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

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EG25-G Mini PCIe:
- LTE FDD: B38/B39/B40/B41
- GSM: B2/B3/B5/B8

**Data**
- LTE FDD: Max 150Mbps (DL)/Max 50Mbps (UL)
- LTE TDD: Max 130Mbps (DL)/Max 30Mbps (UL)
- UMTS:
  - DC-HSDPA: Max 42Mbps (DL)/Max 5.76Mbps (UL)
  - WCDMA: Max 384Kbps (DL)/Max 384Kbps (UL)
- GSM:
  - EDGE: Max 26Kbps (DL)/Max 23.6Kbps (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
- PC M 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
- 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
- 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 (24dBm±3dB) for GSM850 8-PSK
  - Class E2 (24dBm±3dB) for EGSM900 8-PSK
  - Class E2 (24dBm±3dB) for EUS1800 8-PSK
  - Class E2 (24dBm±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: -99.5dBm
  - LTE B2: -99.9dBm
  - LTE B3: -99.7dBm
  - LTE B4: -99.7dBm
  - LTE B5: -99.9dBm
  - LTE B7: -99.2dBm
  - LTE B8: -99.8dBm
  - LTE B12: -99.8dBm
  - LTE B13: -99.5dBm
  - LTE B18: -100dBm
  - LTE B19: -99.9dBm
  - LTE B20: -99.8dBm
  - LTE B25: -100dBm
  - LTE B26: -99.5dBm
  - LTE B28: -99.6dBm
  - LTE B38: -99dBm
  - LTE B39: -99.5dBm
  - LTE B40: -99.2dBm
  - LTE B41: -99dBm
  - 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
- **RIL Driver:**
  - Android 4.2/5.x/6.x/7.x/8.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/HTTPS/FTP/HTTP/PING/QM/NI/TZ.../SMTP/CMUX/HTTPS/MMS/FTP/SMTPS/SSL/FILE*

**General Features**
- **Temperature Range:** -40°C ~ +80°C
- **Dimensions:** 50.0mm 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**
- RoHS Compliant
- GCC* (Global)
- Verizon*/AT&T*/FCC*/PTCRB* (North America)
- CE* (Europe)
- RCM* (Australia)
- IC* (Canada)
- Anatel* (Brazil)
- IFTTEL* (Mexico)
- CCC* (China)
- NCC* (Taiwan)
- KC* (South Korea)
- JATE*/TELEC* (Japan)
- NBTC* (Thailand)
- ICASA* (South Africa)
- FAC* (Russia)

* Under Development