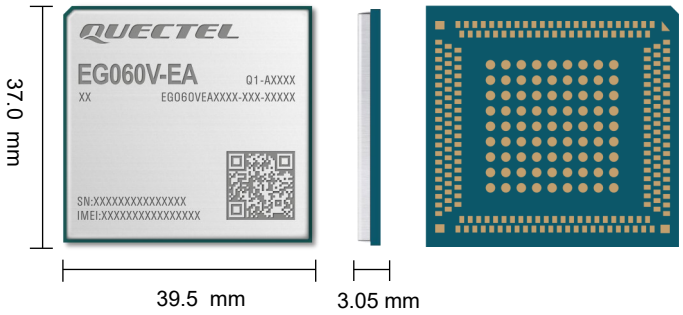
Quectel EG060V-EA

IoT/M2M-optimized LTE-A Cat 6 LGA Module



Quectel EG060V-EA is an LTE Advanced category 6 module optimized specially for M2M and IoT applications. Adopting the 3GPP Release 10 LTE technology, it reaches a maximum data rate of up to 300 Mbps downlink and 50 Mbps uplink.

Designed in an LGA form factor, the module is compatible with Quectel Cat 6 module EG06 and Cat 12 module EG12. This compatibility facilitates migration between different categories.

The module's rich Internet protocols, multiple interfaces, and abundant functionalities (USB drivers for Windows 7, Windows 8/8.1, Windows 10, WinCE, Linux and Android) make it widely applicable in the fields of M2M and IoT. The recommended applications are routers (including MiFis), home gateways, set-top boxes, PDAs, tablet PCs, video transmission and digital signage.

Key Features

- LTE-A Cat 6 module with LGA form factor, optimized for M2M and IoT applications
- Supports LTE-A carrier aggregation
- Worldwide LTE-A and UMTS/HSPA(+) coverage
- Feature refinements: supports FOTA and DTMF
- MIMO technology meets demands of wireless communication systems on data rate and link reliability

LTE
LTE Cat 6
Max 300 Mbps (DL)
Max 50 Mbps (UL)

HSPA+
Max 21 Mbps (DL)
Max 5.76 Mbps (UL)

LGA
LGA Package

Abundant Embedded Protocols

AT
Quectel Enhanced AT Commands

VoLTE
Voice over LTE

USB 2.0 Interface

USB Drivers

Version: 1.2 | Status: Released

Quectel EG060V-EA

IoT/M2M-optimized LTE-A Cat 6 LGA Module

For EMEA/APAC①/Brazil

EG060V-EA

LTE-FDD: B1/B3/B5/B7/B8/B20/B28

LTE-TDD: B38/B40/B41

2 × CA②: B1 + B1/B3/B5/B8/B20/B28;
B3 + B3/B5/B7/B8③/B20/B28;
B7 + B5/B7/B8/B20/B28;
B38 + B38; B40 + B40; B41 + B41

WCDMA: B1/B5/B8

Data

LTE:

LTE-FDD: max. 300 Mbps (DL)/max. 50 Mbps (UL)

LTE-TDD: max. 220 Mbps (DL)/max. 30 Mbps (UL)

UMTS:

HSDPA: max. 21 Mbps (DL)

HSUPA: max. 5.76 Mbps (UL)

WCDMA: max. 384 kbps (DL)/max. 384 kbps (UL)

SMS

Point-to-point MO and MT

SMS Cell Broadcast

Text and PDU Modes

Interfaces

USB 2.0 × 1: Support Slave and Master* Modes

(U)SIM × 1: 1.8/3.0 V

GPIO* × 2

UART × 2

PCIe (RC)*× 1: PCIe Gen 1, for Wi-Fi Function

SD Card Interface* × 1

I2C × 1

PCM × 1

SPI × 1

ADC × 2

RESET_N: Reset the Module

Main and Diversity Antennas

Enhanced Features

MIMO: 2 × 2, 4 × 2, DL

eCall: Emergency Service

Digital Audio and VoLTE (Voice over LTE)

(U)SIM Card Detection

DTMF: Dual-tone Multi-frequency

FOTA: Firmware Upgrade Over-the-Air

Wi-Fi* Function through PCIe Interface

Electrical Characteristics

Output Power:

Class 3 (23 dBm ±2 dB) for LTE-FDD④

Class 3 (23 dBm ±2 dB) for LTE-TDD

Class 3 (24 dBm +1/-3 dB) for WCDMA

Power Consumption:

10 μA @ Power off

3.7 mA @ Sleep (PF = 128)

5.0 mA @ Sleep (PF = 64)

30 mA @ Idle

Software Features

USB Serial Driver:

Windows 7/8/8.1/10

WinCE 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

USB NCM Driver:

Linux 2.6–5.14

RIL Driver:

Android 4.x–10.x

USB ECM Driver:

Linux 2.6–5.9

RNDIS Driver:

Windows 7/8/8.1/10

Linux 2.6–5.9

Protocols:

PPP/TCP/UDP/FTP/FTPS/HTTP/HTTPS/NTP/PING/

SMTP*/MMS*/SMTPS*/SSL

General Features

3GPP E-UTRA Release 10 Compliance

LGA Package

Bandwidth: 1.4/3/5/10/15/20/40 (2 × CA) MHz

Supply Voltage Range: 3.3–4.3 V, typ. 3.8 V

Operation Temperature Range: -20 °C to +55 °C

Extended Temperature Range: -25 °C to +60 °C

Dimensions: 39.5 mm × 37.0 mm × 3.05 mm

Weight: approx. 6.7 g

AT Command:

3GPP TS 27.007

Quectel Enhanced AT Commands

Approvals

Regulatory:

CE (Europe)

NCC (Taiwan, China)

RCM (Australia/New Zealand)

Notes:

1. *: Under Development
2. ①: Excluding Japan and China Mobile
3. ②: 2 x CA supports continuous intra-band CA, but not non-continuous intra-band CA.
4. ③: For CA-3A-8A, “B3 (PCC) + B8 (SCC)” is supported, while “B8 (PCC) + B3 (SCC)” is not.
5. ④: For LTE-FDD Band 3, the transmitting power is 21.5 dBm ±1 dB.

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