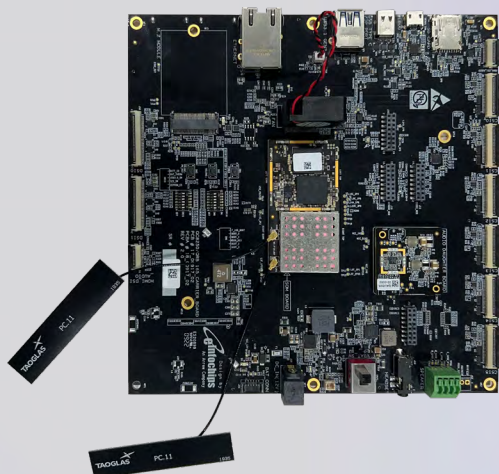


Aikri QRB5165 Development Kit

Based on the Qualcomm® QRB5165 SoC



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.

eInfochips Advantages

- **28** Years of experience in system design
- **10** Design centers worldwide
- **500+** Product designs
- **35+** Product designs on Qualcomm
- **15M+** Product deployments across globe
- **ISO 9001, ISO13485, AS9100/EN9100, ISO26262** and **CMMi L3** compliant processes

eInfochips Aikri QRB5165 Dev Kit

eInfochips Aikri QRB5165 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

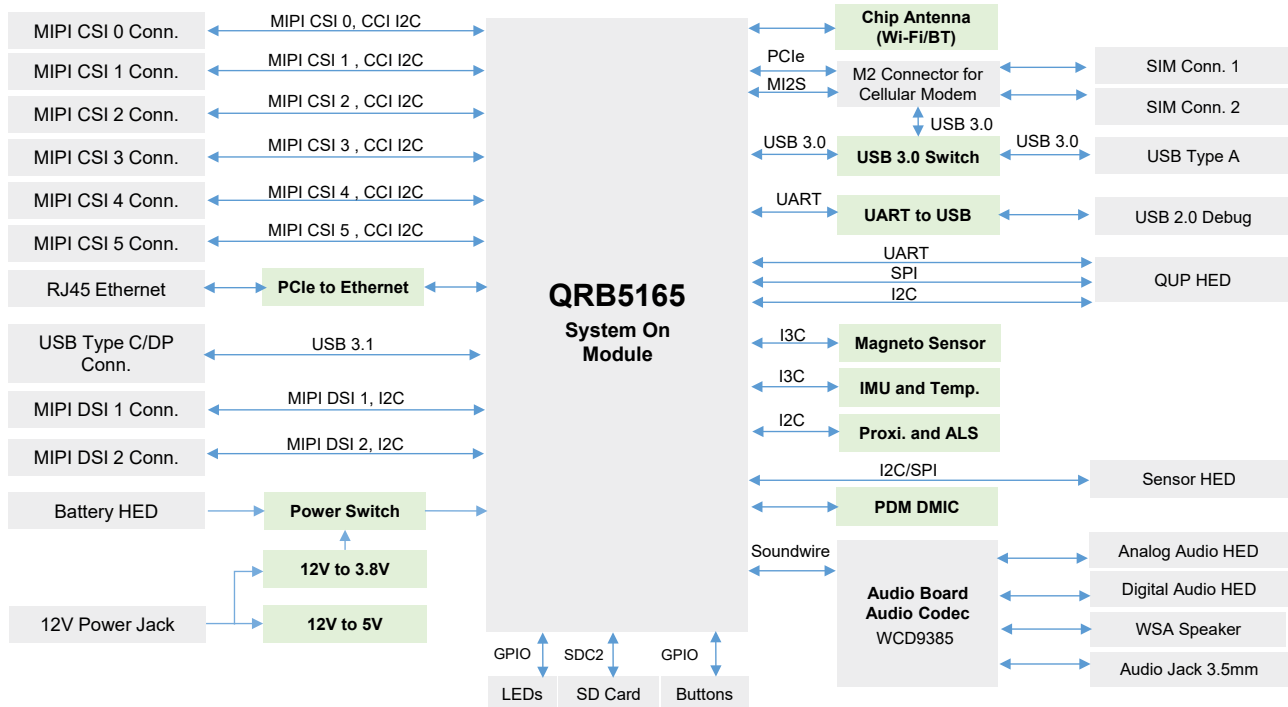
Machine Vision

Digital Signage / HMI

Collaboration System

Robotics

Telematics



Datasheet Rev 0.2

Preliminary specification – subject to change

Processor

- HDMI™ display up to 720p@60
- DSI to HDMI LT9611UXC bridge chip - video and audio

Memory and Storage

- 1x IMU sensor

Connectivity

Wi-Fi:

- Qualcomm® Wi-Fi via QCA6391 802.11a/b/g/n/ac/ax 2.4/5.0 GHz
- Antenna – 2x Chip Antenna
- 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/MI2S/ 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: Aikri-51X-65D

eInfochips, an Arrow company, is a leading global provider of product engineering and semiconductor design services. With over 500+ products developed and 40M deployments in 140 countries, eInfochips continues to fuel technological innovations in multiple verticals. The company's service offerings include digital transformation and connected IoT solutions across various cloud platforms, including AWS and Azure.

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www.einfochips.com

sales.support@einfochips.com