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 150Mbps downlink and 50Mbps uplink data rates. Designed in the compact and unified form factor, EG25-G is compatible with Quectel UMTS/HSPA+ UC20 module and multi-mode LTE EC2x (EC25, EC21, EC20, EC20 R2.0 and EC20 R2.1) module, which allows for flexible migration among them in design and manufacturing.

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, BeiDou, 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/eCall*) 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 Benefits

- 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*, eCall* and DTMF*
- MIMO technology meets demands for data rate and link reliability in modem wireless communication systems

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LTE Cat 4 Module

Variant for Global
EG25-G
LTE TDD: B38/B39/B40/B41
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)

Interfaces
UART x 2: Main UART and Debug UART
USB x 1: USB 2.0 with High Speed up to 480Mbps
(U)SIM x 1: 1.8V/3.0V (U)SIM Interface
PCMCIA x 1: Digital Audio through PCM (Optional)
NETLINUX x 2 (NET_STATUS and NET_MODE)
ADC x 2
SDIO x 2 (for Wi-Fi and SD card)
RESET
PWKEY
Solder pads for Primary, Rx-diversity and GNSS Antennas

Enhanced Features
SDIO Interface for Wi-Fi Function (Optional)
UART/PCM Interfaces for BT4.0 Function
eCall*
DTMF*
Audio Playback*/Audio Recording*
QueueFile*
(U)SIM Card Detection
DFOTA*
Delta Firmware Upgrade Over-The-Air

GNSS:
GPS/GLONASS/BeiDou/Galileo/QZSS (Optional)

Electrical Characteristics
Output Power:
Class 4 (33dBm±2dB) for GSM850
Class 4 (33dBm±2dB) for EGSM900
Class 1 (30dBm±2dB) for DCS1800
Class 1 (30dBm±2dB) for PCS1900
Class 2 (27dBm±3dB) for GSM850 8-PSK
Class 2 (26dBm±3dB) for DCS1800 8-PSK
Class 2 (26dBm±3dB) for PCS1900 8-PSK
Class 3 (24dBm±1-3dB) for WCDMA bands
Class 3 (23dBm±2dB) for LTE-FDD bands
Class 3 (23dBm±2dB) for LTE-TDD bands

Consumption:
20uA @Power off
3mA @Sleep, Typ.
22mA @Idle

Sensitivity:
LTE B1: -95.5dBm (10M)
LTE B2: -94.9dBm (10M)
LTE B3: -97.7dBm (10M)
LTE B4: -95.7dBm (10M)
LTE B5: -99.4dBm (10M)
LTE B7: -99.2dBm (10M)
LTE B8: -99.8dBm (10M)
LTE B12: -99.8dBm (10M)
LTE B13: -99.5dBm (10M)
LTE B15: -100dBm (10M)
LTE B18: -100dBm (10M)
LTE B19: -99.9dBm (10M)
LTE B20: -99.8dBm (10M)
LTE B25: -99.0dBm (10M)
LTE B26: -99.5dBm (10M)
LTE B28: -99.6dBm (10M)
LTE B38: -99.6dBm (10M)
LTE B39: -99.5dBm (10M)
LTE B40: -99.2dBm (10M)
LTE B41: -99dBm (10M)
WCDMA B1: -109.2dBm
WCDMA B2: -110dBm
WCDMA B3: -109.9dBm
WCDMA B4: -110.7dBm
WCDMA B5: -110dBm
WCDMA B6: -110dBm
WCDMA B8: -110.5dBm
WCDMA B19: -110.1dBm
GSM850: -108dBm
GSM900: -108dBm
DCS1800: -107.5dBm
PCS1900: -107.5dBm

Output Power:
GPRS: Max 107Kbps (DL)/Max 85.6Kbps (UL)
EDGE: Max 296Kbps (DL)/Max 236.8Kbps (UL)
GSM: Max 107Kbps (DL)/Max 85.6Kbps (UL)
WCDMA: Max 384Kbps (DL)/Max 384Kbps (UL)
LPDC: Max 107Kbps (DL)/Max 85.6Kbps (UL)
UMTS: Max 296Kbps (DL)/Max 236.8Kbps (UL)
LTE: Max 150Mbps (DL)/Max 50Mbps (UL)

Frequency Range:
GSM850: 890-915MHz/935-960MHz
EGSM900: 885.2-890.2MHz/925-930MHz
Dcs1800: 1710-1785MHz/1805-1880MHz
PCS1900: 1850-1890MHz/1910-1950MHz
DCS1900: 1725-1785MHz/1805-1865MHz
EG25: 1710-1785MHz/1805-1880MHz
LTE TDD: B38/B39/B40/B41
GSM: B2/B3/B5/B8

Antennas
Solder pads for Primary, Rx-diversity and GNSS Antennas

General Features
Temperature Range: -40°C ~ +85°C
Dimensions: 29.0mm x 32.0mm x 2.4mm
Weight: Approx. 4.9g
LGA Package
Supply Voltage: 3.3V~3.6V, 3.8V Typ.
3GPP E-UTRA Release 11
Bandwidth: 1.4/3/5/10/15/20MHz
3GPP TS27.007, 27.005 and Enhanced AT Commands

Approvals
RoHS Compliant
GCF* (Global)
Verizon* / AT&T*/FCC*/PTCRB* (North America)
CE* (Europe)
RCM* (Australia)
Anatel* (Brazil)
ifETEL* (Mexico)
CCCA* (China)
NCC* (Taiwan)
KC* (South Korea)
JATE*/TELEC* (Japan)
NBTC* (Thailand)
ICASA* (South Africa)
FAC* (Russia)
* Under Development

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
4.4.x/5.x/6.x/7.x/8.x
RIL Driver:
Android 4.4.x/5.x/6.x/7.x/8.x
NDS 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
Linux qmi wwan Driver:
3.x (3.4 or later)/4.1~4.14
Protocols:
TCP/UDP/PPP/FTP/HTTP/HTTP/NTP/PING/QMI/NITZ/SMTP/CMUX/*HTTPS*/MM6*/FTP*/SMTTP*/SSL*/FILE*/

Solutions
Verizon* / AT&T*/FCC*/PTCRB* (North America)
CE* (Europe)
RCM* (Australia)
Anatel* (Brazil)
ifETEL* (Mexico)
CCCA* (China)
NCC* (Taiwan)
KC* (South Korea)
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