

# DATA SHEET QUECTEL EC21-EC WIRELESS MODULE

## KEY BENEFITS

Cost-effective, lower-power LTE connectivity optimized for broadband IoT applications

Worldwide LTE, UMTS/HSPA+ and GSM/GPRS/EDGE coverage

Feature refinements: supports DFOTA\*, eCall\*, QuecLocator and DTMF

MIMO technology meets demands for data rate and link reliability in modem wireless communication systems

Extreme operating temperature range -40 °C to +85 °C

## NETWORK

<b>3GPP Protocol Stack Compliance</b>	Release 10
<b>Support for TS.34 IoT Communication Efficiency</b>	RPM - supported
<b>Wireless Protocol Support</b>	
2G/GPRS	Supported
3G/UMTS	Supported
4G/LTE	Supported
NB-IoT	None
<b>Frequency Band Support</b>	
2G Bands (MHz)	900, 1800
3G Bands	B1, B8
4G Bands	B1, B3, B7, B8, B20, B28
NB-IoT Bands (MHz)	None
<b>3GPP Classes / Categories</b>	
CSD	Supported
GPRS Multislot Class (DL/UL)	10 (107/85.6) kbit/s
EDGE Class (DL/UL)	10 (296/236,8) kbit/s
HSDPA Category (DL)	24 (42Mbit/s)
HSUPA Category (UL)	6 (5.76 Mbit/s)
LTE Category (DL/UL)	1(10/5) Mbit/s
NB-IoT Category	None
<b>Short Message Service (SMS)</b>	Yes
<b>Speech Codecs</b>	GSM FR, GSM HR, GSM EFR, FR AMR, HR AMR, FR AMR-WB, UMTS AMR, UMTS AMR2, UMTS AMR-WB
<b>Firmware Updates</b>	Supported (FOTA)
<b>Integrated Positioning Technology</b>	
GPS	None
GLONASS	None
Control Plane A-GPS Support	None

SUPL A-GPS Support	None
<b>Regulatory</b>	
eCall	Supported* (* - under development)
Standalone / Assisted GNSS	None
TTY	None

## HARDWARE

Dimensions (L x W x H, mm)	32.0 x 29.0 x 2.4
Weight (g)	4,9
Operating Temperature – Extended Operation (°C)	-40 °C to +85 °C
Supply Voltage Range (V)	3.3 - 4.3
<b>Interfaces</b>	
USB 2.0 (480 Mbps)	Supported
ASC0 HS Serial Modem	None
GPIO Lines	Supported
UICC and U/SIM (1.8 V/3 V)	1.8 V, 3 V
ADC and I2C	Supported
Serial Interfaces 1.8 V (including automatic baud rate detection)	Supported
Digital Audio, prepared for Analog Audio	Optional



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## CERTIFICATION DETAILS

GMA Certification	None
Deutsche Telekom Certification Date (Initial Firmware)	08.07.2019 (EC21ECGAR06A04M1G)
Certified Deutsche Telekom Affiliates	AT, CZ, DE, GR, HR, HU, ME, MK, NL, PL, RO, SK
Certifying Entity	DTAG ITS-IVA
DT Certification Type (Conditions)	<b>Full</b>
<b>Deutsche Telekom Affiliate Country Codes</b>	
AT	Magenta Telekom GmbH
CZ	T-Mobile Czech Republic a.s.
DE	Telekom Deutschland GmbH
GR	COSMOTE Mobile Telecommunications S.A.
HR	Hrvatski Telekom d.d.
HU	Magyar Telekom Telecommunications plc
ME	Cmorgski Telekom a.d. Podgorica
MK	Makedonski Telekom AD - Skopje
NL	T-Mobile Netherlands B.B.
PL	T-Mobile Polska S.A.
RO	Telekom Romania Mobile Communications S.A.
SK	Slovak Telekom, a.s.



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