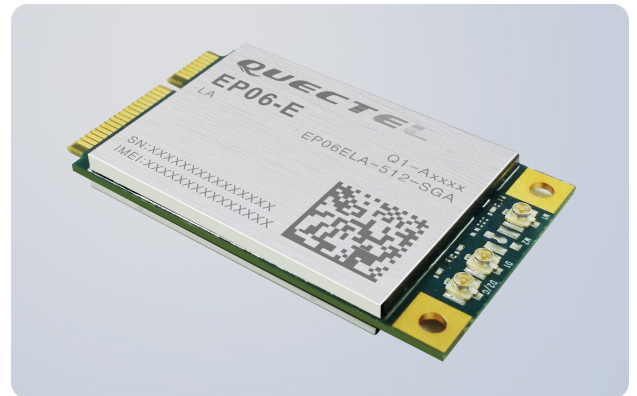


# Quectel EP06

## IoT/M2M-optimized LTE-A Cat 6 Mini PCIe Module



Quectel EP06 is a series of LTE Advanced category 6 module optimized specially for M2M and IoT applications. Adopting the 3GPP Rel. 12 LTE technology, it delivers M2M-optimized speeds of 300Mbit/s downlink and 50Mbit/s uplink peak data rates. Designed in the Mini PCIe form factor, EP06 is compatible with Quectel future Cat 12 module EP12 and Cat 16 module EP16, which will help customers to migrate between different categories in the future.

EP06 contains 4 variants (EP06-E, EP06-A, EP06-LA and EP06-APAC) which are designed for different target regions and nearly cover all the main stream carriers worldwide.

EP06 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 capability.

A rich set of Internet protocols, industry-standard interfaces and abundant functionalities (USB drivers for Windows 7, Windows 8/8.1, Windows 10, Linux, Android/eCall) extend the applicability of the module to a wide range of M2M and IoT applications such as industrial router, home gateway, STB, industrial PDA, rugged tablet PC, video surveillance and digital signage, etc.



### Key Benefits

- ✓ LTE-A Cat 6 module with Mini PCIe form factor, optimized for M2M and IoT applications
- ✓ Support LTE-A carrier aggregation
- ✓ Worldwide LTE-A, UMTS/HSPA+ 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



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



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



Mini PCIe Package



Embedded Abundant Protocols



eCall



Multi-constellation GNSS



USB 2.0/3.0 High Speed Interface



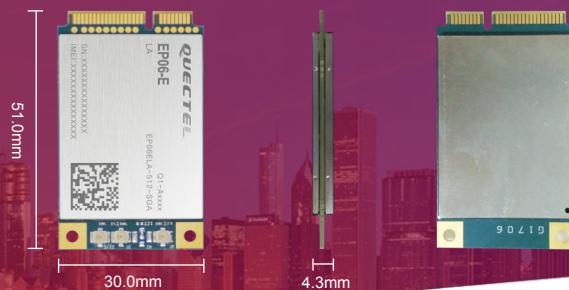
USB Drivers



Quectel Enhanced AT Commands

# Quectel EP06

## IoT/M2M-optimized LTE-A Cat 6 Mini PCIe Module



### Variant for EMEA/Australia/Brazil

#### EP06-E

LTE-FDD: B1/B3/B5/B7/B8/B20/B28/B32

LTE-TDD: B38/B40/B41

2×CA: B1+B1/B5/B8/B20/B28;

B3+B3/B5/B7/B8/B20/B28;

B7+B5/B7/B8/B20/B28;

B20+B32<sup>①</sup>; B38+B38; B40+B40; B41+B41

WCDMA: B1/B3/B5/B8

### Variant for North America

#### EP06-A

LTE-FDD: B2/B4/B5/B7/B12/B13/B25/B26/B29/  
B30/B66

2×CA: B2+B2/B5/B12/B13/B26/B29<sup>①</sup>;

B4+B4/B5/B12/B13/B26/B29<sup>①</sup>;

B7+B5/B7/B12/B13/B26/B29<sup>①</sup>;

B25+B5/B12/B13/B25/B26/B29<sup>①</sup>;

B30+B5/B12/B13/B26/B29<sup>①</sup>;

B66+B5/B12/B13/B26/B29<sup>①</sup>/B66

WCDMA: B2/B4/B5

### Variant for Latin America

#### EP06-LA (Under Planning)

LTE-FDD: B2/B3/B4/B5/B7/B8/B20/B28

2×CA: B2+B2/B5/B8/B20/B28;

B3+B3/B5/B7/B8/B20/B28;

B4+B4/B5/B8/B20/B28;

B7+B5/B7/B8/B20/B28

WCDMA: B2/B3/B4/B5/B8

### Variant for Asia-Pacific

#### EP06-APAC (Under Planning)

LTE-FDD: B1/B3/B5/B7/B8/B18/B19/B21/B26

LTE-TDD: B38/B39/B40/B41

2×CA: B1+B3/B8/B18/B19; B3+B5/B19;

B7+B5/B7; B21+B19; B38+B38; B39+B39;

B39+B41; B40+B40; B41+B41

WCDMA: B1/B5/B6/B8/B9/B19

### Data

#### LTE:

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

LTE-TDD: Max 226Mbps (DL)/Max 28Mbps (UL)

#### UMTS:

DC-HSDPA: Max 42Mbps (DL)

HSUPA: Max 5.76Mbps (UL)

WCDMA: Max 384Kbps (DL)/Max 384Kbps (UL)

### SMS

Point-to-point MO and MT

SMS Cell Broadcast

Text and PDU Mode

### Interfaces

USB 2.0/3.0, Supports Slave Mode

Digital Audio Through PCM Interface

I2C × 1

(U)SIM Interface × 2: 1.8V/3.0V

ANTCTL/GPIO × 4

W\_DISABLE\_N: Control RF Function

RESET\_N: Reset the Module

WAKE\_N: Wake up the Host

WAN\_LED\_N: Indicate Network Status

PCIe Interface\* (Optional)

Main, Diversity and GNSS Antenna Interfaces

### Enhanced Features

MIMO: 2 × 2, 4 × 2, DL

eCall: Emergency Service

Digital Audio and VoLTE (Voice over LTE)

(Optional)

DTMF: Dual-tone Multi-frequency

DFOTA: Delta Firmware over the Air

GNSS: GPS/GLONASS/BeiDou/Galileo/QZSS

### Electrical Characteristics

#### Output Power:

Class 3 (23dBm±2dB) for LTE-FDD

Class 3 (23dBm±2dB) for LTE-TDD

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

#### Consumption:

TBD @Power off

TBD @Sleep, Typ.

TBD @Idle

### Software Features

#### MBIM Driver:

Windows 10

#### 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

#### RIL Driver:

Android 4.x/5.x/6.x/7.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:

Linux 3.x (3.4 or later)/4.1~4.14

### Protocols:

PPP/QMI/TCP\*/UDP\*/FTP\*/HTTP\*/NTP\*/PING\*/

HTTPS\*/SMTP\*/MMS\*/FTPS\*/SMTPS\*/SSL\*

### General Features

3GPP E-UTRA Release 12

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

Supply Voltage: 3.1V~4.4V, 3.3V Typ.

Temperature Range: -40°C ~ +85°C

Dimensions: 51.0mm × 30.0mm × 4.3mm

Mini PCIe Package

Approx. 6.0g

3GPP TS27.007 and Quectel Enhanced AT

Commands

### Approvals

CE\*/GCF\* (Europe)

FCC\*/PTCRB\*/AT&T\*/Verizon\* (North America)

CCC\* (China)

①: B29 and B32 in 2×CA are only for  
secondary component carrier

\* Under Development