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.
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 x 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 Target Applications

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

QCM2290/QCS2290 Block Diagram

QCM2290/QCS2290 Specifications

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

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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