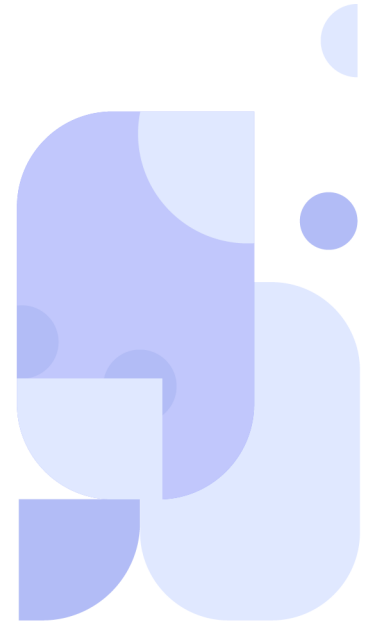
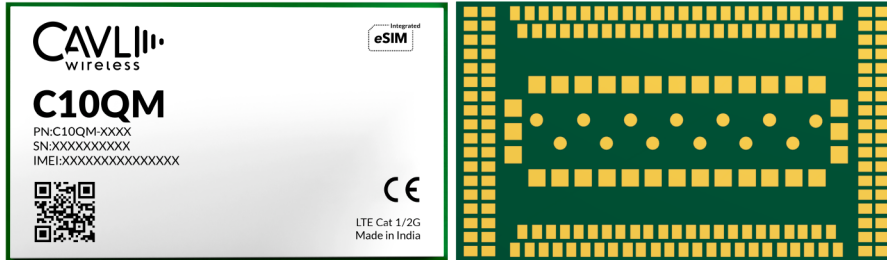


C10QM



Cavli
C Series



Overview

C10QM is the series of LTE Cat 1 modules with 2G fall back supporting 3GPP release 10 designed for IoT and M2M applications. It delivers a maximum data rate of 10 Mbit/s DL & 5 Mbit/s UL. It has a compact LGA form factor which is pin compatible with C20QM LTE Cat 4 module which allows flexible migration. C10QM supports in-built GNSS with Qualcomm® Location Gen8C Lite engine (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 5 variants - C10QM-EAJ for the Europe, Asia and Japan market, C10QM-EU for Europe only, C10QM-NA for the North America market, C10QM-AN for Australia, New Zealand market and C10QM-IN for the Indian 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



In-built GNSS



Integrated eSIM



Cavli Hubble Platform



Virtual CAN Support



VoLTE Support



Integrated MIPI-DBI Interface



2G Fallback



SDK Support



DFOTA Available

Basic Module Information

Basic Specification

Processor:	ARM Cortex-A7 upto 1.3 GHz
RAM:	256 MB
Flash:	256 MB / 512 MB
OS:	Yocto Linux (Kernel 4.14)

LTE Bands

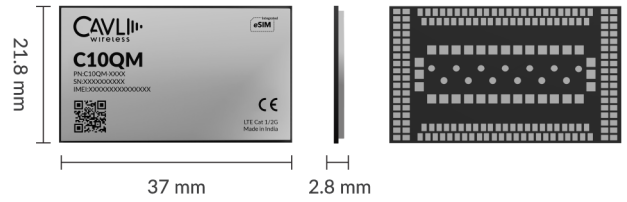
NA:	B2/B4/B5/B12/B13/B17/B25/B66
AN:	B1/B3/B5/B8/B18/B19/B26/B28 GSM 900/1800 MHz
EAJ:	B1/B3/B5/B7/B8/B18/B19/ B20/B26/B28/B38/B40/B41 GSM 900/1800 MHz
IN:	B1/B3/B5/B8/B40/B41 GSM 900/1800 MHz
EU:	B1/B3/B7/B8/B20/B28 GSM 900/1800 MHz

Radio Technology

RAT Used:	LTE Cat 1 with 2G
3GPP Release:	10

Interfaces

UART	x3
USB 2.0	x1
SDIO 3.0	x1
SDC	x1
USIM	x1
JTAG	x1
Network Status Indicator	x1
Module Status Indicator	x1
SGMII	x1
PCM ²	x1
I2C ²	x1
SPI ²	x1
GPIO ²	x9
LCD(DBI 8-bit)	x1
ADC	x2
Main ANT	x1
GNSS ANT	x1



Packaging

Form Factor:	LGA
Dimensions:	37 x 21.8 x 2.8 (mm scale)
Pin Count:	233 Pins
Other FF:	mPCIe
Weight:	5.02g

Network Speed (Peak Values)

Cat 1:	DL 10Mbps & UL 5 Mbps
GSM:	DL 236.8Kbps & UL 236.8 Kbps

Internet Protocols

TCP(S), HTTP(S), MQTT(S), FTP(S), UDP, PPP⁴

Constellation Coverage

GPS/GLO/GAL/BDS with QZSS
Qualcomm Location Suite Gen 8 C lite

Temperature Range

Operating Temperature: -30 °C to 85 °C

Power Characteristics

Voltage Range:	3.4 V to 4.5 V
Typical Voltage:	3.8 V
TxD Peak	937 mA
TxD Idle	31 mA
GNSS (Fix)	90mA

Applicable Region(s)

Eurasia & Japan, North America, Australia & New Zealand,
India Only, Europe Only

¹ Optional

² Needs SDK

³ In Progress

⁴ Planned