

TURBO X

C610/C410 SOM

360 Camera

AI Camera

Body Camera

Dash Camera

Edge Computing

Video Conference

The TurboX C610/C410 SOM is an intelligent vision platform with powerful image processing and machine learning for smart camera and intelligent IoT devices. It's powered by the Qualcomm® QCS610/QCS410 SoC (System-on-Chip), which is also known as Qualcomm Vision Intelligence, platform providing a cost-effective solution to accelerate the product development and commercialization process. The C610/C410 SOM supports Linux and Android OS, featuring a powerful combination of superior camera and video processing capability, outstanding audio processing solution and onboard Artificial Intelligence (AI) Engine. It serves a great variety of IoT devices including AI camera, Video Conference, Surveillance camera, Panorama camera, Dash Camera and Edge Computing.

Overview

C610/C410 SOM Applications



AI Camera



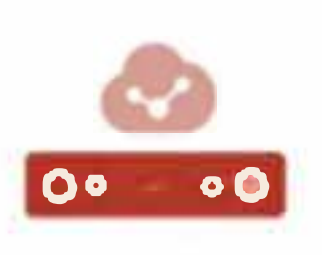
Video Conference

Surveillance
Camera

360 Camera



Dash Camera



Edge Computing

C610/C410 SOM Features

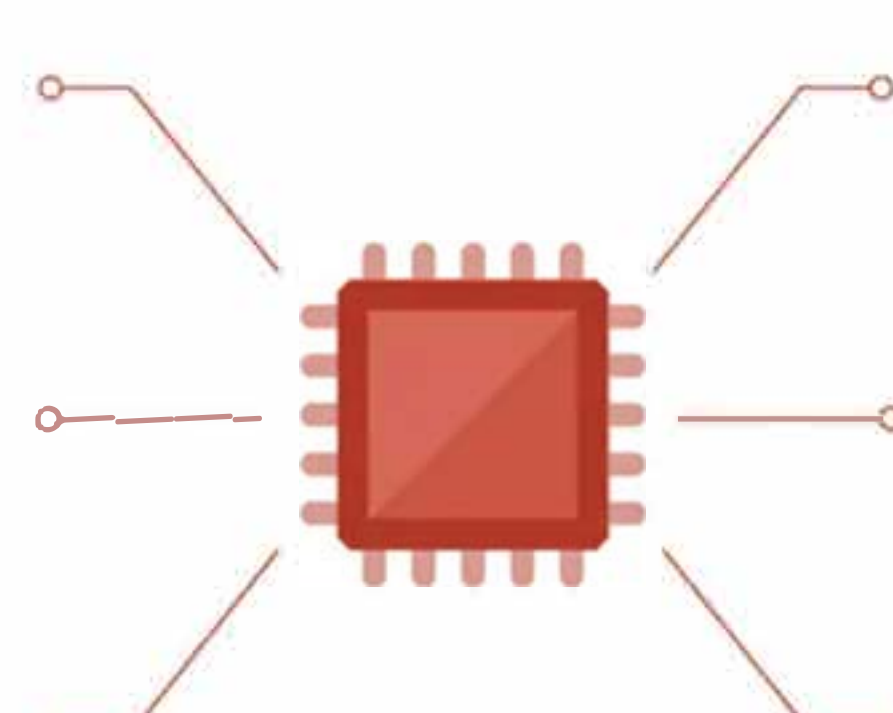
Linux Yocto with enhanced light weight software architecture and toolchain

Connected Camera SDK:

AV Framework with APIs for multi channels audio/video stream encoding

Multi Cameras:

3 cameras concurrency with 2 on IFE and 1 on IFE Lite



C610/C410 SOM

Optimized low light performance with sHDR and TNR

AI:

TensorFlow Lite DSP run-time support through HexNN

Panorama Camera:

Dual Camera side by side stitching algorithm

Specifications

Category	Description
Platform	C610: 2x K4G (Enyo) 2.2 GHz + 6x K4S (A55) 1.8 GHz, 1MB L3 cache C410: 2x K4G (Enyo) 2.2 GHz + 2x K4S (A55) 1.8 GHz, 1MB L3 cache
GPU	Qualcomm® Adreno™ GPU 612 with 64-bit addressing; 845 MHz
DSP	Hexagon™ DSP with dual Qualcomm® Hexagon™ Vector eXtensions (HVX), 1.1 GHz
Memory	C610: LPDDR4x 2GB + eMMC 16GB (Standard); LPDDR4x 4GB + eMMC 64GB (Pro); C410: LPDDR4x 2GB + eMMC 16GB
Connectivity	WLAN 1 x 1 802.11a/b/g/n/ac and Bluetooth 5.1
Encode	C610: 4K@30 fps 8-bit: HEVC C410: 1080p@90 fps 8-bit: HEVC
Decode	C610: 4K@30 fps 10-bit: HEVC C410: 1080p@90 fps 10-bit: HEVC
Display Interfaces	1 x MIPI-DSI 4-lane, 1080p@60 fps, 1 x DisplayPort
Camera Interfaces	Dual ISP support; 3 x 4-lane CSIs (4/4/4 or 4/4/2/1); D-PHY 2.1Gbps/lane;
Other Interfaces	1 x Slimbus; 1 x USB 3.1; 1 x USB 2.0; 1 x SDIO; 4 x I2S; 14 x QUPs; 1 x RGMII; 120 x GPIOs
Operating Environment	Operation Temperature: -25°C ~ +75°C Operation Humidity: 5%~95%, non-condensing
Dimension	38mm x 38mm
OS Support	Linux, Android

RELATED PRODUCTS



C610/C410 Open Kit

360 Camera AI Camera Body Camera

Dash Camera Edge Computing

Video Conference