Quectel EG912U Series

IoT/ M2M-optimized
LTE Cat 1 Module

29.0 mm

EG912U-XX Q1-XXXXX
XX
EG912UXXXX-XXX-XXXX
SN:XXXXXXXXXXXXXXX
IMEI:XXXXXXXXXXXXXXX

25.0 mm   2.4 mm
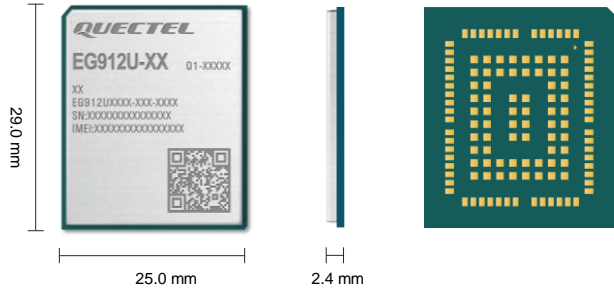
Quectel EG912U is a series of the LTE Cat 1 module optimized specially for M2M and IoT applications. It delivers maximum data rates up to 10 Mbps downlink and 5 Mbps uplink. Designed in the compact and unified form factor, EG912U series is compatible with Quectel multi-mode BG95 series, BG96, EG91 series, EG95 series and EG915U series modules, ensuring that it can easily migrate between 2G and 4G network to meet the needs of different industry applications.

EG912U series contains two variants: EG912U-GL and EG912U-EAL which meet the frequency band coverage of different countries and regions. Through laser engraving, EG912U series features a neat appearance, wear resistant and durable label and improved heat dissipation, which makes it ideal for automation.

A rich set of Internet protocols, industry-standard interfaces and abundant functionalities (USB drivers for Windows 8.1/ 10/ 11, Linux and Android) extend the implementability of the module 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 industrial PDA.

Key Features

- ✔ LTE Cat 1 module optimized for M2M and IoT applications
- ✔ Worldwide LTE and GSM/ GPRS coverage
- ✔ Abundant functional interfaces
- ✔ Analog audio
- ✔ Bluetooth (Optional)
- ✔ GNSS (Optional)
- ✔ DFOTA
- ✔ Wi-Fi Scan (Optional)

4G LTE
LTE Cat 1
Max. 10 Mbps (DL)
Max. 5 Mbps (UL)

Embedded Abundant Protocols

LGA
LGA Package

Multi-constellation GNSS (Optional)

BLE (Optional)

DFOTA
DFOTA

USB 2.0 High Speed Interface

Wi-Fi Scan (Optional)

AT
Quectel Enhanced AT Commands

LTE Cat 1	EG912U-GL	EG912U-EAL
Region	Global	Europe/ APAC/ Latin America
Dimensions	29.0 mm × 25.0 mm × 2.4 mm	29.0 mm × 25.0 mm × 2.4 mm
Weight	Approx. 3.67 g	Approx. 3.5 g
Temperature Range		
Operating Temperature Range	-35 °C to +75 °C	-35 °C to +75 °C
Extended Temperature Range	-40 °C to +85 °C	-40 °C to +85 °C
Frequency Bands		
LTE-FDD	B1/ 2/ 3/ 4/ 5/ 7/ 8/ 12/ 13/ 17/ 18/ 19/ 20/ 25/ 26/ 28/ 66	B1/ 2/ 3/ 4/ 5/ 7/ 8/ 20/ 28/ 66
LTE-TDD	B34/ 38/ 39/ 40/ 41	B38/ 40/ 41
GSM	B2/ 3/ 5/ 8	B2/ 3/ 5/ 8
GNSS (Optional)	GPS/ GLONASS/ BDS/ Galileo/ QZSS	-
Bluetooth (Optional)	Bluetooth 4.2 (BR/ EDR + BLE)	-
Wi-Fi Scan (Optional)	2.4 GHz 802.11b (Rx)	-
Certifications		
Regulatory	**Europe:** CE **America:** FCC **Canada:** IC **Brazil:** Anatel **China:** SRRC/ NAL/ CCC **South Korea:** KC **Taiwan, China:** NCC **Australia/ New Zealand:** RCM	-
Others	WHQL	WHQL
Max. Data Rates		
LTE-FDD	10 Mbps (DL)/ 5 Mbps (UL)	10 Mbps (DL)/ 5 Mbps (UL)
LTE-TDD	8.96 Mbps (DL)/ 3.1 Mbps (UL)	8.96 Mbps (DL)/ 3.1 Mbps (UL)
GSM	85.6 kbps (DL)/ 85.6 kbps (UL)	85.6 kbps (DL)/ 85.6 kbps (UL)
Interfaces		
(U)SIM	× 2	× 2
UART	× 3	× 3
USB 2.0	× 1	× 1
Digital Audio (PCM)	× 1	× 1
Analog Audio[1]	Input: × 1 (Microphone) Output: × 1 (Earpiece)	Input: × 1 (Microphone) Output: × 1 (Earpiece)
ADC	× 2	× 2
I2C	× 1	× 1
SPI	× 1 (QuecOpen®)	× 1 (QuecOpen®)
LCM	× 1 (QuecOpen®)	× 1 (QuecOpen®)
Camera	× 1 (QuecOpen®)	× 1 (QuecOpen®)
SD Card	× 1 (QuecOpen®)	× 1 (QuecOpen®)
RESET_N	× 1	× 1
PWRKEY	× 1	× 1
Antennas	× 3 (at most), Main Antenna, GNSS Antenna (Optional), Wi-Fi Scan/ Bluetooth Antenna (Optional)	× 1, Main Antenna
Voice		
Speech Codec Modes	HR/ FR/ EFR/ AMR/ AMR-WB	HR/ FR/ EFR/ AMR/ AMR-WB
VoLTE	VoLTE (Voice over LTE)	VoLTE (Voice over LTE)
Enhanced Features		
DTMF	●	●
DFOTA	●	●
Audio Playback/ Audio Recording	●	●
QuecFile®	●	●
(U)SIM Detection	●	●
Bluetooth Low Energy	○	-
Wi-Fi Scan	○	-
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
Drivers	GNSS (Optional)	Android 4.x–14.x	-
	RIL	Android 4.x–14.x	Android 4.x–14.x
	USB RNDIS	Windows 8.1/ 10/ 11, Linux 2.6–6.7	Windows 8.1/ 10/ 11, Linux 2.6–6.7
	USB ECM	Linux 2.6–6.7	Linux 2.6–6.7
	USB Serial	Windows 8.1/ 10/ 11, Linux 2.6–6.7, Android 4.x–14.x	Windows 8.1/ 10/ 11, Linux 2.6–6.7, Android 4.x–14.x
Electrical Features		
Supply Voltage Range	3.3 V–4.3 V, typ. 3.8 V	3.3 V–4.3 V, typ. 3.8 V
Power Consumption (Typ.)	31 µA @ Power Off 1.7 mA @ LTE Sleep (PF = 128) 1.5 mA @ LTE Sleep (PF = 256) 30 mA @ Idle (PF = 64, USB Connected) 14 mA @ Idle (PF = 64, USB Disconnected)	31 µA @ Power Off 1.3 mA @ LTE Sleep (PF = 128) 1.2 mA @ LTE Sleep (PF = 256) 28 mA @ Idle (PF = 64, USB Connected) 12 mA @ Idle (PF = 64, USB Disconnected)

NOTE:

1. [1]: In QuecOpen® solution, the module supports an extra headphone interface.
2. ●: Supported.
3. ○: Optional.

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