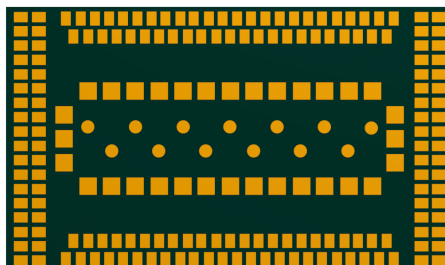


C10QM



Cavli
C Series



Overview

C10QM is the series of LTE CAT 1/ CAT 4 modules with 2G fall back supporting 3GPP release 10, designed for IoT and M2M applications. It has a compact LGA form factor which is pin compatible with C10GS LTE CAT 1/4 module which allows flexible migration. C10QM supports integrated GNSS with Qualcomm® IZat™ location technology Gen8C Lite (GPS, GLONASS, BeiDou/Compass, Galileo and QZSS), for precise and dependable positioning. C10QM supports VoLTE and SMS over IMS/SG/CS and supports wide set Internet protocols and industry-standard interfaces.

They come in 2 variants - C10QM-EA for the Europe and Asia market and C10QM-NA for the North America market. With optional integrated eSIM powered by Cavli Hubble platform, it provides global connectivity that helps to further reduce the time to market. C10QM is ideal for IoT applications such as asset tracking, e-mobility, data loggers, fleet management and environmental monitoring.

Key Highlights



LTE CAT 1/
LTE CAT 4



Integrated GNSS



eSIM



Cavli Hubble
Platform



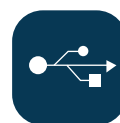
VoLTE
Support



SMS over
IMS/SG/CS



2G



USB 2.0
Interface



Basic Module Information

Application Processor Specification

ARM Cortex-A7 @Speed upto 1.3 GHz	
Flash:	128 MB
RAM:	128 MB
OS:	Linux 3.18

Radio Technology

RAT Used:	CAT 1 / CAT 4 / 2G
3GPP Release:	10

LTE Bands

EA:	B1 /B3 /B5 /B8 /B20 /B40
NA:	B2/ B4/ B5/ B12/ B13 /B25/ B26/ B66

GSM Bands

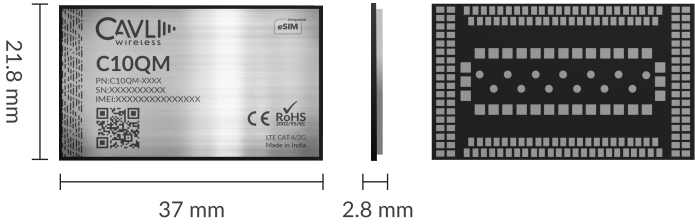
EA:	900 /1800 MHz
NA:	900 /1800 MHz

Internet Protocols

TCP(S), HTTP(S), MQTT(S), FTP(S), WS(S), UDP, PPP, SNMP

Interfaces

UART	x4
USB 2.0	x1
SDIO 3.0	x1
USIM (DSSS) (1.8V / 3.0 V)	x1
JTAG	x1
Network Status Indicator	x1
Module Status Indicator	x1
SGMII	x1
PCM**	x1
I2C**	x1
SPI**	x1
GPIO**	x12
Main ANT	x1
Diversity ANT	x1
GNSS ANT*	x1



Packaging

Form Factor:	LGA
Dimensions:	37 x 21.8 x 2.8 (mm scale)
Pin Count:	211 Pins
Weight:	TBD

Network Speed (Peak Values)

CAT 1:	DL 10Mbps & UL 5Mbps
CAT 4:	DL 150Mbps & UL 50 Mbps
GSM:	DL 236.8Kbps & UL 236.8 Kbps

Constellation Coverage

GNA:	GPS, GLONASS, BeiDou, Galileo QZSS Capable
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Temperature Range

Operating Temperature:	-30 °C to 75 °C
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Power Characteristics

Voltage Range:	3.4 V to 4.2 V	
Typical Voltage:	3.7 V	
TxD Peak	EA	NA
TxD Idle	TBD	TBD
GNSS (Fix)	TBD	TBD

Applicable Region

EMEA & APAC
North America

Product Variants

Variant Name	Region	Integrated eSIM	Internal GNSS	RAT
C10QM-EA-GNA4N	EMEA, APAC	✗	✓	CAT 4
C10QM-EA-GNA4H		✓	✓	CAT 4
C10QM-NA-GNA4N	North America	✗	✓	CAT 4
C10QM-NA-GNA4H		✓	✓	CAT 4
C10QM-EA-GNA1N	EMEA, APAC	✗	✓	CAT 1
C10QM-EA-GNA1H		✓	✓	CAT 1
C10QM-NA-GNA1N	North America	✗	✓	CAT 1
C10QM-NA-GNA1H		✓	✓	CAT 1

* Optional

** Needs SDK. Not available currently

*** In Progress

This document is a pre-release version. Some of the technical specifications are subjected to change.