

Technical Specification Document

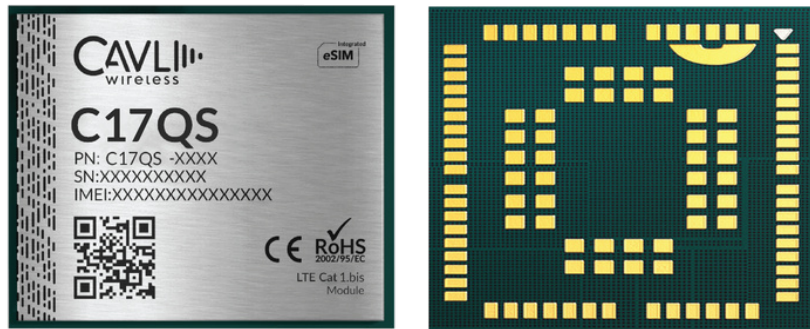
C17QS

Cat 1.bis LTE Module

Cavli C-Series C17QS Module



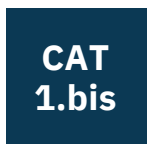
Cat 1.bis LTE Module



C17QS is a series of new LTE Cat1.bis modules with optional integrated GNSS and iSIM, 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.

C17QS 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 and sleep features and low power modes making it ideal for applications such as asset tracking, POS and remote monitoring and energy metering.

Key features



LTE Cat 1.bis



Small Form Factor Design



iSIM



Integrated GNSS



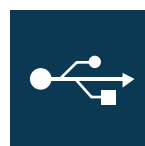
Cavli Hubble Platform



Free RTOS



Low Power Consumption



USB 2.0 Interface



Power Saving Mode



OpenSDK Support

C17QS

Basic Information

Region	Global
CPU	ARM Cortex M3 @ 204MHz clock
Memory	2MB RAM + 8MB Flash
OS	Free RTOS
Package	LGA
Dimensions	26.5 x 22.5 x 2.3 mm
Weight	3.3 g
Operating Temperature	-40°C - +85°C
Storage Temperature	-45°C - +90°C
Pin Count	102

Radio Frequency Bands

RAT	Cat 1.bis
Transmission Rates (Peak)	Peak DL 10 Mbps & UL 5 Mbps
LTE Band List	B1/ B2/ B3/ B4/ B5/ B7/ B8/ B12/ B13/ B14/ B18/ B19/ B20/ B25/ B26/ B28/ B34/ B34 TDD/ B39/ B40 TDD/ B41 TDD/ B66/ B71
3GPP Release	14

GNSS Capability

Constellations	GPS/ GLONASS/ BeiDou/ NavIC/ GALILEO SBAS + QZSS Capable
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Network Protocols

Internet Protocols	TCP(S), HTTP(S), FTP(S), MQTT(S), UDP, PPP
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Interfaces

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

* Optional

** Needs SDK. Not available currently

*** In Progress



Main ANT	x1
GNSS ANT*	x1

Electrical Characteristics

Operating Voltage	Range: 3.6V - 4.5V Typical: 3.8V
TxD Idle	TBD
DRx Mode (Avg)	TBD
eDRx Mode (Avg)	TBD
Power Saving Mode	TBD
Dormant Mode	TBD
GNSS (Fix)	TBD

Driver Support

USB Driver	RNDIS / CDC-ECM / CDC-ACM
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Certifications

Regulatory	Global: GCF ³ Europe: CE ³ Japan: TELEC/JATE ³ RCM: RCM ³ Taiwan: NCC ³ Malaysia: SIRIM ³ America: FCC ³ Canada: IC ³ N.A: PTCRB ³
Carrier	Orange ³ / Verizon ³ / AT&T ³ / T-Mobile ³

Other Features

Integrated GNSS	Optional
Mini-PCIe form factor	Optional

¹Optional

²Needs SDK. Not available currently

³In Progress



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

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