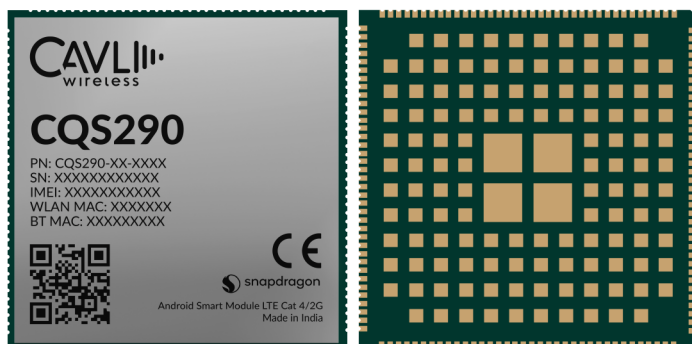


CQS290



Cavli
C Series



Overview

Cavli CQS290, a series of LTE Cat 4 module with 2G fall back. This smart module is equipped with the Cortex A53 quad-core CPU architecture with built-in Adreno™ 702 GPU delivering higher graphics capabilities, better quality images and excellent power performance. The module comes in 6 variants based on Regional LTE bands - Eurasia and Japan (EAJ), Australia and New Zealand (AN), India (IN), Latin America (LA), North America (NA) & Worldwide (WW). All variants supporting multi-constellation GNSS with GPS, BDS, GLONASS, Galileo, QZSS and SBAS.

CQS290 supports versatile features such as USB 2.0 and 3.1, Bluetooth 5.0, Wi-Fi 5 & FM making it ideal for wide range of applications.

Key Highlights



ARM Cortex-A53
64-bit Processor
(Quad-core)



Qualcomm
Adreno™ 702 GPU



Android /
Linux OS



LTE Cat 4



LCC+LGA
Package



GPS/BDS/GLONASS/
Galileo/QZSS/SBAS



Superior Multimedia
Functions



WiFi IEEE 802.11
a/b/g/n/ac



Bluetooth 5.0
(BR/EDR + BLE)



Qualcomm QCM2290
Baseband Chipset



Integrated MIPI-DSI
Interface

Basic Module Information

Basic Specification

Processor: Quad-core ARM Cortex-A53 64-bit CPU @ 2.0 GHz
Inbuilt GPU: Adreno 702 @ 845 MHz (64-bit)

Flash: 4¹/8¹/16/32/64 GB eMMC

RAM: 1¹/2/3/4 GB LPDDR4X

OS: Linux/Android

Radio Technology

RAT Used: LTE Cat 4 with 2G

3GPP Release: 10

Secondary Wireless Protocols: WLAN and BLE

LTE Bands

WW: 1/2/3/4/5/7/8/12/13/17/18/19/
20/25/26/28/38/40/41/66/71

EAJ: 1/3/5/7/8/18/19/20/26/28/38/
40/41

NA: 2/4/5/7/8/12/13/17/25/66/71

AN: 1/3/5/8/18/19/26/28

IN: 1/3/5/8/40/41

GSM Bands: 900 /1800 MHz

Interfaces

MIPI_CSI (4-bit) x2

MIPI_DSI (4-bit) x1

Analog Audio Out x3*

USB (3.1) x1

USIM x1

UART x7*

GPIO x71*

SDC (4 bit) x1

ADC x1*

I2C x4*

CCI I2C x2

Capacitive Touch Panel (I2C) x1

I3C(Sensor for Accel + Gyro) x2*

SPI x5*

MIC (Analog) x3*

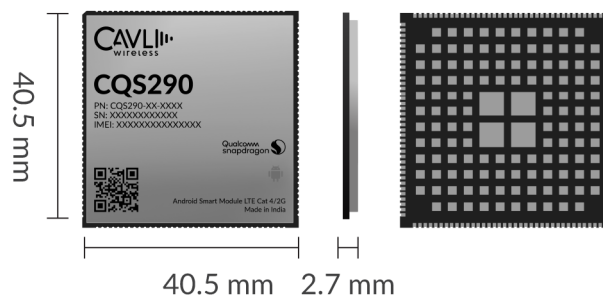
DMIC x2*

Main ANT x1

DIV ANT x1

GNSS ANT x1

Wi-Fi, BLE& FM ANT x1



Packaging

Form Factor: LCC+LGA

Dimensions: 40.5 x 40.5 x 2.7 (mm scale)

WLAN and BLE Specifications

WLAN Frequencies: 2.4GHz & 5GHz

WLAN Standard: 802.11a/b/g/n/ac

BLE Specifications: 2.1 EDR/3.0 HS/4.2 LE/5.0 LE

BLE Standard: BLE 5.0

Network Speed (Peak Values)

Cat 4: DL 150Mbps & UL 50 Mbps

GSM: DL 236.8Kbps & UL 236.8 Kbps

Constellation Coverage

GPS/BDS/GLONASS/Galileo/QZSS/SBAS

Temperature Range

Operating Temperature: -30°C to +85°C

Power Characteristics

Voltage Range: 3.5 V to 4.4 V

Typical Voltage: 4 V

Applicable Region

Eurasia & Japan, Australia & New Zealand, Latin America, India, North America and Worldwide

¹Linux Only *Maximum Number Possible

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