Qualcomm

Qualcomm® QCM2150 SoC for IoT

The robust entry level QCM2150 System-on-Chip features 64-bit CPU and dual camera support for IoT devices.

The QCM2150 SoC uses the advanced 28 nm process for lower active power dissipation and faster peak CPU performance. It includes a 64-bit Arm Cortex-A53 quad-core application processor.

Highlights

Improved performance

A new 64-bit CPU architecture delivers a massive boost in CPU performance when compared to previous generation.

Dual ISPs for dual cameras

The QCM2150 is equipped with dual ISP for dual camera optical zoom and depth capture (with software and support from our third party ecosystem) and can capture full HD 1080p video.

Improved power consumption

Powerful performance requires stronger power efficiency. QCM2150 features a Qualcomm® Hexagon™ DSP which delivers low power audio and sensor processing.

87-28736-1 Rev. A

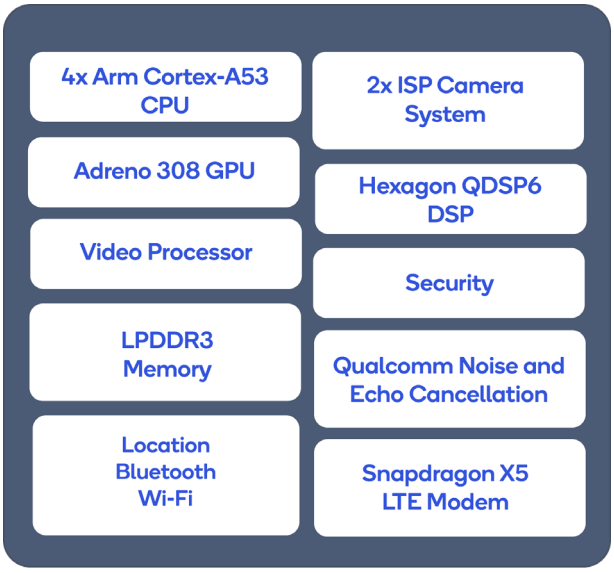
QCM2150 Target Applications

- Retail Point-of-Sale (POS)
- Industrial Handheld
- Asset Tracking

Features

- Up to a 50% increase in CPU performance, compared to the previous generation
- Support for up to 13 MP single camera and 8 MP dual camera
- Advanced 28 nm process for lower active power dissipation and faster peak CPU performance
- Power of 4G with the Snapdragon™ X5 LTE Modem engineered to support peak LTE download speeds and very low power.
- Wi-Fi integrated 802.11b/g/n/ac with MU-MIMO
- Qualcomm® RF Front End (RFFE) solution
- Two Hexagon QDSP6 v56 at up to 691 MHz
- One 4-lane DSI D-PHY; up to HD+ (1440 × 720) 60 fps
- Two 4-lane CSI (4 + 4 or 4 + 2 +1) D-PHY at 2.1 Gbps per lane

QCM2150 Block Diagram



QCM2150 Specifications

Package	720 BNSP, 14.0 × 12.0 × 0.91 mm; 0.4 mm pitch
CPU	4x Arm Cortex-A53 @ up to 1.3 GHz
Modem	Snapdragon X5 LTE Modem Support for LTE Cat 4
Camera Support	13 MP at 30 fps ZSL using dual ISP
Video	1080p30 8-bit decode for H.264/H.265/VP8, 1080p30 8-bit encode for H.264
DSP	Hexagon QDSP6 v56 at up to 691 MHz
GPU	Qualcomm® Adreno™ 308 GPU with 64-bit addressing at up to 485 MHz; support for Open GL ES 3.2, Open CL, DirectX
Display Support	1560 x 720
Memory	LPDDR3 SDRAM; 32-bit wide; up to 672 MHz eMMC5.1, SD 3.0
Audio	Qualcomm® Noise and Echo Cancellation
Connectivity	WLAN 1×1 802.11b/g/n (Qualcomm® WCN3615), 802.11a/b/g/n (Qualcomm® WCN3660B), 802.11ac (Qualcomm® WCN3680B) Bluetooth 4.1 and FM
Location	GPS, GLONASS, BeiDou, Galileo

Snapdragon, Qualcomm RFFE, Qualcomm Adreno, Qualcomm Noise and Echo Cancellation, Qualcomm WCN3615, Qualcomm WCN3660B and Qualcomm WCN3680B are products of Qualcomm Technologies, Inc. and/or its subsidiaries.

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