

Quectel EC25

Multi-mode LTE Module



Cat4
Max. 150Mbps(DL)
Max. 50Mbps(UL)



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



LCC Package



Embedded Abundant
Protocols



eCall



GNSS



USB 2.0 High Speed
Compliant Interface



USB Drivers



Quectel Enhanced
AT Commands

Key Benefits

- ☛ Worldwide LTE and UMTS/HSPA+ and GSM/GPRS/EDGE coverage
- ☛ Minimal SMT form factor ideal for small end products with tight space and extended operating temperature range
- ☛ MIMO technology meets demands for data rate and link reliability in modem wireless communication systems
- ☛ GNSS receiver available for applications requiring fast and accurate fixes in any environments
- ☛ Simple migration from 3G to 4G with a flexible and scalable platform

LTE



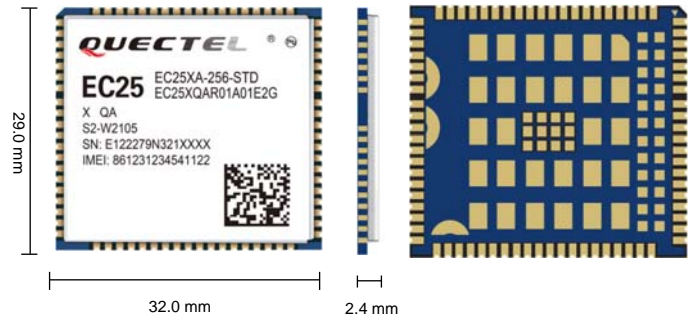
EC25 series is the new generation of Quectel's LTE modules. Adopted the 3GPP Rel. 10 LTE technology, it delivers 150Mbps downlink and 50Mbps uplink data rates and is fallback compatible with Quectel UMTS/HSPA+ UC20 module and multi-mode LTE EC20 module in the compact and unified form factor, providing a flexible and scalable platform for migrating from UMTS/HSPA+ to LTE. EC25 contains 7 variants EC25-C, EC25-CE, EC25-E, EC25-AUT&AU, EC25-V and EC25-A, which makes it backward-compatible with existing EDGE and GSM/GPRS networks to ensure that it can connect even in remote areas devoid of 4G or 3G coverage.

It supports Multiple-input multiple-output (MIMO) technology, a cutting edge antenna technology transmitting multiple data streams on multiple transmitters to multiple receivers. The antennas at each end of the communications circuit are combined to minimize errors and optimize data speed. It also combines high-speed wireless connectivity with embedded multi-constellation high-sensitivity positioning GNSS receiver.

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 applications such as CPE, router, data card, rugged tablet, automotive, security and industry PDA.

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Multi-mode LTE Module



General Features

Frequency Bands	EC25-E	FDD LTE: B1/B3/B5/B7/B8/B20 TDD LTE: B38/B40/B41 WCDMA: B1/B5/B8 GSM: B3/B8
	EC25-V	FDD LTE: B2/B4/B13
	EC25-A	FDD LTE: B2/B4/B5/B12 WCDMA: B2/B4/B5
	EC25-AUT	FDD LTE: B1/B3/B5/B7/B28 WCDMA: B1/B5
	EC25-AU	FDD LTE: B1/B3/B5/B7/B8/B28 TDD LTE: B40 WCDMA: B1/B2/B5/B8 GSM: B2/B3/B5/B8
	EC25-J	FDD LTE: B1/B8/B9/B11/B18/B19/B21/B28 WCDMA: B1/B8/B9/B11/B19
LTE Version	3GPP E-UTRA Release 10	
Bandwidth	1.4/3/5/10/15/20MHz	
Antenna	DL MIMO, supports Rx-diversity	
Supply Voltage Range	3.3V~ 4.3V, 3.8V Typ.	
Operation Temperature	-40°C ~ +85°C	
Dimensions	32.0mm×29.0mm×2.4mm	
Package	LCC	
Weight	Approx. 4.6g	
Control via AT commands	3GPP TS27.007 and enhanced AT Commands	

Specifications

Data	LTE	LTE-FDD Max 150Mbps (DL) Max 50Mbps (UL) LTE-TDD Max 61Mbps (DL) Max 18Mbps (UL)
	DC-HSPA+	Max 42Mbps(DL) Max 5.76Mbps(UL)
	UMTS	Max 384Kbps(DL) Max 384Kbps(UL)
	TD-SCDMA	Max 4.2Mbps(DL) Max 2.2Mbps(UL)
	CDMA	Max 5.4Mbps(DL) Max 14.7Mbps(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*/FTP/ SMTP*/NTP/PING/DTMF/FILE*/CMUX*/QMI	

Interfaces

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

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 2.3/4.0/4.2/4.4/5.0
Linux qmi wwan	NIDS	Windows XP, Windows Vista, Windows 7, Windows 8/8.1
	ECM	Linux 2.6 or later
	Gobinet	Linux 2.6 or later
GNSS	Linux qmi wwan	Linux 3.4 or later
	DFOTA	Firmware updated via the air
BT4.0/WIFI	Optional	
GNSS	GPS/GLONASS/BeiDou/Galileo and QZSS	

Electrical Characteristics

Output Power	Class 3 (23dBm±2dB) for LTE FDD Class 3 (23dBm±2dB) for LTE TDD Class 3 (24dBm +1/-3dB) for TD-SCDMA Class 3 (24dBm +1/-3dB) for UMTS Class E2 (27dBm ±3dB) for EDGE 850/900MHz Class E2 (26dBm +3/-4dB) for EDGE 1800/1900MHz Class 4 (33dBm ±2dB) for GSM 850/900MHz Class 1 (30dBm ±2dB) for GSM 1800/1900MHz
Consumption	20uA @Power off 3mA @Sleep, Typ
Sensitivity	TBD

Certification

Approval	CCC*/CE*/NAL*/TA*/FCC*/PTCRB*/AT&T*/ Verizon*/KC*/SKT*/RCM*/JATE*/TELEC*
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