX = 1.28 s

24.15 mA @ eDRX = 81.92 s

LTE Connected (Avg.):

250 mA @ Max. Power

@ LTE Cat NB1 (Typ.):

Sleep (USB Suspend):

3.68 mA @ DRX = 1.28 s

2.72 mA @ eDRX = 81.92 s

Idle (USB Suspend):

20.65 mA @ DRX = 1.28 s

20.27 mA @ eDRX = 81.92 s

LTE Connected (Avg.):

357 mA @ Max. Power

### Software Features

#### 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

#### Protocols:

PPP/TCP/UDP/SSL/TLS/FTP(S)/HTTP(S)/NITZ/

PING/MQTT/LwM2M/CoAP/IPv6

### General Features

Mini PCIe Package

3GPP E-UTRA Release 14

Supply Voltage: 3.0–3.6 V, Typ. 3.3 V

Dimensions: 51.0 mm × 30.0 mm × 4.9 mm

Operating Temperature Range: -35 °C to +75 °C

Extended Temperature Range: -40 °C to +80 °C

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

Enhanced AT Commands

### Approvals

#### Carrier:

Global: Vodafone<sup>①</sup>

Europe: Deutsche Telekom

Spain: Telefónica<sup>①</sup>

France: Orange<sup>①</sup>

North America: Verizon/AT&T<sup>①</sup>/T-Mobile<sup>①</sup>

China: China Telecom\*/China Mobile\*/China

Unicom\*

#### Regulatory:

Global: GCF<sup>①</sup>

Europe: CE

North America: PTCRB<sup>①</sup>

North America: FCC

United Kingdom: UKCA

Canada: IC

Brazil: Anatel\*

South Korea: KC\*

Taiwan, China: NCC<sup>①</sup>

Japan: JATE/TELEC<sup>①</sup>

Australia/New Zealand: RCM

Thailand: NBTC\*

Singapore: IMDA\*

#### Others:

RoHS/PEN

Note: 1. \* : under development/planning.

2. <sup>①</sup> : sharing LGA module certificate.