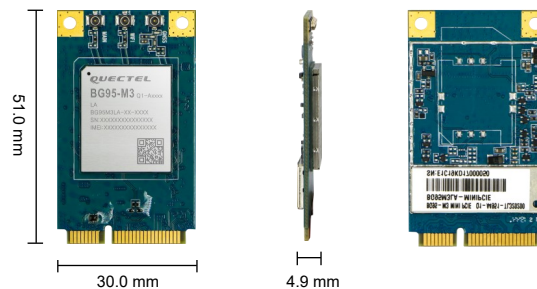




Quectel BG95-M3 Mini PCIe

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 form factor (Mini PCIe). 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 from 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, Linux, etc.) extend the applicability of the module to a wide range of M2M applications such as wireless POS, smart metering, tracking, etc.

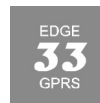


Key Benefits

- ✓ Multi-band LTE Cat M1/Cat NB2/EGPRS module with global coverage
- ✓ Standard PCI Express® Mini Card form factor (Mini PCIe) 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

Rev.: V1.0 | Status: Released

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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 VoLTE Only)

PCM* × 1 (For VoLTE Only)

(U)SIM × 1 (1.8V 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, BeiDou, 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 @ LTE Cat M1 (Typ.):

Idle State:

28 mA @ DRX 1.28 s

27 mA @ eDRX = 40.96 s

LTE Connected Mode (Avg.):

255 mA @ max. power

Power Consumption @ LTE Cat NB1 (Typ.):

Idle State:

28 mA @ DRX 1.28 s

27 mA @ eDRX = 40.96 s

LTE Connected Mode (Avg.):

249 mA @ max power

Software Features

USB Serial Driver:

Windows 7/8/8.1/10,

Linux 2.6–5.4,

Android 4.x–9.x

GNSS/RIL Driver*:

Android 4.x–9.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:

Vodafone (Global)

Deutsche Telekom (Europe)

Verizon/AT&T/T-Mobile/Sprint (North America)

China Telecom/China Mobile/China Unicom
(China)

SKT (South Korea)

NTT DOCOMO/SoftBank/KDDI (Japan)

Telstra (Australia)

Regulatory:

GCF (Global)

CE (Europe)

FCC/PTCRB (North America)

IC (Canada)

Anatel (Brazil)

SRRC/NAL/CCC (China)

KC (South Korea)

NCC (Taiwan, China)

JATE/TELEC (Japan)

RCM (Australia/New Zealand)

NBTC (Thailand)

IMDA (Singapore)

Others:

RoHS/PEN/ATEX

* Under Development/Planning