

Qualcomm

Qualcomm® QCM2290/ Qualcomm® QCS2290 SoCs

The robust entry level Qualcomm QCM2290/QCS2290 System-on-Chips deliver blazing fast LTE connectivity (QCM2290 only), enhanced GPS and advanced camera features.

The QCM2290/QCS2290 enable reliable performance and power-conservation with LTE connectivity, upgraded features and memory support for low power consumption. Equipped with the Cortex A53 quad-core CPU architecture, the entry-level platform is a cost-effective solution, delivering greater performance, higher graphics capabilities, better quality images, and improved power performance compared to previous generations. This platform is well-suited for retail point-of-sale (POS), industrial handheld, tracking and camera applications.

Highlights

Powerful CPU and GPU in its tier

Reliable performance and power-conservation; 11nm process node offers improved power performance.



Flexible connectivity solutions

From Bluetooth to Wi-Fi or 4G LTE (available only with QCM2290), the QCM2290/QCS2290 supports a range of connectivity options. With QCM2290, compatibility with virtually any band supported by global cellular operators enables devices to stay connected from almost anywhere.*



Accelerate time to commercialization

The QCM2290/QCS2290 baseband chipset is pin-to-pin compatible with Qualcomm® QCM4290/QCS4290 which helps customers leverage hardware and software development across various IoT devices to reduce cost and time to commercialization.



* Requires a network connection and a compatible network.

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QCS2290
QCM2290

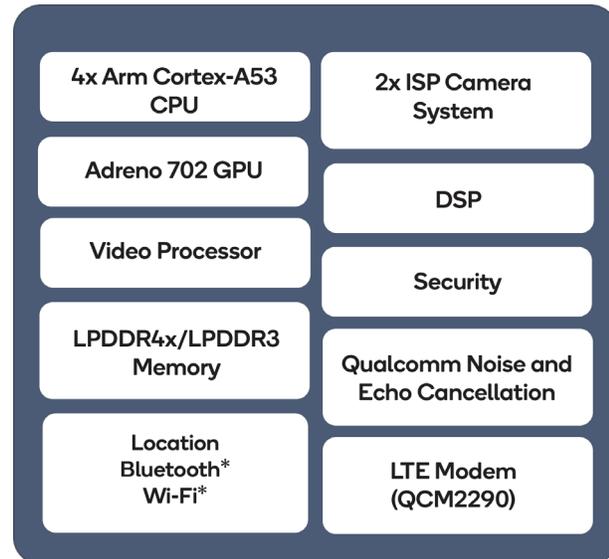
QCM2290/QCS2290 Target Applications

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

Features

- Customized 64-bit Arm Cortex-A53 quad-core applications processor at up to 2.0 GHz
- Dedicated DSP shared between sensor core and low-power audio subsystem
- Qualcomm® Adreno™ 702 GPU @ 845 MHz, 3D graphics accelerator with 64-bit addressing
- Qualcomm® Universal Bandwidth Compression (UBWC) with GPU
- Display support: HD+, 720 × 1680 at 60 Hz, 10 bit end-to-end, and up to four hardware layer composition. Features Qualcomm® Low-Power Picture Enhancement and Qualcomm® True Palette Display
- One 4-lane DSI D-PHY 1.2 at 1.5 Gbps per lane, split link supported
- 2x ISP (13 MP + 13 MP or 25 MP) at 30 fps ZSL
- Two 4-lane CSIs (4/4 or 4/2/1) D-PHY 1.2 at 2.5 Gbps per lane or C-PHY 1.0 at 10 Gbps (3.42 Gbps/trio)
- Support for USB 3.1 Type-C/Micro USB
- Always-on subsystem with RPM for power management
- Long term support with extended life hardware and software support through 2028

QCM2290/QCS2290 Block Diagram



* Supported with a companion module

QCM2290/QCS2290 Specifications

Package	752 NSP, 12.0 × 12.4 × 0.91 mm; 0.4 mm pitch
CPU	4x Arm Cortex-A53 @ up to 2.0 GHz
Modem	6th generation LTE multimode modem 3GPP Rel. 10 with selected 3GPP Rel. 12 features. (QCM2290 only)
Camera Support	13 MP + 13 MP or 25 MP at 30 fps ZSL
Video	1080p30 8-bit decode for H.264/H.265/VP9, 1080p30 8-bit encode for H.264/H.265
GPU	Adreno 702 GPU @ 845 MHz with support for Open GL ES 3.1, Open CL 2.0, Vulkan 1.1
Display Support	Adreno 920 DPU
Memory	Dual channel, non-PoP high-speed memory: LPDDR4x SDRAM @ 1804 MHz clock (2 x 16 bit); LPDDR3 SDRAM @ 933 MHz clock (1 x 32 bit)
Audio	Integrated Low Power Island (LPI) DSP for Voice UI, Qualcomm® Noise and Echo Cancellation, Qualcomm® Voice Suite
Connectivity	WLAN 1x1 802.11a/b/g/n/ac, Bluetooth 5.0, and FM with Qualcomm® WCN3950 or Qualcomm® WCN3910 (802.11b/g/n)
Location	GPS, GLONASS, NavIC, BeiDou, Galileo, QZSS, and SBAS

Qualcomm Adreno, Qualcomm Universal Bandwidth Compression, Qualcomm True Palette Display, Qualcomm Noise and Echo Cancellation, Qualcomm Voice Suite, Qualcomm WCN3950 and Qualcomm WCN3910 are products of Qualcomm Technologies, Inc. and/or its subsidiaries.

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