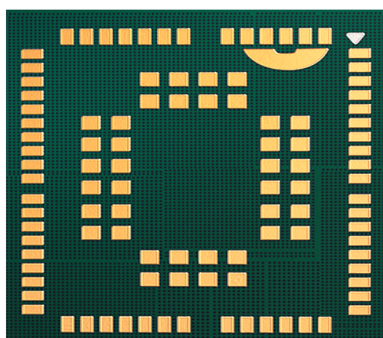


C16QS



Cavli
C Series



Overview

Cavli C16QS modules use their LTE Cat 1bis technology and optional integrated GNSS tracking capabilities to simplify global connectivity and tracking solutions. Coming with an optional integrated eSIM and Cavli Hubble Device management platform connectivity, C16QS is capable of ensuring remote management and seamless global coverage. The module comes in six region-specific variants which can be deployed according to the customer requirements. The C16QS series, with its power saving and DRx/eDRx modes, ensure prolonged battery life.

The module's LTE and GNSS subsystems can be operated independently resulting in an optimized workflow. The above-mentioned features along with its small form-factor and interfacing capabilities ensure simpler designs and makes C16QS ideal for solutions that require reliable connectivity, tracking capabilities or, are constrained by space and power. C16QS comes in 7 variants - Eurasia and Japan, North America, Latin America, South-East Asia, Europe alone, Indian alone and Global variant respectively, covering different countries and regions.

Key Highlights



LTE Cat 1bis



Integrated
GNSS



Integrated
eSIM



Cavli Hubble
Platform



WiFi Scanning
Available



Power Saving
Modes



Low Power
Consumption



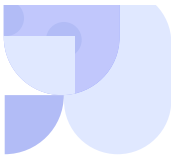
Small Form
Factor Design



USB 2.0
Interface



DFOTA
Available



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)

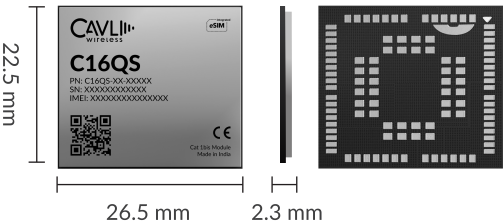
Cat 1bis:	DL 10Mbps & UL 5Mbps
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LTE Bands

EAJ:	B1/ B3/ B5/ B7/ B8/ B18/ B19/ B20/ B26/ B28/ B38/ B40/ B41
EU:	B1/B3/B5/B7/B8/B20/B28
NA:	B2/B4/B5/B12/B13/ B25/B66
LA:	B1/B2/B3/B4/B5/B7/B8/B28
AN:	B2/B4/B5/B12/B13/ B25/B66
IN:	B1/B3/B5/B8/B40/B41
WW:	B1/B2/B3/B4/B5/B7/B8/B12/B13 B18/ B19/B20/B25/B26/B28/B38 B40/B41/B66

Interfaces

UART	x3
USB 2.0	x1
USIM (DSSS) (1.8V / 3.0 V)	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:	3.9 mg
Other FF:	mPCIe, Dongle

Constellation Coverage

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

Temperature Range

Operating Temperature:	-45 °C to 90 °C
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Internet Protocols

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

Voltage Range:	3.4 V to 4.2 V
Typical Voltage:	3.7 V

	EU	AN	NA	LA	IN	EAJ	WW
TxD Peak (@23bBm)	970 mA	970 mA	970 mA	970 mA	970 mA	970 mA	970 mA
TxD Idle (USB Connected)	34.2 mA	34.2 mA	34.1 mA	34.2 mA	34.1 mA	34.2 mA	34.3 mA
TxD Idle (USB Disconnected)	5.1 mA	5.1 mA	5 mA	5.1 mA	5.1 mA	5.1 mA	5.1 mA
Sleep Mode	11 µA	11 µA	11 µA	11 µA	11 µA	11 µA	11 µA
GNSS (Fix)	60 mA	60 mA	60 mA	60 mA	60 mA	60 mA	60 mA

Applicable Region

Europe Only, Eurasia & Japan, Australia, New Zealand, Taiwan, Japan and South Korea, North America, Latin America, India, World Wide
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Product Variants

Features	EU Europe	EAJ Europe, Asia & Japan	AN Australia, New Zealand, Taiwan, Japanand South Korea	NA North America	LA Latin America	WW World Wide	IN India
Modem Only	C16QS-EU-S00N	C16QS-EAJ-S00N	C16QS-AN-S00N	C16QS-NA-S00N	C16QS-LA-S00N	C16QS-WW-S00N	C16QS-IN-S00N
Modem + eSIM	C16QS-EU-S00H	C16QS-EAJ-S00H	C16QS-AN-S00H	C16QS-NA-S00H	C16QS-LA-S00H	C16QS-WW-S00H	C16QS-IN-S00H
Modem + GNSS (L1)	C16QS-EU-GNAN	C16QS-EAJ-GNAN	C16QS-AN-GNAN	C16QS-NA-GNAN	C16QS-LA-GNAN	C16QS-WW-GNAN	C16QS-IN-GNAN
Modem + eSIM + GNSS (L1)	C16QS-EU-GNAH	C16QS-EAJ-GNAH	C16QS-AN-GNAH	C16QS-NA-GNAH	C16QS-LA-GNAH	C16QS-WW-GNAH	C16QS-IN-GNAH

¹ Optional

² Needs SDK

³ In Progress

⁴ Planned

