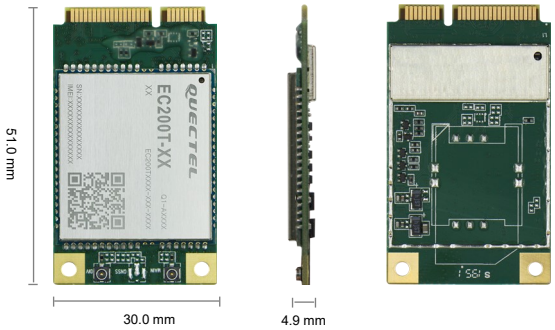
Quectel EC200T Series Mini PCIe

IoT/M2M-optimized LTE Cat 4 Module



Quectel EC200T Mini PCIe is a series of LTE category 4 module adopting standard PCI Express® Mini Card form factor (Mini PCIe). It is optimized specially for M2M and IoT applications, and delivers maximum data rates up to 150 Mbps downlink and 50 Mbps uplink.

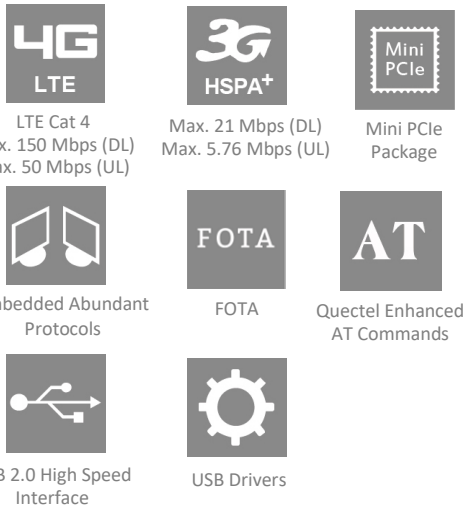
Designed in the compact and unified form factor, EC200T series Mini PCIe is compatible with Quectel UMTS/HSPA+ UC200T series Mini PCIe module, LTE Cat 4 EC25 series Mini PCIe/EC20 R2.1 Mini PCIe/EG25-G Mini PCIe modules in package, which allows for flexible migration among them in design and manufacturing. This makes it 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.

EC200T series Mini PCIe contains 3 variants: EC200T-CN Mini PCIe, EC200T-EU Mini PCIe and EC200T-AU Mini PCIe. With laser engraving process used, EC200T 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. EC200T series Mini PCIe supports multiple input and output technology (MIMO), 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 7/8/8.1/10, Linux, Android) extend the applicability of the module to a wide range of M2M applications such as industrial router, industrial PDA, rugged tablet PC, video surveillance and digital signage.

Key Features

- LTE category 4 module optimized for broadband IoT applications
- Worldwide LTE, UMTS/HSPA+ and GSM/GPRS/EDGE coverage
- Standard PCI Express® Mini Card form factor (Mini PCIe) ideal for manufacturers to easily integrate wireless connectivity into their devices
- MIMO technology meets demands for data rate and link reliability in modem wireless communication systems
- Support Firmware Upgrade Over-The-Air (FOTA)



Version: 1.1 | Status: Released

Quectel EC200T Series Mini PCIe

LTE Cat 4	EC200T-CN Mini PCIe	EC200T-EU Mini PCIe	EC200T-AU Mini PCIe
Region/Operator	China/India	Europe	Latin America/Australia/New Zealand
Dimensions (mm)	51.0 × 30.0 × 4.9	51.0 × 30.0 × 4.9	51.0 × 30.0 × 4.9
Temperature Ranges			
Operating Temperature	-35 °C to +75 °C	35 °C to +75 °C	35 °C to +75 °C
Extended Temperature	-40 °C to +80 °C	-40 °C to +80 °C	-40 °C to +80 °C
Frequency Bands			
LTE-FDD	B1/B3/B5/B8	B1/B3/B7/B8/B20/B28	B1/B2/B3/B4/B5/B7/B8/B28/ B66
LTE-TDD	B34/B38/B39/B40/B41	B38/B40/B41	B40
WCDMA	B1/B5/B8	B1/B8	B1/B2/B4/B5/B8
GSM/EDGE	B3/B8	B3/B8	B2/B3/B5/B8
Certifications			
Carrier	**China:** China Telecom/China Mobile	-	-
Regulatory	**China:** SRRC/NAL/CCC	**Europe:** CE **Australia/New Zealand:** RCM	**America:** FCC
Others	RoHS/WHQL	RoHS/WHQL	RoHS/WHQL
Data Transmission			
LTE-FDD Data Rates (Mbps)	150 (DL)/ 50 (UL)	150 (DL)/ 50 (UL)	150 (DL)/ 50 (UL)
LTE-TDD Data Rates (Mbps)	130 (DL)/ 30 (UL	130 (DL)/ 30 (UL)	130 (DL)/ 30 (UL)
HSPA+/HSUPA Data Rates (Mbps)	21 (DL)/ 5.76 (UL)	21 (DL)/ 5.76 (UL)	21 (DL)/ 5.76 (UL)
WCDMA Data Rates (kbps)	384 (DL)/ 384 (UL)	384 (DL)/ 384 (UL)	384 (DL)/ 384 (UL)
EDGE Data Rates (kbps)	236.8 (DL)/ 236.8 (UL)	236.8 (DL)/ 236.8 (UL)	236.8 (DL)/ 236.8 (UL)
GPRS Data Rates (kbps)	85.6 (DL)/ 85.6 (UL)	85.6 (DL)/ 85.6 (UL)	85.6 (DL)/ 85.6 (UL)
Interfaces			
(U)SIM	x 1	x 1	x 1
USB 2.0	x 1	x 1	x 1
Audio Digital (PCM)	x 1	x 1	x 1
I2C	x 1	x 1	x 1
LED_WWAN#	x 1	x 1	x 1
W_DISABLE#	x 1	x 1	x 1
UART	x 1	x 1	x 1
PERST#	x 1	x 1	x 1
Voice			
Speech Codec Modes	HR/FR/EFR/AMR/AMR-WB	HR/FR/EFR/AMR/AMR-WB	HR/FR/EFR/AMR/AMR-WB
Echo Arithmetic	Echo Cancellation/Noise Suppression	Echo Cancellation/Noise Suppression	Echo Cancellation/Noise Suppression
Audio	Digital Audio	Digital Audio	Digital Audio
Enhanced Features			
DTMF	●	●	●
FOTA	●	●	●
Audio Playback/Audio Recording	●	●	●
QuecLocator®	●	●	●
QuecFile®	●	●	●
VoLTE	●	●	●
(U)SIM Card Detection	●	●	●
Internet Protocols			
Internet 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			
USB Serial Driver	Windows 7/8/8.1/10 Linux 2.6–5.12 Android 4.x–11.x	Windows 7/8/8.1/10 Linux 2.6–5.12 Android 4.x–11.x	Windows 7/8/8.1/10 Linux 2.6–5.12 Android 4.x–11.x
RIL Driver	Android 4.x–11.x	Android 4.x–11.x	Android 4.x–11.x
USB RNDIS Driver	Windows 7/8/8.1/10 Linux 2.6–5.12	Windows 7/8/8.1/10 Linux 2.6–5.12	Windows 7/8/8.1/10 Linux 2.6–5.12
USB ECM Driver	Linux 2.6–5.12	Linux 2.6–5.12	Linux 2.6–5.12
Electrical Features			
Supply Voltage Range	3.0–3.6 V, 3.3 V Typ.	3.0–3.6 V, 3.3 V Typ.	3.0–3.6 V, 3.3 V Typ.
Power Consumption	4.0 mA @ LTE Sleep (PF = 128) 3.7 mA @ LTE Sleep (PF = 256) 40 mA @ Idle	4.0 mA @ LTE Sleep (PF = 128) 3.7 mA @ LTE Sleep (PF = 256) 40 mA @ Idle	4.0 mA @ LTE Sleep (PF = 128) 3.7 mA @ LTE Sleep (PF = 256) 40 mA @ Idle

Notes:

- ● means supported.

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