

# 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 150Mbps downlink and 50Mbps uplink data rates.

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, BeiDou, 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/eCall\*) 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 Benefits

- ✓ 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



LTE Cat 4  
Max 150Mbps (DL)  
Max 50Mbps (UL)



Max 42Mbps (DL)  
Max 5.76Mbps (UL)



Mini PCIe Package



Embedded Abundant Protocols



eCall\*



Multi-constellation GNSS



USB 2.0 High Speed Interface



USB Drivers

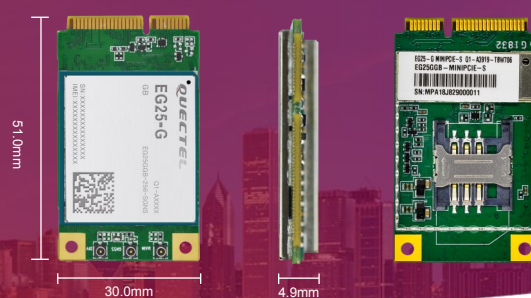


Quectel Enhanced AT Commands

# Quectel

## EG25-G Mini PCIe

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



#### 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 150Mbps (DL)/Max 50Mbps (UL)  
LTE TDD: Max 130Mbps (DL)/Max 30Mbps (UL)

##### UMTS:

DC-HSDPA: Max 42Mbps (DL)  
HSUPA: Max 5.76Mbps (UL)  
WCDMA: Max 384Kbps (DL)/Max 384Kbps (UL)

##### GSM:

EDGE: Max 296Kbps (DL)/Max 236.8Kbps (UL)  
GPRS: Max 107Kbps (DL)/Max 85.6Kbps (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 480Mbps  
PCM x 1: Digital Audio through PCM (Optional)  
(U)SIM x 1: 1.8V/3.0V (U)SIM Interface  
UART x 1: Main UART  
LED\_WWAN# for Network Status Indication  
W\_DISABLE# for Disabling RF Function  
PERST# for Module Resetting  
Solder pads for Main Antenna, Rx-diversity and  
GNSS Antennas

#### Enhanced Features

eCall\*  
DTMF\*  
(U)SIM Card Detection  
(U)SIM Card Connector (Optional)<sup>①</sup>  
Support MIMO in DL Direction  
**DFOTA\*:**  
Delta Firmware Upgrade Over-The-Air  
**GNSS:**  
GPS/GLONASS/BeiDou/Galileo/QZSS (Optional)

#### Electrical Characteristics

##### Output Power:

Class 3 (23dBm±2dB) for LTE FDD bands  
Class 3 (23dBm±2dB) for LTE TDD bands  
Class 3 (24dBm+1/-3dB) for WCDMA bands  
Class E2 (27dBm±3dB) for GSM850 8-PSK  
Class E2 (27dBm±3dB) for EGSM900 8-PSK  
Class E2 (26dBm±3dB) for DCS1800 8-PSK  
Class E2 (26dBm±3dB) for PCS1900 8-PSK  
Class 4 (33dBm±2dB) for GSM850  
Class 4 (33dBm±2dB) for EGSM900  
Class 1 (30dBm±2dB) for DCS1800  
Class 1 (30dBm±2dB) for PCS1900

##### Consumption:

3.6mA @Sleep, Typ.  
35mA @Idle

##### Sensitivity:

LTE B1: -99.5(10M)  
LTE B2: -99.9dBm (10M)  
LTE B3: -99.7dBm (10M)  
LTE B4: -99.7dBm (10M)  
LTE B5: -99.9dBm (10M)  
LTE B7: -99.2dBm (10M)  
LTE B8: -99.8dBm (10M)  
LTE B12: -99.8dBm (10M)  
LTE B13: -99.5dBm (10M)  
LTE B18: -100dBm (10M)  
LTE B19: -99.9dBm (10M)  
LTE B20: -99.8dBm (10M)  
LTE B25: -100dBm(10M)  
LTE B26: -99.5dBm (10M)  
LTE B28: -99.6dBm (10M)  
LTE B38: -99dBm (10M)  
LTE B39: -99.5dBm(10M)  
LTE B40: -99.2dBm (10M)  
LTE B41: -99dBm (10M)  
WCDMA B1: -109.2dBm  
WCDMA B2: -110dBm  
WCDMA B4: -109.7dBm  
WCDMA B5: -110.4dBm  
WCDMA B6: -110.5dBm  
WCDMA B8: -110.5dBm  
WCDMA B19: -110.1dBm  
GSM850: -108dBm  
GSM900: -108dBm  
DCS: -107.5dBm  
PCS: -107.5dBm

#### 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

#### NDIS Driver:

Windows 7/8/8.1/10

#### 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:

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

#### Protocols:

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

#### General Features

Temperature Range: -40°C ~ +80°C  
Dimensions: 51.0mm x 30.0mm x 4.9mm  
Weight: Approx. 9.8g  
Mini PCIe Package  
Supply Voltage: 3.0V~3.6V, 3.3V Typ.  
3GPP E-UTRA Release 11  
Bandwidth: 1.4/3/5/10/15/20MHz  
3GPP TS27.007 and Enhanced AT Commands

#### Approvals

##### Carrier:

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

##### Regulatory:

GCF\* (Global)  
CE (Europe)  
FCC\*/PTCRB\* (North America)  
IC\* (Canada)  
Anatel\* (Brazil)  
IFETEL\* (Mexico)  
SRRC/CCC/NAL\* (China)  
KC\* (South Korea)  
NCC\* (Taiwan)  
JATE/TELEC (Japan)  
RCM\* (Australia)  
FAC\* (Russia)  
NBTC\* (Thailand)  
ICASA\* (South Africa)

##### Others:

RoHS Compliant  
WHQL

\* Under Development

① EG25-G Mini PCIe includes (U)SIM card connector by default, and it is optional.