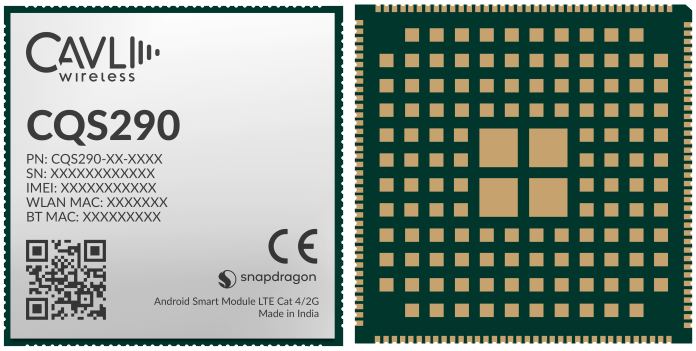
CQS290

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 AdrenoTM 702 GPU delivering higher graphics capabilities, better quality images and excellent power performance.The module comes in 5 variants based on Regional LTE bands - Eurasia and Japan (EAJ), Australia and New Zealand (AN), India (IN), 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

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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)	
Memory:	2 GB LPDDR4X + 16 GB eMMC 3 GB LPDDR4X + 32 GB eMMC 4 GB LPDDR4X + 64 GB eMMC 1 GB LPDDR4X + 4GB eMMC(Linux only) 1GB LPDDR4X + 8GB eMMC(Linux only)

Radio Technology

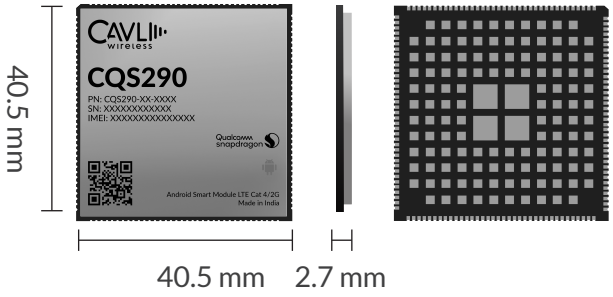
RAT Used:	LTE Cat 4 with 2G
3GPP Release:	10
Secondary Wireless Protocols:	WLAN and BLE

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
I2S	x2*



Packaging

Form Factor:	LCC+LGA
Dimensions:	40.5 x 40.5 x 2.7 (mm scale)
Weight:	11g

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,India,
North America and Worldwide

[1]Linux Only *Maximum Number Possible #Optional

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

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