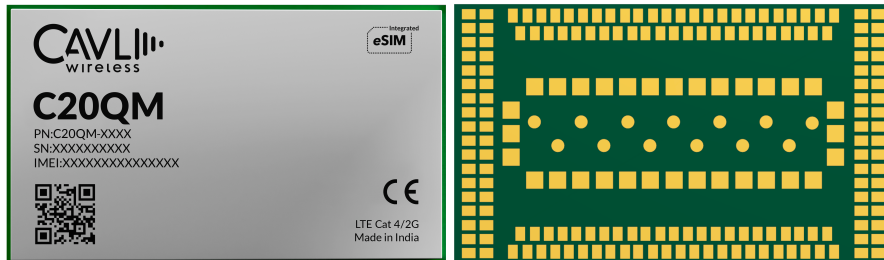


C20QM Cavli C Series



Overview

C20QM is the series of LTE 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/ Cat 4 module which allows flexible migration. C20QM supports in-built GNSS based on Qualcomm Location Suite Gen 8C for precise and dependable positioning. C20QM supports VoLTE and SMS over IMS/SG/CS and support a wide array of internet protocols and industry-standard interfaces.

They come in 3 region-specific models: C20QM-EA for the Europe and Asia market, C20QM-EAJ for the Europe Asia Japan Market and C20QM-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. C20QM is ideal for IoT applications such as asset tracking, e-mobility, data loggers, fleet management and environmental monitoring.

Key Highlights



LTE Cat 4



In-built GNSS



Integrated
eSIM



Cavli Hubble
Platform



Virtual
CAN Support



VoLTE
Support



Integrated
MIPI-DBI Interface



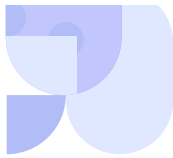
2G Fallback



OpenSDK
Support



DFOTA
Available



Basic Module Information

Basic Specification

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

Radio Technology

RAT Used:	LTE Cat 4 with 2G
3GPP Release:	10

LTE Bands

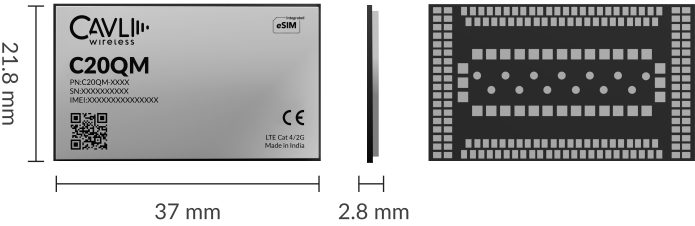
EA:	B1/ B3/ B5/ B8/ B40
NA:	B2/ B4/ B5/ B7/ B12/ B13/ B17/ B25/ B26/ B66
EAJ:	B1/ B3/ B5/ B7/ B8/ B18/ B19/ B20/ B26/ B28/ B38/ B40/ B41
GSM Bands:	900 /1800 MHz

Internet Protocols

TCP(S), HTTP(S), MQTT(S), FTP(S), UDP, PPP ⁴

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
Main ANT	x1
Diversity ANT	x1
GNSS ANT	x1
LCD(DBI 8-bit) ²	x1
ADC	x2



Packaging

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

Network Speed (Peak Values)

Cat 4:	DL 150Mbps & UL 50 Mbps
GSM:	DL 236.8Kbps & UL 236.8 Kbps

Constellation Coverage

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

Temperature Range

Operating Temperature:	-30 °C to 85 °C
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Power Characteristics

Voltage Range:	3.6 V to 4.5 V		
Typical Voltage:	3.8 V		
	EA	NA	EAJ
TxD Peak	TBD	TBD	TBD
TxD Idle	TBD	TBD	TBD
GNSS (Fix)	90mA	90mA	90mA

Applicable Region(s)

EMEA & APAC, EAJ, North America

Product Variants

Variant Name	Region	Integrated eSIM	RAM	Flash
C20QM-EA-22GNN	EMEA, APAC	✗	256MB	256MB
C20QM-EA-22GNH		✓	256MB	256MB
C20QM-EA-24GNN		✗	256MB	512MB
C20QM-EA-24GNH		✓	256MB	512MB
C20QM-NA-22GNN	North America	✗	256MB	256MB
C20QM-NA-22GNH		✓	256MB	256MB
C20QM-NA-24GNN		✗	256MB	512MB
C20QM-NA-24GNH		✓	256MB	512MB
C20QM-EAJ-22GNN	Europe, Asia and Japan	✗	256MB	256MB
C20QM-EAJ-22GNH		✓	256MB	256MB
C20QM-EAJ-24GNN		✗	256MB	512MB
C20QM-EAJ-24GNH		✓	256MB	512MB

¹ Optional ² Needs SDK ³ In Progress ⁴ Planned

