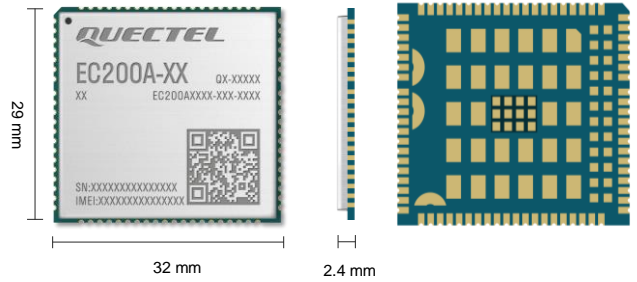


# Quectel EC200A Series

## IoT/ M2M-optimized LTE Cat 4 Module



Quectel EC200A is a series of LTE Cat 4 module optimized specially for M2M and IoT applications. Adopting the 3GPP Release 9 LTE technology, it delivers maximum data rates up to 150 Mbps downlink and 50 Mbps uplink. Designed in the compact and unified form factor, EC200A series is compatible with Quectel multi-mode LTE Standard EC25 series, EC21 series, EC20-CE, EG25-G, EC200U series, and UMTS/HSPA+ UC200A-GL module, which allows for flexible migration among them in design and manufacturing.

EC200A series contains four variants: EC200A-CN, EC200A-EU , EC200A-AU and EC200A-EL, covering the frequency band of different countries and regions. It is backward compatible with existing GSM/ GPRS/ EDGE network, ensuring that it can work properly even in remote areas devoid of 4G or 3G coverage. EC200A series adopts the laser engraving process to ensure more good-looking appearance, strong metallic texture, better heat dissipation, durable label information, which makes it more suitable for automation requirements.

A rich set of Internet protocols, industry-standard interfaces and abundant functionalities (USB serial drivers for Windows7/ 8/ 8.1/ 10/ 11, Linux, Android) extend the applicability of the module to a wide range of M2M and IoT applications such as industrial router, MIFI, industrial PDA, rugged tablet PC, video surveillance, and digital signage.



### Key Features

- ✓ LTE Cat 4 module optimized for M2M and IoT applications
- ✓ Worldwide LTE, UMTS/HSPA+ and GSM/ GPRS/ EDGE coverage
- ✓ Support Delta Firmware Upgrade Over-The-Air (DFOTA)
- ✓ MIMO technology meeting demands for data rate and link reliability in modem wireless communication systems
- ✓ Super cost-effective

 LTE Cat 4 Max. 150 Mbps (DL) Max. 50 Mbps (UL)	 Max. 21 Mbps (DL) Max. 5.76 Mbps (UL)	 LCC Package
 Embedded Abundant Protocols	 DFOTA	 VoLTE
 USB 2.0 High Speed Interface	 USB Drivers	 Quectel Enhanced AT Commands
 RGMII/ RMII		

Version: 1.3 | Status: Released

# Quectel EC200A Series

LTE Cat 4	EC200A-CN	EC200A-EU	EC200A-AU	EC200A-EL
<b>Region/ Operator</b>	China, India	Europe, Asia-Pacific	Australia, New Zealand, Latin America	Europe, Asia-Pacific
<b>Dimensions (mm)</b>	29.0 × 32.0 × 2.4	29.0 × 32.0 × 2.4	29.0 × 32.0 × 2.4	29.0 × 32.0 × 2.4
<b>Temperature Range</b>				
<b>Operating Temperature Range</b>	-35 °C to +75 °C	-35 °C to +75 °C	-35 °C to +75 °C	-35 °C to +75 °C
<b>Extended Temperature Range</b>	-40 °C to +85 °C	-40 °C to +85 °C	-40 °C to +85 °C	-40 °C to +85 °C
<b>Frequency Bands</b>				
<b>LTE-FDD</b>	B1/ 3/ 5/ 8	B1/ 3/ 5/ 7/ 8/ 20/ 28	B1/ 2/ 3/ 4/ 5/ 7/ 8/ 28/ 66	B1/ 3/ 5/ 7/ 8/ 20/ 28
<b>LTE-TDD</b>	B34/ 38/ 39/ 40/ 41	B38/ 40/ 41	B40	B38/ 40/ 41
<b>WCDMA</b>	B1/ 5/ 8	B1/ 5/ 8	B1/ 2/ 4/ 5/ 8	B1/ 5/ 8
<b>GSM/ EDGE</b>	B3/ 8	B3/ 8	B2/ 3/ 5/ 8	-
<b>Certifications</b>				
<b>Regulatory</b>	China: SRRRC/ NAL/ CCC	Europe: CE The UK: UKCA South Korea: KC* Taiwan, China: NCC Australia/New Zealand: RCM	America: FCC Brazil: Anatel	Europe: CE*
<b>Others</b>	WHQL	WHQL	WHQL	WHQL
<b>Data Rates</b>				
<b>LTE-FDD (Mbps)</b>	150 (DL)/ 50 (UL)	150 (DL)/ 50 (UL)	150 (DL)/ 50 (UL)	150 (DL)/ 50 (UL)
<b>LTE-TDD (Mbps)</b>	130 (DL)/ 30 (UL)	130 (DL)/ 30 (UL)	130 (DL)/ 30 (UL)	130 (DL)/ 30 (UL)
<b>HSPA+ (Mbps)</b>	21 (DL)/ 5.76 (UL)	21 (DL)/ 5.76 (UL)	21 (DL)/ 5.76 (UL)	21 (DL)/ 5.76 (UL)
<b>WCDMA (kbps)</b>	384 (DL)/ 384 (UL)	384 (DL)/ 384 (UL)	384 (DL)/ 384 (UL)	384 (DL)/ 384 (UL)
<b>EDGE (kbps)</b>	236.8 (DL)/ 236.8 (UL)	236.8 (DL)/ 236.8 (UL)	236.8 (DL)/ 236.8 (UL)	-
<b>GPRS (kbps)</b>	85.6 (DL)/ 85.6 (UL)	85.6 (DL)/ 85.6 (UL)	85.6 (DL)/ 85.6 (UL)	-
<b>Interfaces</b>				
<b>(U)SIM</b>	× 1	× 1	× 1	× 1
<b>UART <sup>①</sup></b>	× 3 (main, debug, auxiliary <sup>①</sup> )	× 3 (main, debug, auxiliary <sup>①</sup> )	× 3 (main, debug, auxiliary <sup>①</sup> )	× 3 (main, debug, auxiliary <sup>①</sup> )
<b>USB 2.0</b>	× 1	× 1	× 1	× 1
<b>Digital Audio (PCM)</b>	× 1	× 1	× 1	× 1
<b>NET_STATUS</b>	× 1	× 1	× 1	× 1
<b>NET_MODE</b>	× 1	× 1	× 1	× 1
<b>ADC</b>	× 2	× 2	× 2	× 2
<b>SDIO (for SD Card and Wi-Fi)</b>	× 2	× 2	× 2	× 2
<b>RESET_N</b>	× 1	× 1	× 1	× 1
<b>PWRKEY</b>	× 1	× 1	× 1	× 1
<b>RGMI/ RMII</b>	× 1	× 1	× 1	× 1 (only support RMII)
<b>Analog Audio Input (× 1) Analog Audio Output (× 1)</b>	× 1 (Microphone and Headset)	× 1 (Microphone and Headset)	× 1 (Microphone and Headset)	× 1 (Microphone and Headset)
<b>SPI<sup>①</sup></b>	× 1	× 1	× 1	× 3
<b>I2C</b>	× 1	× 1	× 1	× 1
<b>Antennas</b>	× 2 (Primary and Rx-diversity Antennas)	× 2 (Primary and Rx-diversity Antennas)	× 2 (Primary and Rx-diversity Antennas)	× 2 (Primary and Rx-diversity Antennas)
<b>Voice</b>				
<b>Speech Codec Modes</b>	HR/ FR/ EFR/ AMR/ AMR-WB	HR/ FR/ EFR/ AMR/ AMR-WB	HR/ FR/ EFR/ AMR/ AMR-WB	HR/ FR/ EFR/ AMR/ AMR-WB
<b>Echo Algorithm</b>	Echo Cancellation/ Noise Suppression	Echo Cancellation/ Noise Suppression	Echo Cancellation/ Noise Suppression	Echo Cancellation/ Noise Suppression
<b>Voice</b>	Digital Voice and VoLTE (Voice over LTE)	Digital Voice and VoLTE (Voice over LTE)	Digital Voice and VoLTE (Voice over LTE)	Digital Voice and VoLTE (Voice over LTE)

NOTE:

1. <sup>①</sup>: Supported only by the QuecOpen® solution.

2. \*: Under development/ in progress.

# Quectel EC200A Series

LTE Cat 4	EC200A-CN	EC200A-EU	EC200A-AU	EC200A-EL
<b>Enhanced Features</b>				
DTMF	●	●	●	●
DFOTA	●	●	●	●
Audio Playback/ Audio Recording	●	●	●	●
QuecLocator®	●	●	●	●
QuecFile®	●	●	●	●
(U)SIM Card Detection	●	●	●	●
<b>Software Features</b>				
<b>Protocols</b>	TCP/ UDP/ PPP/ NTP/ NITZ/ FTP/ HTTP/ PING/ CMUX/ HTTPS/ FTPS/ SSL/ FILE/ MQTT/ MMS/ SMTP/ SMTPS	TCP/ UDP/ PPP/ NTP/ NITZ/ FTP/ HTTP/ PING/ CMUX/ HTTPS/ FTPS/ SSL/ FILE/ MQTT/ MMS/ SMTP/ SMTPS	TCP/ UDP/ PPP/ NTP/ NITZ/ FTP/ HTTP/ PING/ CMUX/ HTTPS/ FTPS/ SSL/ FILE/ MQTT/ MMS/ SMTP/ SMTPS	TCP/ UDP/ PPP/ NTP/ NITZ/ FTP/ HTTP/ PING/ CMUX/ HTTPS/ FTPS/ SSL/ FILE/ MQTT/ MMS/ SMTP/ SMTPS
<b>RIL</b>	Android 4.x-12.x	Android 4.x-12.x	Android 4.x-12.x	Android 4.x-12.x
<b>USB Serial</b>	Windows 7/ 8/ 8.1/ 10/ 11 Linux 2.6-5.18	Windows 7/ 8/ 8.1/ 10/ 11 Linux 2.6-5.18	Windows 7/ 8/ 8.1/ 10/ 11 Linux 2.6-5.18	Windows 7/ 8/ 8.1/ 10/ 11 Linux 2.6-5.18
<b>USB RNDIS</b>	Windows 7/ 8/ 8.1/ 10/ 11 Linux 2.6-5.18	Windows 7/ 8/ 8.1/ 10/ 11 Linux 2.6-5.18	Windows 7/ 8/ 8.1/ 10/ 11 Linux 2.6-5.18	Windows 7/ 8/ 8.1/ 10/ 11 Linux 2.6-5.18
<b>USB ECM</b>	Linux 2.6-5.18	Linux 2.6-5.18	Linux 2.6-5.18	Linux 2.6-5.18
<b>Electrical Features</b>				
<b>Supply Voltage Range</b>	3.4–4.5 V, typ. 3.8 V	3.4–4.5 V, typ. 3.8 V	3.4–4.5 V, typ. 3.8 V	3.4–4.5 V, typ.3.8 V
<b>Power Consumption (Typical)</b>	11 uA @ Power off 1.2 mA @ LTE Sleep (PF = 128) 1.1 mA @ LTE Sleep (PF = 256) 18 mA @ Idle	10 uA @ Power off 1.8 mA @ LTE Sleep (PF = 128) 1.2 mA @ LTE Sleep (PF = 256) 24 mA @ Idle	10 uA @ Power off 1.1 mA @ LTE Sleep (PF = 128) 1.0 mA @ LTE Sleep (PF = 256) 19 mA @ Idle	24 uA @ Power off 1.2 mA @ LTE Sleep (PF = 128) 1.0 mA @ LTE Sleep (PF = 256) 20.5 mA @ Idle

**NOTE:**

1.●: supported.