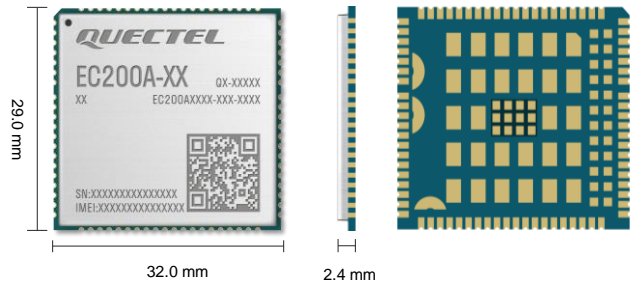


Quectel EC200A Series

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 Rel-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 Windows 7/8/8.1/10/11, 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 transmission, 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

 4G LTE	 3G HSPA+	 LCC LCC Package
LTE Cat 4 Max. 150 Mbps (DL) Max. 50 Mbps (UL)	Max. 21 Mbps (DL) Max. 5.76 Mbps (UL)	
 Embedded Abundant Protocols	 DFOTA DFOTA	 VoLTE VoLTE
 USB 2.0 High Speed Interface	 USB Drivers	 AT Quectel Enhanced AT Commands
 RGMII RGMII/ RMII		

Version: 1.4 | Status: Released

Quectel EC200A Series

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

Quectel EC200A Series

LTE Cat 4	EC200A-CN	EC200A-EU	EC200A-AU	EC200A-EL
Enhanced Features				
DTMF	●	●	●	●
DFOTA	●	●	●	●
Audio Playback/ Audio Recording	●	●	●	●
QuecLocator®	●	●	●	●
QuecFile®	●	●	●	●
(U)SIM Card Detection	●	●	●	●
Software Features				
Protocols	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
RIL	Android 4.x–13.x	Android 4.x–13.x	Android 4.x–13.x	Android 4.x–13.x
USB Serial	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	Windows 7/ 8/ 8.1/ 10/ 11 Linux 2.6–6.5
USB RNDIS	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	Windows 7/ 8/ 8.1/ 10/ 11 Linux 2.6–6.5
USB ECM	Linux 2.6–6.5	Linux 2.6–6.5	Linux 2.6–6.5	Linux 2.6–6.5
Electrical Features				
Supply Voltage Range	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
Power Consumption (Typical)	12 uA @ Power off 1.2 mA @ LTE Sleep (PF = 128) 1.1 mA @ LTE Sleep (PF = 256) 20 mA @ Idle	11 uA @ Power off 1.2 mA @ LTE Sleep (PF = 128) 1.0 mA @ LTE Sleep (PF = 256) 19 mA @ Idle	12 uA @ Power off 1.2 mA @ LTE Sleep (PF = 128) 1.1 mA @ LTE Sleep (PF = 256) 19 mA @ Idle	16 uA @ Power off 1.1 mA @ LTE Sleep (PF = 128) 1.0 mA @ LTE Sleep (PF = 256) 20 mA @ Idle

NOTE:

●: supported.