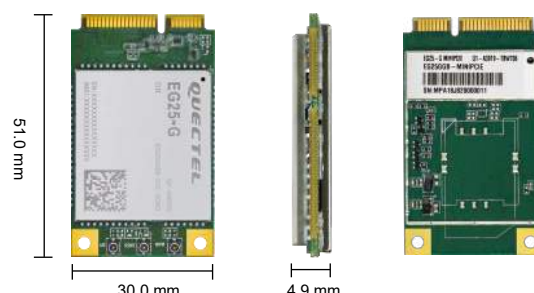




# Quectel EG25-G Mini PCIe

IoT/M2M-optimized  
LTE Cat 4 Module



Quectel EG25-G Mini PCIe is an LTE category 4 module adopting standard PCI Express® Mini Card form factor (Mini PCIe). It is optimized specially for M2M and IoT applications, and delivers maximum data rates up to 150 Mbps downlink and 50 Mbps uplink.

EG25-G Mini PCIe is backward-compatible with existing EDGE and GSM/GPRS networks, ensuring that it can be connected even in remote areas devoid of 4G or 3G coverage.

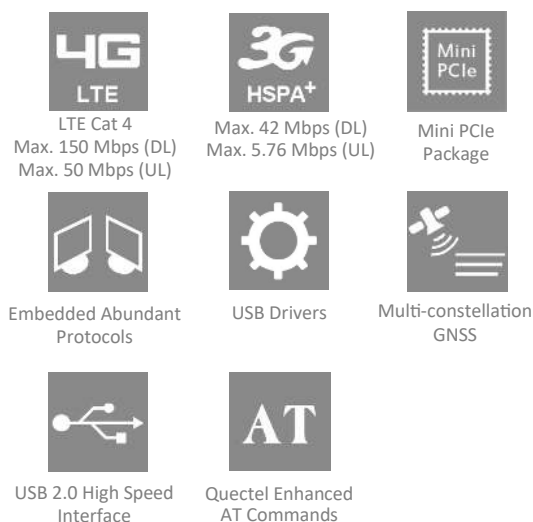
EG25-G Mini PCIe supports Qualcomm® IZat™ location technology Gen8C Lite (GPS, GLONASS, BDS, Galileo and QZSS). The integrated GNSS greatly simplifies product design, and provides quicker, more accurate and dependable positioning.

A rich set of Internet protocols, industry-standard interfaces and abundant functionalities (USB serial drivers for Windows 7/8/8.1/10, Linux, Android) extend the applicability of the module to a wide range of M2M applications such as industrial router, industrial PDA, rugged tablet PC, video surveillance and digital signage, etc.



## Key Features

- ✓ LTE category 4 module optimized for broadband IoT applications
- ✓ Worldwide LTE, UMTS/HSPA+ and GSM/GPRS/EDGE coverage
- ✓ Standard PCI Express® Mini Card form factor (Mini PCIe) ideal for manufacturers to easily integrate wireless connectivity into their devices
- ✓ MIMO technology meets demands for data rate and link reliability in modem wireless communication systems
- ✓ Multi-constellation GNSS receiver available for applications requiring fast and accurate fixes in any environment



Version: 1.5 | Status: Released

# Quectel

## EG25-G Mini PCIe

### IoT/M2M-optimized LTE Cat 4 Module

#### Frequency Bands

##### EG25-G Mini PCIe:

LTE-FDD: B1/B2/B3/B4/B5/B7/B8/B12/B13/B18/  
B19/B20/B25/B26/B28

LTE-TDD: B38/B39/B40/B41

WCDMA: B1/B2/B4/B5/B6/B8/B19

GSM: B2/B3/B5/B8

#### Data

##### LTE:

LTE-FDD: Max. 150 Mbps (DL)/Max. 50 Mbps (UL)

LTE-TDD: Max. 130 Mbps (DL)/Max. 30 Mbps (UL)

##### UMTS:

DC-HSDPA: Max. 42 Mbps (DL)

HSUPA: Max. 5.76 Mbps (UL)

WCDMA: Max. 384 kbps (DL)/Max. 384 kbps (UL)

##### GSM:

EDGE: Max. 296 kbps (DL)/Max. 236.8 kbps (UL)

GPRS: Max. 107 kbps (DL)/Max. 85.6 kbps (UL)

#### Voice

##### Speech Codec Modes:

HR/FR/EFR/AMR/AMR-WB

##### Echo Arithmetic:

Echo Cancellation/Noise Suppression

##### Audio:

Digital Audio and VoLTE (Voice over LTE)

(Optional)

#### Interfaces

USB x 1: USB 2.0 with High Speed up to

480 Mbps

PCM x 1: Digital Audio through PCM (Optional)

I2C x 1

(U)SIM x 1: 1.8/3.0 V (U)SIM Interface

UART x 1: Main UART

LED\_WWAN# for Network Status Indication

W\_DISABLE# for Disabling RF Function

PERST# for Module Resetting

Main, Rx-diversity and GNSS Antenna Connectors

#### Enhanced Features

DTMF

Audio Playback/Audio Recording

(U)SIM Card Detection

QuecFile

(U)SIM Card Connector (Optional) <sup>①</sup>

QuecLocator<sup>®</sup>

Downlink MIMO (Supports Rx-diversity Antenna)

##### DFOTA:

Delta Firmware Upgrade Over-The-Air

##### GNSS:

GPS/GLONASS/BDS/Galileo/QZSS (Optional)

#### Electrical Characteristics

##### Output Power:

GSM850: Class 4 (33 dBm ±2 dB)

EGSM900: Class 4 (33 dBm ±2 dB)

DCS1800: Class 1 (30 dBm ±2 dB)

PCS1900: Class 1 (30 dBm ±2 dB)

GSM850 8-PSK: Class E2 (27 dBm ±3 dB)

EGSM900 8-PSK: Class E2 (27 dBm ±3 dB)

DCS1800 8-PSK: Class E2 (26 dBm ±3 dB)

PCS1900 8-PSK: Class E2 (26 dBm ±3 dB)

WCDMA: Class 3 (24 dBm +1/-3 dB)

LTE-FDD: Class 3 (23 dBm ±2 dB)

LTE-TDD: Class 3 (23 dBm ±2 dB)

##### Consumption:

3.3 mA @Sleep, Typ.

35 mA @Idle

##### Sensitivity:

LTE B1: -99.5 dBm (10 MHz)

LTE B2: -99.9 dBm (10 MHz)

LTE B3: -99.8 dBm (10 MHz)

LTE B4: -99.7 dBm (10 MHz)

LTE B5: -99.9 dBm (10 MHz)

LTE B7: -99.1 dBm (10 MHz)

LTE B8: -99.8 dBm (10 MHz)

LTE B12: -99.8 dBm (10 MHz)

LTE B13: -100.1 dBm (10 MHz)

LTE B18: -100 dBm (10 MHz)

LTE B19: -99.8 dBm (10 MHz)

LTE B20: -99.7 dBm (10 MHz)

LTE B25: -100.2 dBm (10 MHz)

LTE B26: -100 dBm (10 MHz)

LTE B28: -99.8 dBm (10 MHz)

LTE B38: -99.2 dBm (10 MHz)

LTE B39: -99.8 dBm (10 MHz)

LTE B40: -99.7 dBm (10 MHz)

LTE B41: -99.3 dBm (10 MHz)

WCDMA B1: -109.2 dBm

WCDMA B2: -110 dBm

WCDMA B4: -109.5 dBm

WCDMA B5: -110 dBm

WCDMA B6: -110.5 dBm

WCDMA B8: -109.2 dBm

WCDMA B19: -110.5 dBm

GSM850: -108 dBm

EGSM900: -108 dBm

DCS: -107.5 dBm

PCS: -107.5 dBm

#### Software Features

##### USB Serial Driver:

Windows 7/8/8.1/10

Linux 2.6-5.14

Android 4.x-11.x

##### GNSS Driver:

Android 4.x-11.x

##### RIL Driver:

Android 4.x-11.x

##### USB NDIS Driver:

Windows 7/8/8.1/10

##### USB GobiNet Driver:

Linux 2.6-5.14

##### USB QMI\_WWAN Driver:

Linux 3.4-5.14

#### Protocols:

TCP/UDP/PPP/FTP/HTTP/NTP/PING/QMI/NITZ/  
SMTP/MQTT/CMUX/HTTPS/FTPS/SMTPS/SSL/  
MMS/FILE

#### General Features

Operating Temperature Range: -35 to +75 °C

Extended Temperature Range: -40 to +80 °C

Dimensions: 51.0 mm x 30.0 mm x 4.9 mm

Weight: Approx. 10.5 g

Mini PCIe Package

Supply Voltage: 3.0-3.6 V, 3.3 V Typ.

3GPP E-UTRA Release 11

Bandwidth: 1.4/3/5/10/15/20 MHz

3GPP TS27.007 and Enhanced AT Commands

#### Approvals

##### Carrier:

Deutsche Telekom (Europe)

Verizon/AT&T/U.S. Cellular (America)

Telus/Rogers\* (Canada)

##### Regulatory:

GCF (Global)

CE (Europe)

UKCA (UK)

PTCRB (North America)

FCC (America)

IC (Canada)

Anatel (Brazil)

IFETEL (Mexico)

KC (South Korea)

NCC (Taiwan, China)

JATE/TELEC (Japan)

RCM (Australia & New Zealand)

ICASA (South Africa)

##### Others:

RoHS

WHQL

\* Under Development

① There are two types of EG25-G Mini PCIe, with or without (U)SIM card connector.