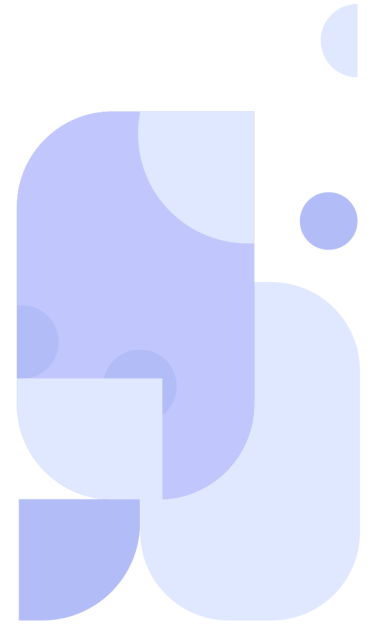
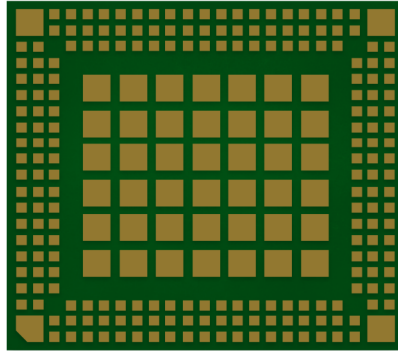


CQM220 Cavli C Series



Overview

CQM220 is the latest 5G RedCap module in Cavli's C-Series portfolio based on 3GPP release 17 standards, supports SA mode and is backward compatible with 4G network. The module supports a theoretical data rate of 223Mbps and uplink speed of 123Mbps under the 5G RedCap network. It also offers multi-constellation dual band GNSS capability, with support for constellations like GPS, GLONASS, Galileo, NavIC, SBAS and QZSS.

The CQM220 is engineered in a compact LGA form factor, measuring 28.0mm x 25.5mm x 2.7 mm. Moreover, the CQM220 offers PCIe Gen2 interface support for high bandwidth peripheral connectivity to further elevate your connected solutions. The module currently comes in CQM220-WW variant that supports major World Wide bands, along with regional variants for North America, Eurasia & Japan, Latin America and India only. The CQM220 is an ideal candidate for IoT enabled applications that require high-throughput and precise location tracking such as Asset tracking, HD Smart Surveillance Solutions, Industry 4.0 etc.

Key Highlights



5G RedCap



In-built GNSS
(L1+L5)



LTE Cat 4
Fallback



Open SDK



USB 2.0
Interface



PCIe Interface
(Gen 2)



OpenWrt

Basic Module Information

Basic Specification

Processor:	Arm Cortex-A7 up to 1.9 GHz
Memory:	256/512/1024 MB ROM 256/512/1024 MB RAM
OS:	OpenWrt
Operating Mode:	Standalone

Radio Technology

RAT Used:	5G RedCap
3GPP Release:	17
Fall back:	LTE Cat 4

Network Speed (Peak Values)

5G RedCap:	DL 220Mbps & UL 120 Mbps
LTE Cat 4:	DL 150Mbps & UL 50 Mbps

Temperature Range

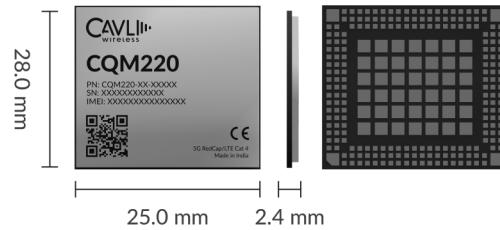
Operating Temperature:	-30°C to 85°C
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Interfaces

USB 2.0	x1
I2C ³	x1
USIM (1.8V / 3.0V)	x2
SGMII	x1
SDC (WLAN-SDIO)	x1
PCIe (Gen2)	x1
I2S	x1
UART	x2
Network Status	x2
ADC	x2
SPI	x1
JTAG	x1
GPIO	x1
Main ANT	x1
Diversity ANT	x1
GNSS ANT	x1

Applicable Region(s)

Global



Packaging

Form Factor:	LGA
Dimensions:	28.0 x 25.5 x 2.7(mm scale)
Other FF:	M.2

Power Characteristics

Operating Voltage:	3.4V - 4.5V
Typical:	3.8V

Constellation Coverage

Qualcomm Location Suite Gen 9 (L1+L5)
GPS/GLONASS/Galileo/BeiDou/NavIC/QZSS/SBAS

5G Bands

WW	n1/n2/n3/n5/n7/n8/n12/n13/n14/n18/n20/n25/n26/n28/n38/n40/n41/n48/n66/n71/n77/n78
NA	n2/n5/n7/n12/n13/n14/n25/n48/n66/n71/n77/n78
EAJ	n1/n3/n5/n7/n8/n18/n20/n26/n28/n38/n40/n41/n48/n77/n78
IN	n1/n3/n5/n8/n38/n40/n41/n48/n77/n78
LA	n2/n5/n7/n8/n25/n28/n38/n41/n40/n48/n66/n77/n78

LTE Bands

WW	B1/B2/B3/B4/B5/B7/B8/B12/B13/B14/B17/B18/B19/B20/B25/B26/B28/B34/B38/B39/B40/B41/B42/B43/B48/B66/B71
NA	B2/B4/B5/B7/B12/B13/B14/B17/B25/B42/B43/B48/B66/B71
EAJ	B1/B3/B5/B7/B8/B18/B19/B20/B26/B28/B34/B38/B39/B40/B41/B42/B43/B48
IN	B1/B3/B5/B8/B38/B40/B41/B42/B43/B48
LA	B2/B4/B5/B7/B8/B25/B28/B38/B40/B41/B42/B43/B48/B66

¹ Optional

² Needs SDK

³ In Progress

⁴ Planned

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