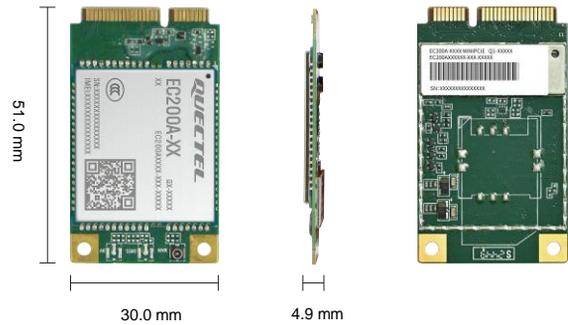




Quectel EC200A Series Mini PCIe

IoT/M2M-optimized
LTE Cat 4 Module



Quectel EC200A series Mini PCIe is an LTE Cat 4 module adopting standard PCI Express Mini Card form factor (Mini PCIe). With 3GPP Rel-9 LTE technology, it is optimized specially for M2M and IoT applications, and delivers maximum data rates up to 150 Mbps downlink and 50 Mbps uplink.

Designed in the compact and unified form factor, EC200A series Mini PCIe is compatible with Quectel LTE Cat 4 EC25 series Mini PCIe, EC20-CE Mini PCIe and EG25-G Mini PCIe modules in form factor, which allows for flexible migration among them in design and manufacturing. EC200A series Mini PCIe is backward-compatible with existing EDGE and GSM/GPRS networks, ensuring that it can be connected even in remote areas devoid of 4G or 3G coverage.

EC200A series Mini PCIe contains 3 variants: EC200A-CN Mini PCIe, EC200A-EU Mini PCIe and EC200A-AU Mini PCIe. With laser engraving process used, EC200A series Mini PCIe features a more fashionable appearance, strong metallic texture, better thermal dissipation capability and durable label information, which makes it ideally suited for large-scale production. EC200A series Mini PCIe supports multiple input and output (MIMO) technology, and multiple receiving antennas can be used to receive signals at the receiving end, thereby reducing bit error rate and improving communication quality.

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



Key Features

- ✓ LTE Cat 4 module optimized for broadband IoT applications
- ✓ Worldwide LTE, UMTS/HSPA+ and GSM/GPRS/EDGE coverage
- ✓ Standard Mini PCIe form factor: ideal for manufacturers to easily integrate wireless connectivity into devices
- ✓ MIMO technology which meets demands for data rate and link reliability in modem wireless communication systems
- ✓ Support DFOTA



LTE Cat 4
Max. 150 Mbps (DL)
Max. 50 Mbps (UL)



Mini PCIe
Package



Embedded Abundant
Protocols



DFOTA



USB 2.0 High Speed
Interface



VoLTE



Quectel Enhanced
AT Commands



USB Drivers



Max. 21 Mbps (DL)
Max. 5.76 Mbps (UL)

Quectel EC200A Series Mini PCIe

LTE Cat 4	EC200A-CN Mini PCIe	EC200A-EU Mini PCIe	EC200A-AU Mini PCIe
Region/Operator	China/India	Europe/APAC/Australia/New Zealand	Latin America
Dimensions (mm)	30.0 mm × 51.0 mm × 4.9 mm	30.0 mm × 51.0 mm × 4.9 mm	30.0 mm × 51.0 mm × 4.9 mm
Weight	Approx. 9.7 g	Approx. 9.7 g	Approx. 9.7 g
Temperature Range			
Operating Temperature Range	-35 °C to +75 °C	-35 °C to +75 °C	-35 °C to +75 °C
Extended Temperature Range	-40 °C to +80 °C	-40 °C to +80 °C	-40 °C to +80 °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	B40
WCDMA	B1/5/8	B1/5/8	B1/2/4/5/8
GSM	B3/8	B3/8	B2/3/5/8
Certifications			
Regulatory/Conformance	China: SRRC/NAL/CCC	Europe: CE The UK: UKCA South Korea: KC Taiwan, China: NCC Australia/New Zealand: RCM	Brazil: Anatel
Carrier	China: China Telecom		
Max. Data Rates			
LTE-FDD (Mbps)	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)
HSPA+/HSDPA (Mbps)	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)
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
UART	× 1	× 1	× 1
USB 2.0	× 1	× 1	× 1
PCM	× 1	× 1	× 1
UART_DTR	× 1	× 1	× 1
W_DISABLE#	× 1	× 1	× 1
LED_WWAN#	× 1	× 1	× 1
RESET#	× 1	× 1	× 1
Antennas	× 1 (Primary Antenna)	× 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
Echo Algorithm	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)
Enhanced Features			
DTMF	●	●	●
DFOTA	●	●	●
Audio Playback/ Audio Recording	●	●	●
QuecFile®	●	●	●
VoLTE	●	●	●
(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
Drivers			
RIL	Android 4.x–14.x	Android 4.x–14.x	Android 4.x–14.x
USB RNIDS	Windows 10/11, Linux 2.6–6.7	Windows 10/11, Linux 2.6–6.7	Windows 10/11, Linux 2.6–6.7
USB ECM	Linux 2.6–6.7	Linux 2.6–6.7	Linux 2.6–6.7
USB Serial	Windows 10/11, Linux 2.6–6.7, Android 4.x–14.x	Windows 10/11, Linux 2.6–6.7, Android 4.x–14.x	Windows 10/11, Linux 2.6–6.7, Android 4.x–14.x
Electrical Features			
Supply Voltage Range	3.0–3.6 V, typ. 3.3 V	3.0–3.6 V, typ. 3.3 V	3.0–3.6 V, typ. 3.3 V
Power Consumption (Typ.)	4.42 mA @ LTE sleep (PF = 128) 4.25 mA @ LTE sleep (PF = 256)	4.35 mA @ LTE sleep (PF = 128) 4.19 mA @ LTE sleep (PF = 256)	4.35 mA @ LTE sleep (PF = 128) 4.19 mA @ LTE sleep (PF = 256)

NOTE:

●: Supported.