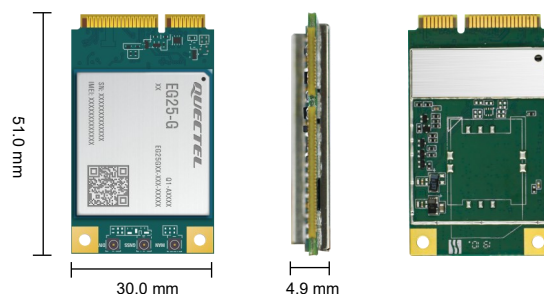




Quectel EG25-G Mini PCIe

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.

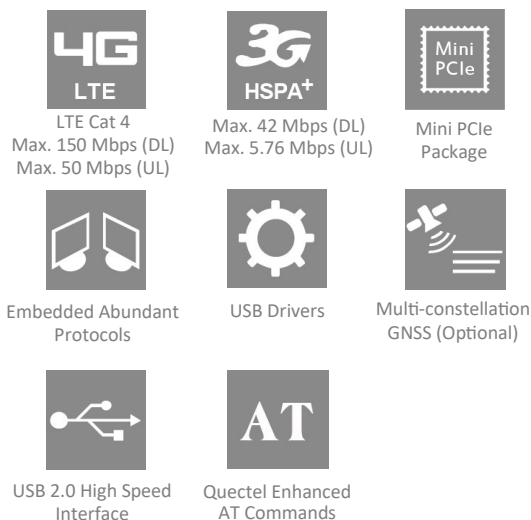
EG25-G Mini PCIe supports Qualcomm® IZat™ location technology Gen8C Lite (GPS, GLONASS, BDS, Galileo and QZSS). The integrated GNSS greatly simplifies product design, and provides quicker, more accurate and dependable positioning.

A rich set of Internet protocols, industry-standard interfaces and abundant functionalities (USB serial drivers for Windows 7/8/8.1/10/11, 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 transmission and digital signage.



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 (optional) available for applications requiring fast and accurate fixes in any environment



Version: 1.7 | Status: Released

Quectel

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Frequency Bands

EG25-G Mini PCIe:

LTE-FDD: B1/ 2/ 3/ 4/ 5/ 7/ 8/ 12/ 13/ 18/ 19/ 20/
25/ 26/ 28
LTE-TDD: B38/ 39/ 40/ 41
WCDMA: B1/ 2/ 4/ 5/ 6/ 8/ 19
GSM: B2/ 3/ 5/ 8

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) ①
QuecLocator®
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/ 11
Linux 2.6-6.5

Android 4.x-13.x

GNSS Driver:

Android 4.x-13.x

RIL Driver:

Android 4.x-13.x

USB NDIS Driver:

Windows 7/ 8/ 8.1/ 10/ 11

USB GobiNet Driver:

Linux 2.6-6.5

USB QMI_WWAN Driver:

Linux 3.4-6.5

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.