Quectel EC200U Series

IoT/ M2M-optimized
LTE Cat 1 Module

28.0 mm
31.0 mm
2.4 mm
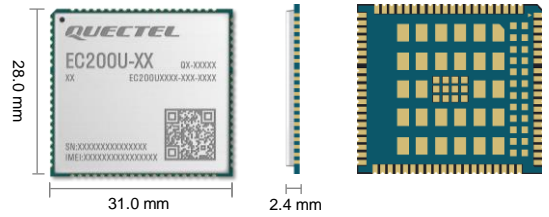
Quectel EC200U is a series of the latest LTE Cat 1 module optimized specially for M2M and IoT applications. It delivers maximum data rates up to 10 Mbps downlink and 5 Mbps uplink. Designed in the compact and unified form factor, EC200U series is compatible with Quectel multi-mode LTE Standard EC20-CE, EC200S series, EC21 series, EC25 series, EG21-G and EG25-G, ensuring that it can easily migrate among compatible modules. EC200U series also supports standard Mini PCIe packages to meet the needs of different industry applications.

EC200U series contains three variants: EC200U-CN, EC200U-EU and EC200U-AU, which meets the frequency band coverage of different countries and regions. Adopting laser engraving process, EC200U series features a more fashionable appearance, strong metallic texture, better heat dissipation capability and durable label information, which makes it ideally suited for automation requirement.

A rich set of Internet protocols, industry-standard interfaces and abundant functionalities (USB drivers for Windows 7/ 8/ 8.1/ 10/ 11, Linux, Android) extend the applicability of EC200U series to a wide range of M2M and IoT applications such as POS, POC, ETC, shared equipment, data card, energy control and monitoring, smart safety and protection, and industrial PDA.

Key Features

- ✔ LTE Cat 1 module optimized for M2M and IoT applications
- ✔ Worldwide LTE, GSM/ GPRS coverage
- ✔ Abundant functional interfaces
- ✔ Support analog audio
- ✔ Built-in GNSS (optional)
- ✔ Feature refinements: support Wi-Fi Scan (optional), Bluetooth (optional) and FOTA
- ✔ High performance

LTE Cat 1
Max. 10 Mbps (DL)
Max. 5 Mbps (UL)

LCC Package

Embedded Abundant Protocols

FOTA

Bluetooth (Optional)

GNSS (Optional)

USB 2.0 High Speed Interface

Wi-Fi Scan (Optional)

Quectel Enhanced AT Commands

Version: 1.4 | Status: Released

Quectel EC200U Series

LTE Cat 1	EC200U-CN	EC200U-EU	EC200U-AU
Region/ Operator	China/ India	EMEA/ Australia/ New Zealand	Latin America
Dimensions (mm)	28.0 × 31.0 × 2.4	28.0 × 31.0 × 2.4	28.0 × 31.0 × 2.4
Weight (g)	Approx. 4.1	Approx. 4.1	Approx. 4.1
Temperature Range			
Operating Temperature	-35 °C to +75 °C	-35 °C to +75 °C	-35 °C to +75 °C
Extended Temperature	-40 °C to +85 °C	-40 °C to +85 °C	-40 °C to +85 °C
Frequency Bands			
LTE-FDD	B1/ 3/ 5/ 8	B1/ 3/ 5/ 7/ 8/ 20/ 28	B1/ 2/ 3/ 4/ 5/ 7/ 8/ 28/ 66
LTE-TDD	B34/ 38/ 39/ 40/ 41	B38/ 40/ 41	B38/ 40/ 41
GSM	Optional, B3/ 8	B2/ 3/ 5/ 8	B2/ 3/ 5/ 8
GNSS (Optional)	GPS/ BDS/ Galileo/ GLONASS/ QZSS	GPS/ BDS/ Galileo/ GLONASS/ QZSS	GPS/ BDS/ Galileo/ GLONASS/ QZSS
Bluetooth (Optional)	Bluetooth 4.2 (BR/ EDR + BLE)	Bluetooth 4.2 (BR/ EDR + BLE)	Bluetooth 4.2 (BR/ EDR + BLE)
Wi-Fi Scan (Optional)	2.4 GHz 11b (Rx)	2.4 GHz 11b (Rx)	2.4 GHz 11b (Rx)
Bandwidth	1.4/ 3/ 5/ 10/ 15/ 20 MHz	1.4/ 3/ 5/ 10/ 15/ 20 MHz	1.4/ 3/ 5/ 10/ 15/ 20 MHz
Certifications			
Regulatory	**China**: SRRC/ NAL/ CCC	**Europe**: CE **Australia/ New Zealand**: RCM **South Korea**: KC	**America**: FCC **Brazil**: Anatel
Carrier	**China**: China Telecom/ China Mobile/ China Unicom	**South Korea**: KT*	
Max. Data Rate			
LTE-FDD (Mbps)	10 (DL)/ 5 (UL)	10 (DL)/ 5(UL)	10 (DL)/ 5(UL)
LTE-TDD (Mbps)	8.96 (DL)/ 3.1 (UL)	8.96 (DL)/ 3.1 (UL)	8.96 (DL)/ 3.1 (UL)
GSM (kbps)	85.6 (DL)/ 85.6 (UL)	85.6 (DL)/ 85.6 (UL)	85.6 (DL)/ 85.6 (UL)
Interfaces			
(U)SIM	× 2	× 2	× 2
UART	× 3	× 3	× 3
USB 2.0	× 1	× 1	× 1
Audio Digital (PCM)	× 1	× 1	× 1
Audio Analog	× 2 (Microphone, Loudspeaker)	× 2 (Microphone, Loudspeaker)	× 2 (Microphone, Loudspeaker)
ADC	× 3	× 3	× 3
SPI	× 1	× 1	× 1
SD Card	× 1	× 1	× 1
RESET_N	× 1	× 1	× 1
PWERKEY	× 1	× 1	× 1
I2C	× 2	× 2	× 2
LCM	× 1 (QuecOpen®)	× 1 (QuecOpen®)	× 1 (QuecOpen®)
Camera	× 1 (QuecOpen®)	× 1 (QuecOpen®)	× 1 (QuecOpen®)
Matrix Keypad (4 × 4) [①]	× 1 (QuecOpen®)	× 1 (QuecOpen®)	× 1 (QuecOpen®)
Wi-Fi Scan/ Bluetooth Antenna (Optional)	× 1	× 1	× 1
GNSS Antenna (Optional)	× 1	× 1	× 1
Main Antenna	× 1	× 1	× 1
Enhanced Features			
FOTA	●	●	●
BLE (Bluetooth 4.2)	○	○	○
Wi-Fi Scan	○	○	○
GNSS	○	○	○
Audio Playback/ Audio Recording	●	●	●
QuecLocator®	●	●	●
QuecPython®	●	●	●
QuecFile®	●	●	●
(U)SIM Card Detection	●	●	●
Software Features			
Protocols	TCP/ UDP/ PPP/ NITZ/ PING/ FILE/ MQTT/ NTP/ HTTP/ HTTPS/ SSL/ FTP/ FTPS/ CMUX/ MMS [②]	TCP/ UDP/ PPP/ NITZ/ PING/ FILE/ MQTT/ NTP/ HTTP/ HTTPS/ SSL/ FTP/ FTPS/ CMUX/ MMS [②]	TCP/ UDP/ PPP/ NITZ/ PING/ FILE/ MQTT/ NTP/ HTTP/ HTTPS/ SSL/ FTP/ FTPS/ CMUX/ MMS [②]
Driver	**RIL Driver** — Android 4.x–13.x	Android 4.x–13.x	Android 4.x–13.x
	USB RNDIS Driver — Windows 7/ 8/ 8.1/ 10/ 11, Linux 2.6–6.5	Windows 7/ 8/ 8.1/ 10/ 11, Linux 2.6–6.5	Windows 7/ 8/ 8.1/ 10/ 11, Linux 2.6–6.5
	GNSS Driver (Optional) — Android 4.x–13.x	Android 4.x–13.x	Android 4.x–13.x
	USB ECM Driver — Linux 2.6–5.18	Linux 2.6–5.18	Linux 2.6–5.18
	USB Serial Driver — Windows 7/ 8/ 8.1/ 10/ 11, Linux 2.6–6.5, Android 4.x–13.x	Windows 7/ 8/ 8.1/ 10/ 11, Linux 2.6–6.5, Android 4.x–13.x	Windows 7/ 8/ 8.1/ 10/ 11, Linux 2.6–6.5, Android 4.x–13.x
Electrical Features			
Supply Voltage Range	3.3–4.3 V, Typ. 3.8 V	3.3–4.3 V, Typ. 3.8 V	3.3–4.3 V, Typ. 3.8 V
Power Consumption (Typical)	31 µA @ Power Off 1.4 mA @ LTE Sleep (PF = 128) 1.2 mA @ LTE Sleep (PF = 256) 28.7 mA @ Idle (PF = 64, USB Connected) 12.7 mA @ Idle (PF = 64, USB Disconnected)	31 µA @ Power Off 1.5 mA @ LTE Sleep (PF = 128) 1.4 mA @ LTE Sleep (PF = 256) 27.9 mA @ Idle (PF = 64, USB Connected) 12.7 mA @ Idle (PF = 64, USB Disconnected)	30 µA @ Power Off 1.4 mA @ LTE Sleep (PF = 128) 1.2 mA @ LTE Sleep (PF = 256) 27.8 mA @ Idle (PF = 64, USB Connected) 12.5 mA @ Idle (PF = 64, USB Disconnected)

NOTE:
1. ●: Supported.
2. ○: Optional.
3. *: In progress.
4. ②: MMS protocol is optional.
5. ①: GNSS function is optional. If the chosen module variant supports GNSS function, 4 × 4 matrix keypad is supported; Otherwise 4 × 6 matrix keypad is supported.

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