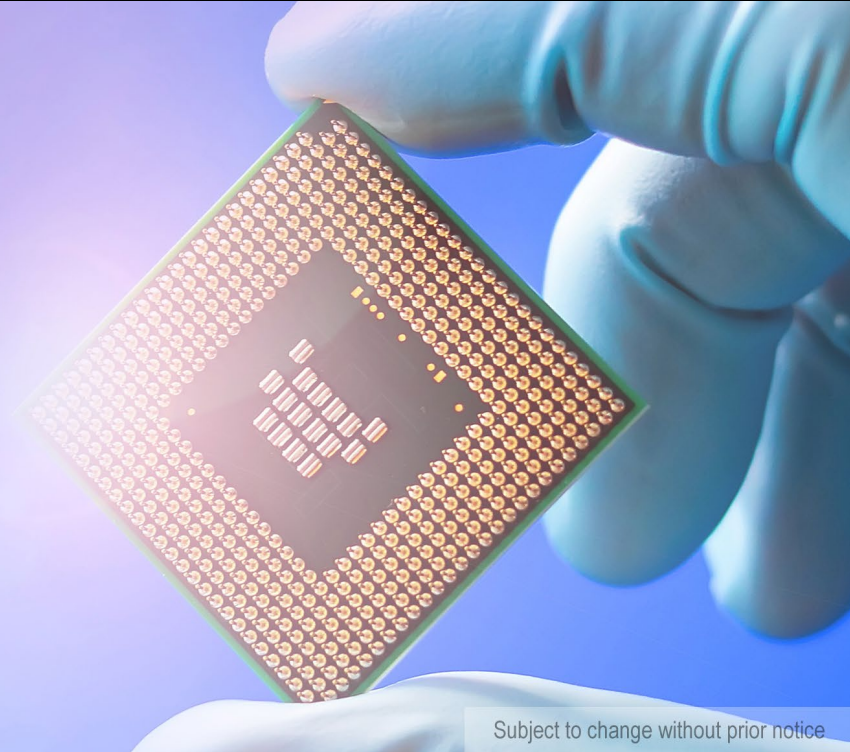


QRB5165 Development Kit



Based on the Qualcomm® QRB5165 SoC Platform



Subject to change without prior notice

About eInfochips

eInfochips is product engineering services company offering technology consulting and product design services in multiple industry verticals like aerospace & defense, security and surveillance, medical and healthcare, industrial and home Automation, consumer electronics and more.

eInfochips being a Qualcomm Snapdragon Technology Partner (STP) offers turnkey product designs on multiple Snapdragon and other SoCs of Qualcomm® and have enabled global customers with Qualcomm based product designs.

Engineering Highlights

- **25+ Years** of experience in system design
- **7 Design** centers spread across USA & India
- **500+ Products** designs
- **35+** Product designs on Qualcomm
- **15M+** Product deployments across globe
- **ISO 9001** and **CMMi L3** compliant processes

eInfochips QRB5165 Development Kit

QRB5165 Reference Development Kit is based on QRB5165 System on Chip (SOC) from Qualcomm®. It is powerful computing for collaboration, video conferencing, tele-health, artificial intelligence & machine learning applications, with exceptional power and thermal efficiency. QRB5165 incorporates four Kryo™ 585 Gold cores operating at 2.4GHz (three cores) & 2.8GHz (one core) and four Kryo™ 585 Silver cores operating at 1.8GHz. For AI acceleration, high-end camera, collaboration use cases, SoC incorporates dedicated NPU230, Hexagon 698 with quad hexagon vector processor (HVX), Adreno 650 GPU and Spectra 480 ISP.

QRB5165 Development Kit enables OEMs and engineers to evaluate performance of QRB5165 for their product designs and reduce time to market.

AI and ML Applications

4K Camera

Medical Imaging / Medical

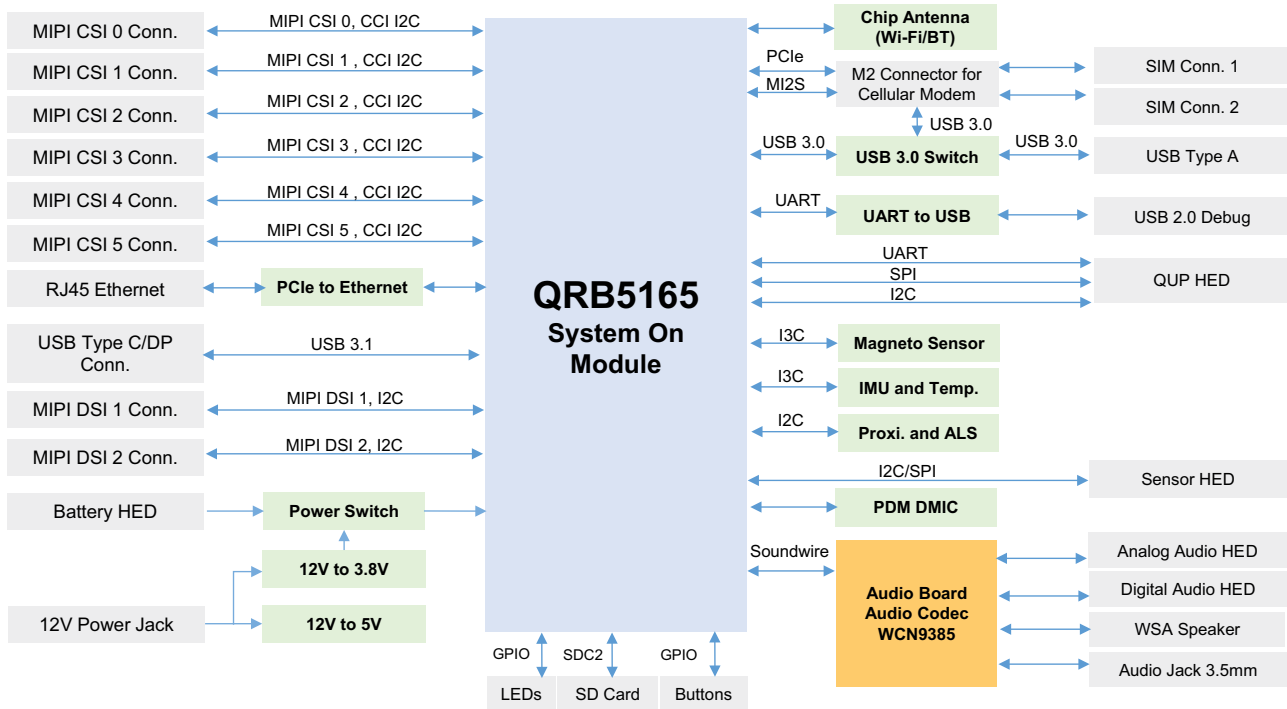
Machine Vision

Digital Signage / HMI

Collaboration System

Robotics

Telematics



Datasheet Rev 0.1

Note: This is preliminary information and subject to change without notice

Processor

- Qualcomm® QRB5165
- 64-Bit Octa-core Kryo™ 585
- Hexagon™ DSP with quad HVX
- Adreno™ 650 GPU, 655 VPU
- Spectra™ 480 Dual 14-bit ISP

Memory and Storage

- 8GB LPDDR5 PoP Memory
- 64GB UFS 2.1

Connectivity

Wi-Fi:

- Qualcomm® Wi-Fi via QCA6391 802.11a/b/g/n/ac/ax 2.4/5.0 GHz
- Antenna – 2x Chip Antenna

Bluetooth:

- Support BT 5.0 + HS and backward compatible with BT 1.x, 2.x + EDR

USB

- 1x Type-C USB3.1 with DP
- 2x Type-A USB3.0 Host

Sensors

- IMU, Temp., Magneto, Proximity
- 1x Sensor Expansion Connector

Audio

- 6x PDM DMICs, 2x MI2S
- WCD9385 based Daughter Board with WSA8815 speaker amplifier – Mic and Speaker support

Camera

- 6x 4-lane MIPI CSI Support
- D-PHY & C-PHY Support
- HDMI 2.0 (HDMI to CSI) via Daughter Board accessory

Display

- 2x 4-Lane MIPI DSI
- 1080p@30 LCD with Touch
- HDMI 2.0 (DSI to HDMI) via Daughter Board accessory
- DisplayPort over USB3.1 Type-C

Video

Encode:

- H.265 Main 10, H.265 Main, H.264 High, and VP8 codecs
- Video encode up to 4K120 or 8K30

Decode:

- H.265 Main 10, H.265 Main, H.264 High, VP9 profile 2, VP8, and MPEG-2 codecs
- Video decode up to 4K240 or 8K60

Simultaneous Encode + Decode

- 4K 60D + 4K 30E

Power Specification

- Power supply input: 12V/5A input from 12V AC Power Adapter

Others

- Debug Serial UART console over USB 2.0
- SPI/I3C/I2C/UART/I2S/ and GPIOs
- 1x SD Card Support
- 1x M2 Connector for 2x SIM Support via USB 3.0 Switch
- 1x Gbe Ethernet via PCIe
- 1x Battery Header Support

Mechanical Specification

- Main Board: 170mm x 170mm
- SOM: 59.7mm x 32.2mm

Operating System

- Linux

Kit Contents

- Main Board with SOM
- Setup Guide

Add-on Accessories

- LCD Display Panel with Touch over DSI (1080p)
- 12V AC Power Adapter
- Camera Sensor Card,
- Daughter Card for HDMI Input
- Daughter Card for HDMI Output

Orderable Part

- Development Kit: EIC-QRB5165-210

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