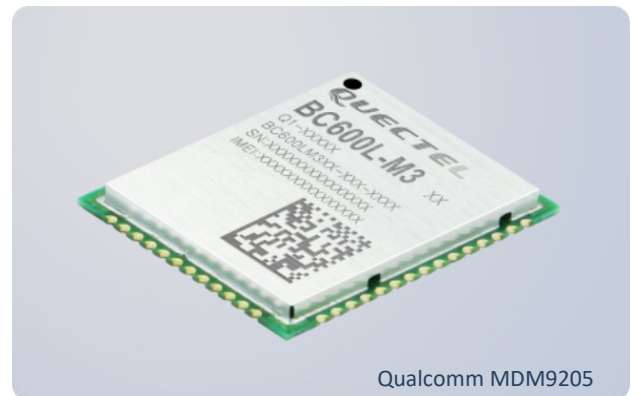


Quectel BC600L-M3

LTE Cat M1/ Cat NB2/
EGPRS Module



BC600L-M3 is a multi-mode LTE Cat M1/Cat NB2/EGPRS module with integrated GNSS functionality. It is fully compliant with 3GPP Rel. 14 specification and offers a maximum data rate of 589Kbps downlink and 1.12Mbps uplink. It features ultra-low power consumption by leveraging the integrated RAM/flash as well as the ARM Cortex A7 processor supporting ThreadX, achieving up to 70% reduction in PSM leakage and 85% reduction in eDRX current consumption compared to its predecessor.

BC600L-M3 boasts a comprehensive set of hardware-based security features and enables trusted applications to run directly on the Cortex A7 TrustZone engine. Additionally, BC600L-M3 is compatible with Quectel GSM/GPRS/GNSS module MC60, providing customers a convenient solution for network migration.

With a cost-effective SMT form factor of 18.7mm × 16.0mm × 2.1mm and high integration level, BC600L-M3 enables integrators and developers to easily design their applications and take advantage from the module's low power consumption and mechanical intensity. Its advanced package allows fully automated manufacturing for high-volume applications. A rich set of Internet protocols, industry-standard interfaces (USB/UART/PCM/STATUS) and abundant functions (e.g. USB drivers for Windows 7/8/8.1/10, Linux and Android, etc.) extend the applicability of the module to a wide range of M2M applications such as wireless POS, smart metering, tracking, wearable devices, etc.

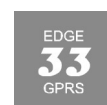


Key Benefits

- ✓ LTE Cat M1/Cat NB2/EGPRS module with ultra-low power consumption
- ✓ Easy migration from Quectel GSM/GPRS/GNSS module due to footprint compatibility
- ✓ Super slim profile in LCC package
- ✓ Integrated RAM and flash in the baseband chipset
- ✓ Comprehensive set of hardware-based security features
- ✓ Fast time-to-market: reference designs, evaluation tools and timely technical support minimize design-in time and development efforts
- ✓ Compact SMT form factor ideal for size-constrained applications with tight space
- ✓ Robust mounting and interfaces



LTE Cat M1/
Cat NB2



EGPRS



LCC Package



Embedded Abundant
Protocols



DFOTA



USB 2.0 High Speed
Interface



Ultra-low Power
Consumption



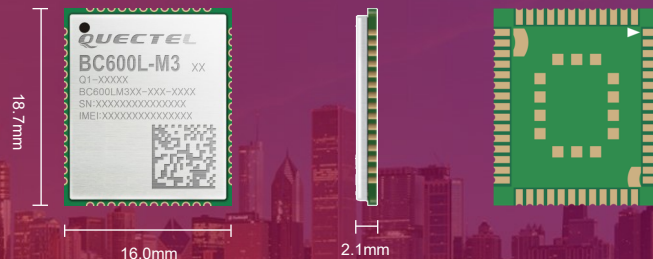
Quectel Enhanced
AT Commands



Integrated RAM/
Flash in Chipset

Quectel BC600L-M3

LTE Cat M1/ Cat NB2/ EGPRS Module



Variants for the Global

BC600L-M3*

Cat M1/Cat NB2:

LTE FDD: B1/B2/B3/B4/B5/B8/B12/B13/B14/
B17/B18/B19/B20/B25/B26*/B27/B28/B66/
B71/B85

EGPRS:

850/900/1800/1900MHz

Data

Cat M1:

Max. 589Kbps (DL), Max. 1.12Mbps (UL)

Cat NB2:

Max. 136Kbps (DL), Max. 150Kbps (UL)

EDGE:

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

GPRS:

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

Voice*

VoLTE (For Cat M1 Only)

CS Voice for GSM

SMS *

Point-to-point MO and MT

SMS Cell Broadcast

Text and PDU Mode

Interfaces*

USB 2.0 × 1

UART × 3

PCM × 1

ADC × 1

GPIO × 2

(U)SIM × 1

NETLIGHT × 1 (For Network Status Indication)

LTE Antenna Interface

GNSS Antenna Interface

Enhanced Features

GNSS* (Optional):

GPS, GLONASS, BeiDou, Galileo

Firmware Upgrade:

via USB interface

DFOTA*:

Delta Firmware Upgrade Over-the-Air

Processor:

ARM A7 Processor

QueLocator™*:

Support Cell ID Positioning

Electrical Characteristics

Output Power:

Max. Power: 20dBm

Consumption @LTE Cat M1 (Typical):

Power Saving Mode: 3uA

Idle State: TBD

Sleep State: TBD

LTE Connected Mode (Avg.): TBD

Consumption @LTE Cat NB2 (Typical):

Power Saving Mode: 3uA

Idle State: TBD

Sleep State: TBD

LTE Connected Mode (Avg.): TBD

Sensitivity:

TBD

Software Features

USB Serial Driver*:

Windows 7/8/8.1/10, Windows CE 5.0/6.0/7.0*,

Linux 2.6/3.x/4.1~4.14,

Android 4.x/5.x/6.x/7.x/8.x/9.x

RIL Driver*: Android 4.x/5.x/6.x/7.x/8.x/9.x

ECM Driver*: Linux 2.6/3.x/4.1~4.14

Gobinet Driver*: Linux 2.6/3.x/4.1~4.14

QMI_WWAN Driver*:

Linux 3.x(3.4 or later)/4.1~4.14

Protocols*:

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

PING/MQTT/CoAP

General Features

3GPP E-UTRA Release 14

Temperature Range: -40°C ~ +85°C

Dimensions: 18.7mm × 16.0mm × 2.1mm

LCC Package

Supply Voltage: 2.4V~4.8V, 3.8V Typ.

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

Enhanced AT Commands

Approvals*

Carrier:

Vodafone (Global)

Deutsche Telekom/Telefónica (Europe)

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

Rogers/Bell/Telus (Canada)

KT/SKT/LGU+ (South Korea)

NTT DOCOMO/SoftBank/KDDI (Japan)

Telstra (Australia)

Regulatory:

GCF (Global)

CE (Europe)

FCC/PTCRB (North America)

IC (Canada)

IFETEL (Mexico)

CCC (China)

KC (South Korea)

NCC (Taiwan)

JATE/TELEC (Japan)

RCM (Australia)

NBCT (Thailand)

IMDA (Singapore)

Others:

RoHS Compliant

* Under Development