

Quectel EG91

IoT/M2M-optimized Cat.1 LTE Module



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



Max. 42Mbps (DL)
Max. 5.76Mbps (UL)



LGA Package



Embedded Abundant
Protocols



eCall



Compact Size



USB 2.0 High Speed
Interface



USB Drivers



Quectel Enhanced
AT Commands

Key Benefits

- ☛ Low-power LTE connectivity optimized for broadband IoT applications
- ☛ Worldwide LTE, UMTS/HSPA+ and GSM/GPRS/EDGE coverage
- ☛ Compact SMT form factor ideal for small end products with tight space and extended operating temperature range
- ☛ Embedded power management unit (PMU) featuring ultra-low deep-sleep current consumption
- ☛ Simple migration from 3G to 4G with a flexible and scalable platform

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LTE



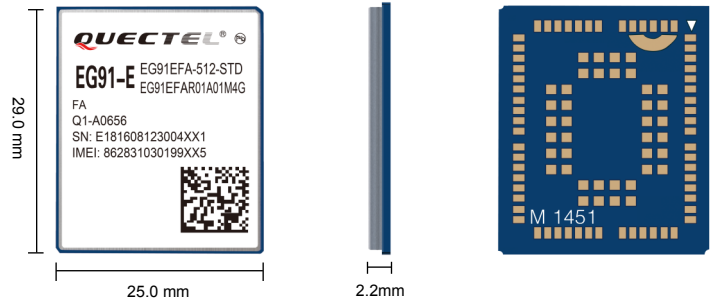
Quectel EG91 is an LTE category-1 module optimized specially for M2M and IoT applications. It delivers power-enhanced performance and M2M-optimized speeds of 10Mbit/s downlink and 5Mbit/s uplink, and features low-power LTE connectivity. These make it ideally suitable for numerous IoT applications that are not rely on high speed connectivity but still require the longevity and reliability of LTE networks.

EG91 is fallback pin-to-pin compatible with Quectel UMTS/HSPA+ UG95 and UG96 module. This makes it backward-compatible with existing EDGE and GSM/GPRS networks, which ensures that it can easily migrate from LTE to 2G or 3G networks.

A rich set of Internet protocols, industry-standard interfaces and abundant functionalities (USB drivers for Windows XP, Windows Vista, Windows 7, Windows 8/8.1, Linux, Android/eCall) extend the applicability of the module to a wide range of M2M and IoT applications such as metering, wearable devices, digital signs, industrial routers, tracking and tracing, fleet management, smart home gateways and even drones.

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General Features

Frequency Bands	EG91-E	FDD LTE: B1/B3/B7/B8/B20 WCDMA: B1/B8 GSM: 900/1800
LTE Version		3GPP E-UTRA Release 11
Bandwidth		1.4/3/5/10/15/20MHz
Antenna		Supports Rx-diversity
Supply Voltage Range		3.3V~4.3V, 3.8V Typ.
Operation Temperature		-40°C ~ +85°C
Dimensions		25.0mm×29.0mm×2.25mm
Package		LGA
Weight		Approx. 3.8g
Control via AT Commands		3GPP TS27.007 and enhanced AT Commands

Specifications

	LTE	LTE-FDD Max 10Mbps (DL) Max 5Mbps (UL)
	DC-HSPA+	Max 42Mbps (DL) Max 5.76Mbps (UL)
Data	UMTS	Max 384Kbps (DL) Max 384Kbps (UL)
	EDGE	Max 236.8Kbps (DL) Max 236.8Kbps (UL)
	GPRS	Max 85.6Kbps (DL) Max 85.6Kbps (UL)
Voice	Speech Codec Modes	HR, FR, EFR, AMR, AMR-WB
	Echo Arithmetic	Echo Cancellation Noise Reduction
	eCall*	Accident, Emergency Services
	VoLTE*	Digital Audio and VoLTE (Voice over LTE) (Optional)
	Protocols	TCP/UDP/PPP/FTP*/HTTP*/SMTP*/MMS*/NTP/ PING/DTMF*/FILE*/CMUX*/QMI

Special Features

Drivers	USB Serial	Windows XP, Windows Vista, Windows 7, Windows 8/8.1, Windows CE5.0/6.0/7.0, Linux 2.6 or later, Android 2.3 /4.0/4.2/4.4 /5.0
	RIL*	Android 4.0/4.2/4.4/5.0
	NDIS	Windows XP, Windows Vista, Windows 7, Windows 8/8.1
	ECM*	Linux 2.6 or later
	Gobinet	Linux 2.6 or later
	Linux qmi wwan	Linux 3.4 or later
	DFOTA*	Firmware updated via the air

Interfaces

USB 2.0 Device	High Speed, 480Mbps
PCM	×1, Digital Audio through PCM Interface (Optional)
USIM	×2, 1.8V/3V
NETLIGHT	×2, NET_STATUS and NET_MODE
UART	×2 UART
RESET	
PWRKEY	
Antenna	Pads for Primary, Rx-diversity
ADC	×1

* Under development

Electrical Characteristics

Output Power	Class 3 (23dBm±2dB) for LTE FDD Class 3 (24dBm +1/-3dB) for UMTS Class E2 (27dBm ±3dB) for EDGE 900MHz Class E2 (26dBm +3/-4dB) for EDGE 1800MHz Class 4 (33dBm ±2dB) for GSM 900MHz Class 1 (30dBm ±2dB) for GSM 1800MHz
Consumption	TBD
Sensitivity	TBD

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