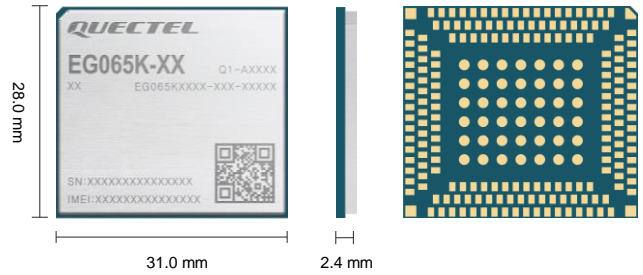


# Quectel EG065K Series

## IoT/M2M-optimized LTE-A Cat 6 LGA Module



Quectel EG065K is a series of LTE category 6 modules optimized specially for M2M and IoT applications. Using the 3GPP Rel-12 LTE technology, it delivers M2M-optimized speeds of 300 Mbps downlink and 75 Mbps uplink.

EG065K series includes two variants (EG065K-NA and EG065K-EA) which are designed for different target regions and nearly meet requirements of all the mainstream carriers worldwide.

The module's rich Internet protocols, multiple interfaces, and abundant functionalities (USB drivers for Windows 7/8/8.1/10/11, Linux, and Android) make it widely applicable in the fields of M2M and IoT. The recommended applications are audio and video recorders, routers (including MiFis), home gateways, set-top boxes, PDAs, tablet PCs, video transmission and digital signage.



### Key Features

- ✓ Power saving design ensures ultra-low power consumption
- ✓ Compact size
- ✓ LTE-A Cat 6 module with LGA form factor, optimized for M2M and IoT applications
- ✓ Supports LTE-A carrier aggregation
- ✓ Regional LTE-A and UMTS/HSPA(+) coverage
- ✓ Feature refinement: supports DFOTA
- ✓ MIMO technology meets demands on data rate and link reliability in modem wireless communication systems

 LTE Cat 6 Max. 300 Mbps (DL) Max. 75 Mbps (UL)	 Max. 42 Mbps (DL) Max. 5.76 Mbps (UL)	 LGA Package
 Embedded Abundant Protocols	 Ultra-low Power Consumption	 Compact Size
 USB 2.0/3.0 Interface	 USB Drivers	 Quectel Enhanced AT Commands

# Quectel EG065K Series

LTE Cat 6	EG065K-NA	EG065K-EA
Region/Operator	North America	Europe, Latin America
Dimensions (mm)	28.0 × 31.0 × 2.4	28.0 × 31.0 × 2.4
Weight (g)	Approx. 5.3	Approx. 5.3
Temperature Range		
Operating Temperature	-30 °C to +75 °C	-30 °C to +75 °C
Extended Temperature	-40 °C to +85 °C	-40 °C to +85 °C
Frequency Bands		
LTE-FDD	B2/ 4/ 5/ 7/ 12/ 13/ 14/ 25/ 26/ 30/ 66	B1/ 2/ 3/ 4/ 5/ 7/ 8/ 20/ 28
LTE-TDD	-	B40
WCDMA*	-	B1/ 2/ 3/ 4/ 5/ 8
Certifications		
Carrier	America: AT&T (FirstNet)/ Verizon* Canada: Telus	UK: British Telecom Europe: Telefónica Australia: Telstra*
Regulatory	Global: GCF North America: PTCRB America: FCC Canada: IC Mexico: IFETEL*	Global: GCF Europe: CE Australia/New Zealand: RCM Singapore: IMDA*
Data Rate		
LTE-FDD (Mbps)	300 (DL)/ 75 (UL)	300 (DL)/ 75 (UL)
LTE-TDD (Mbps)	-	250 (DL)/ 45 (UL)
HSPA (Mbps) *	-	42 (DL)/ 5.76 (UL)
WCDMA (kbps) *	-	384 kbps (DL)/ 384 kbps (UL)
Interfaces		
(U)SIM	× 2	× 2
UART	× 2	× 2
SPI*	× 1 (Master only)	× 1 (Master only)
PCM*	× 1	× 1
I2S*	× 1	× 1
PCle*	× 1 (RC only : Gen 2, for Wi-Fi, Ethernet functions)	× 1 (RC only : Gen 2, for Wi-Fi, Ethernet functions)
USB 2.0/3.0	× 1 (Master* and slave modes)	× 1 (Master* and slave modes)
USB_BOOT	× 1	× 1
ADC	× 1	× 1
SDIO	× 1	× 1
I2C*	× 1	× 1
GPIO	× 5	× 5
RESET_N	× 1	× 1
RFFE Antenna Tuner Control	× 1	× 1
GRFC Antenna Tuner Control	× 4	× 4
Antennas	× 2 (Main Antennas) × 2 (Diversity Antennas)	× 2 (Main Antennas) × 2 (Diversity Antennas)
Voice		
VoLTE*	Digital Audio and VoLTE (Voice over LTE) (Optional)	Digital Audio and VoLTE (Voice over LTE) (Optional)
Enhanced Features		
MIMO (DL 2 × 2, DL 4 × 2)	●	●
eCall*	●	●
DFOTA/ LwM2M	●	●
QMI/ RmNet	●	●
(U)SIM Detection	●	●

NOTE:

- \*: Under development/planning.
- : Supported.

# Quectel EG065K Series

LTE Cat 6	EG065K-NA	EG065K-EA	
<b>Software Features</b>			
<b>Protocols</b>	QMI/MBIM/NITZ/HTTP/HTTPS/FTP/LwM2M/PING	QMI/MBIM/NITZ/HTTP/HTTPS/FTP/LwM2M/PING	
<b>Drivers</b>	<b>RIL*</b>	Android 4.x–12.x	Android 4.x–12.x
	<b>USB NDIS</b>	Windows 7/8/8.1/10/11	Windows 7/8/8.1/10/11
	<b>USB ECM*</b>	Linux 2.6–5.18	Linux 2.6–5.18
	<b>USB GobiNet</b>	Linux 2.6–5.18	Linux 2.6–5.18
	<b>USB QMI_WWAN</b>	Linux 3.4–5.18	Linux 3.4–5.18
	<b>USB Serial Driver</b>	Windows 7/8/8.1/10/11 Linux 2.6–5.18 Android 4.x–12.x	Windows 7/8/8.1/10/11 Linux 2.6–5.18 Android 4.x–12.x
	<b>MBIM*</b>	Windows 8/8.1/10/11 Linux 3.18–5.18	Windows 8/8.1/10/11 Linux 3.18–5.18
	<b>Electrical Features</b>		
<b>Supply Voltage Range</b>	3.3–4.5 V, typ. 3.8 V	3.3–4.5 V, typ. 3.8 V	
<b>Power Consumption (Typical)</b>	26 $\mu$ A @ Power off 3.1 mA @ Sleep (PF = 128) 4.0 mA @ Sleep (PF = 64) 12.8 mA @ Idle	26 $\mu$ A @ Power off 2.7 mA @ Sleep (LTE-FDD PF = 128) 3.4 mA @ Sleep (LTE-FDD PF = 64) 12.6 mA @ Idle (LTE-FDD) 2.6 mA @ Sleep (LTE-TDD PF = 128) 3.3 mA @ Sleep (LTE-TDD PF = 64) 12.4 mA @ Idle (LTE-TDD)	
<b>Output Power</b>	LTE-FDD B30: Class 3 (22.3 dBm $\pm$ 2 dB) Other LTE-FDD Bands: Class 3 (23.5 dBm $\pm$ 2 dB)	LTE-FDD: Class 3 (23.5 dBm $\pm$ 2 dB) LTE-TDD: Class 3 (23.5 dBm $\pm$ 2 dB)	

NOTE:

\*: Under development/planning.