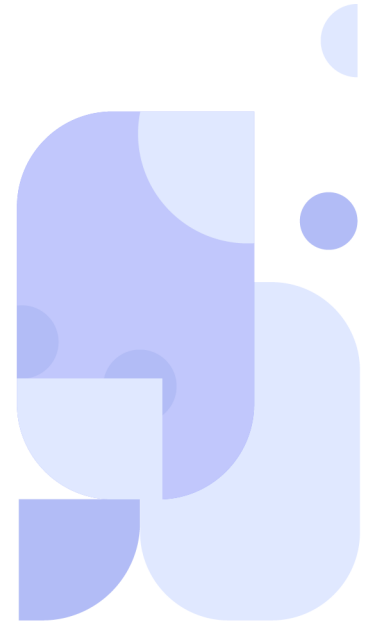
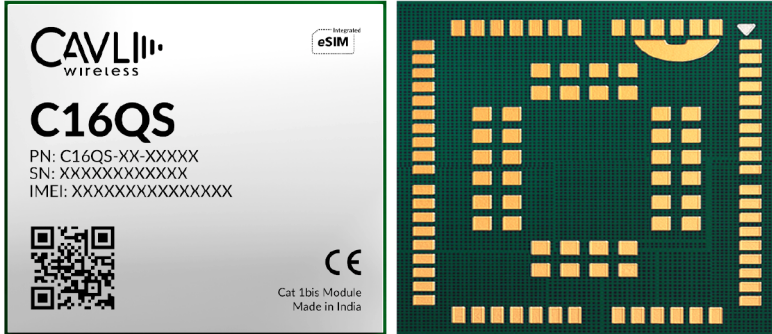


# C16QS



Cavli  
C Series



## Overview

C16QS is a series of LTE Cat 1bis modules with optional integrated GNSS and eSIM optimized for IoT applications with low cost and low power consumption. It is compliant to 3GPP Rel14 Cat 1bis standards and ideal for customers interested in switching from legacy 2G and 3G solutions to LTE.

C16QS comes with unique features that enables easy product development and faster go to market for product makers. Its enhanced tracking features that process GPS data on the edge, independent LTE and GNSS power supply and sleep features and low power modes making it ideal for applications such as asset tracking, POS and remote monitoring and energy metering. C16QS comes in 7 variants - Eurasia & Japan, Australia & New Zealand, North America, Latin America, India alone, Europe alone and World Wide, covering different countries and regions.

## Key Highlights



LTE Cat 1bis



Integrated  
GNSS



Integrated  
eSIM



Cavli Hubble  
Platform



Terrestrial Positioning  
Service



Power Saving  
Modes



Low Power  
Consumption



Small Form  
Factor Design



USB 2.0  
Interface



Location-as-  
a-Service

# Basic Module Information

## Basic Specification

Processor: ARM Cortex M3 processor @204MHz clock	
RAM:	1.25MB
Flash:	4MB
OS:	FreeRTOS

## Radio Technology

RAT Used:	Cat 1bis
3GPP Release:	14

## Network Speed (Peak values)

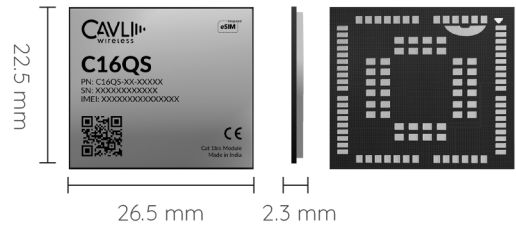
Cat 1bis:	DL 10Mbps & UL 5Mbps
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## LTE Bands

EAJ:	B1/ B3/ B5/ B7/ B8/ B18/ B19/ B20/ B26/ B28/ B40/ B41
NA:	B2/ B4/ B5/ B12/ B25/ B66
LA:	B1/ B2/ B3/ B4/ B5/ B7/ B8
AN:	B1/ B3/ B5/ B8/ B18/ B19/ B26/ B28
IN:	B1/ B3/ B5/ B8/ B40/ B41
EU:	B1/ B3/ B5/ B7/ B8/ B20/ B28
WW:	B1/ B2/ B3/ B4/ B5/ B7/ B8/ B12/ B18/ B19/ B20/ B25/ B26/ B28/ B40/ B41/ B66

## Interfaces

UART	x3
USB 2.0	x1
USIM (DSSS) (1.8V / 3.0V)	x1
SWD	x1
Network Status Indicator	x1
Power ON Status Indicator	x1
ADC	x2
I2S 2	x1
I2C 2	x1
SPI 2	x1
GPIO 2	x4
Main ANT	x1
GNSS ANT	x1



## Packaging

Form Factor:	LGA
Dimensions:	26.5 x 22.5 x 2.3 (mm scale)
Pin Count:	102 Pins
Weight:	3.9g
Other FF:	mPCIe, Dongle

## Constellation Coverage

GPS/ BeiDou
Hot Start / Warm Start / Cold Start with AGNSS Support

## Temperature Range

Operating Temperature:	-30 °C to 85 °C
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## Internet Protocols

TCP(S), HTTP(S), FTP(S), MQTT(S), PPP
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## Power Characteristics

Voltage Range:	3.1 V to 4.5 V
Typical Voltage:	3.8 V
Tx Peak (@23dBm)	650.88 mA
Tx Idle (USB Connected)	Upto 34.3 mA
Tx Idle (USB Disconnected)	5.1 mA
Sleep Mode (Hibernate)	11 µA
eDRX	5.12 , PTW : 1.28 - 173 uA
	10.24 , PTW : 2.56 - 161 uA
	20.48 , PTW : 5.12 - 130 uA
	40.96 , PTW : 10.24 - 81 uA

## Applicable Region

Eurasia & Japan, Australia & New Zealand, North America, Latin America, India, Europe, World Wide
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<sup>1</sup> Optional

<sup>2</sup> Needs SDK

<sup>3</sup> In Progress

<sup>4</sup> Planned