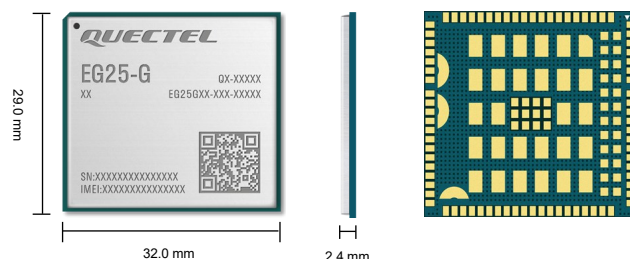




Quectel EG25-G

IoT/M2M-optimized LTE Cat 4 Module



Quectel EG25-G is an LTE Cat 4 module optimized specially for M2M and IoT applications. Adopting the 3GPP Rel.11 LTE technology, it delivers maximum data rates up to 150 Mbps downlink and 50 Mbps uplink. Designed in the compact and unified form factor, EG25-G is compatible with Quectel UMTS/HSPA+ UC200T series module and multi-mode LTE Standard EC2x series (EC25 series, EC21 series and EC20-CE)/EC200A series/EG21-G modules, which allows for flexible migration among them in design and use.

EG25-G 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 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 more 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 and IoT applications such as industrial router, industrial PDA, rugged tablet PC, video surveillance, and digital signage.



Key Features

- ✓ LTE Cat 4 module optimized for M2M and IoT applications
- ✓ Worldwide LTE, UMTS/HSPA(+) and GSM/GPRS/EDGE coverage
- ✓ Multi-constellation GNSS receiver available for applications requiring fast and accurate fixes in any environment
- ✓ Feature refinements: supports DFOTA and DTMF
- ✓ MIMO technology meets demands for data rate and link reliability in modem wireless communication systems



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



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



LGA Package



Wi-Fi
Interface



Bluetooth
Interface



USB 2.0 High Speed
Interface



Embedded Abundant
Protocols



Multi-constellation
GNSS



Quectel Enhanced
AT Commands



USB Drivers

Version: 1.4 | Status: Released

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Variant for Global

EG25-G:

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

UART × 2 : Main UART and Debug UART

USB × 1: USB 2.0 with High Speed up to 480 Mbps

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

PCM × 1: Digital Audio through PCM (Optional)

I2C × 1

NETLIGHT × 2 (NET_STATUS and NET_MODE)

ADC × 2

SDIO × 2 (for Wi-Fi and SD Card)

SGMII × 1

BT × 1

RESET (Active Low)

PWRKEY (Active Low)

STATUS

USB_BOOT

Solder Pads for Primary, Rx-diversity and GNSS

Antennas

Enhanced Features

SDIO Interface for Wi-Fi Function (Optional)

UART/PCM Interfaces for BT 4.0 Function*

DTMF

Audio Playback/Audio Recording

QuecFile

QuecLocator®

QuecOpen®

Downlink MIMO (Supports Rx-diversity Antenna)

(U)SIM Card Detection

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:

15 µA @ Power off

1.8 mA @ Sleep, Typ.

22 mA @ Idle

Sensitivity:

LTE B1: -99.5 dBm (10 MHz)

LTE B2: -99.9 dBm (10 MHz)

LTE B3: -99.7 dBm (10 MHz)

LTE B4: -99.7 dBm (10 MHz)

LTE B5: -99.9 dBm (10 MHz)

LTE B7: -99.2 dBm (10 MHz)

LTE B8: -99.8 dBm (10 MHz)

LTE B12: -99.8 dBm (10 MHz)

LTE B13: -99.5 dBm (10 MHz)

LTE B18: -100 dBm (10 MHz)

LTE B19: -99.9 dBm (10 MHz)

LTE B20: -99.8 dBm (10 MHz)

LTE B25: -100 dBm (10 MHz)

LTE B26: -99.5 dBm (10 MHz)

LTE B28: -99.6 dBm (10 MHz)

LTE B38: -99 dBm (10 MHz)

LTE B39: -99.5 dBm (10 MHz)

LTE B40: -99.2 dBm (10 MHz)

LTE B41: -99 dBm (10 MHz)

WCDMA B1: -109.2 dBm

WCDMA B2: -110 dBm

WCDMA B4: -109.5 dBm

WCDMA B5: -110.4 dBm

WCDMA B6: -110.5 dBm

WCDMA B8: -109.5 dBm

WCDMA B19: -110.1 dBm

GSM850: -108 dBm

EGSM900: -108 dBm

DCS1800: -107.4 dBm

PCS1900: -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/SMTPS/SSL/

MMS/FILE

General Features

Operating Temperature Range: -35 to +75 °C

Extended Temperature Range: -40 to +85 °C

Dimensions: 29.0 mm x 32.0 mm x 2.4 mm

Weight: Approx. 4.9 g

LGA Package

Supply Voltage: 3.3-4.3 V, 3.8 V Typ.

3GPP E-UTRA Release 11

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

3GPP TS27.007, 27.005 and Enhanced AT

Commands

Certification

Carrier:

Deutsche Telekom (Europe)

Verizon/AT&T/Sprint/U.S. Cellular/T-Mobile

(America)

Telus/Rogers* (Canada)

Regulatory:

GCF (Global)

CE (Europe)

UKCA (UK)

PTCRB (North America)

FCC (America)

IC (Canada)

Anatel (Brazil)

IFETEL (Mexico)

SRRC/CCC/NAL (China)

KC (South Korea)

NCC (Taiwan, China)

JATE/TELEC (Japan)

RCM (Australia & New Zealand)

NBTC (Thailand)

IMDA (Singapore)

ICASA (South Africa)

Others:

RoHS

WHQL

* Under Development