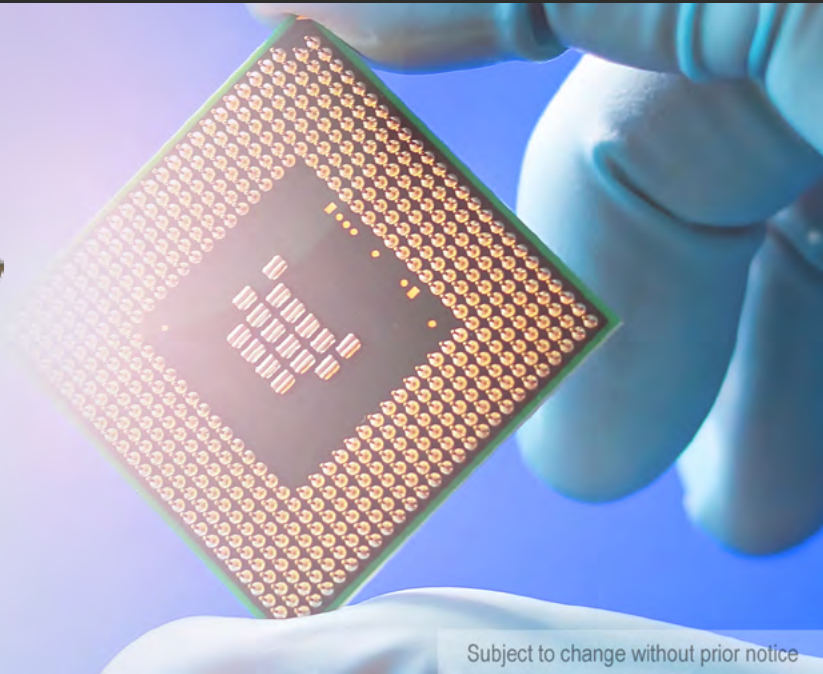
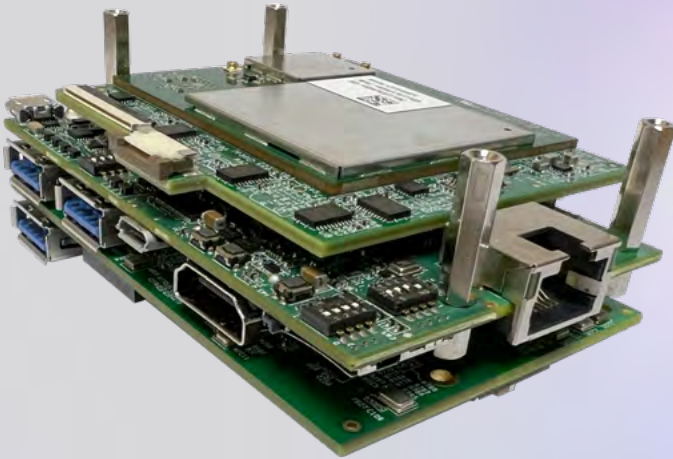


Aikri QCS405 Development Kit

Based on the Qualcomm® QCS405 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 QCS405 Dev Kit

The Aikri-40X-5LD-1 development kit comprises of the Qualcomm® QCS405-based SoM mounted on a carrier board, interfaced with a mezzanine board. All native interfaces that the QCS405 supports, such as GPIOs, USB 3.0, PCIe, HDMI, SDIO, I2S, UART, I2C, and SPI are made available on the development kit.

The QCS405 is designed specifically for smart audio applications and supports features such as Multi-mic Qualcomm® Noise and Echo Cancellation that isolates noisy environments from voice, simultaneous multi-keyword detection to aid voice services like Amazon Alexa and Google assistant, Qualcomm® DDFA™ amplifier technology, Qualcomm® aptX™ audio and Dolby Atmos.

The SoM integrates a 64-bit Quad-core Arm Cortex-A53-1.4 GHz CPU, 2x Qualcomm® Hexagon™ QDSP6 v66, Qualcomm® Adreno™ 306 GPU, 2x2 11ac Wi-Fi and Bluetooth 5.0 connectivity and supports a mic array, multi-speaker connection via Wi-Fi/BT, PCIe, HDMI 1.4a and multi-room audio streaming. The Aikri development kit helps kick-start and optimize your creation of complex, feature-rich smart-audio solutions such as Smart-speakers, Soundbars, Home cinema, Smart assistants, Home Hubs etc. within a short turnaround time.

Smart Speakers

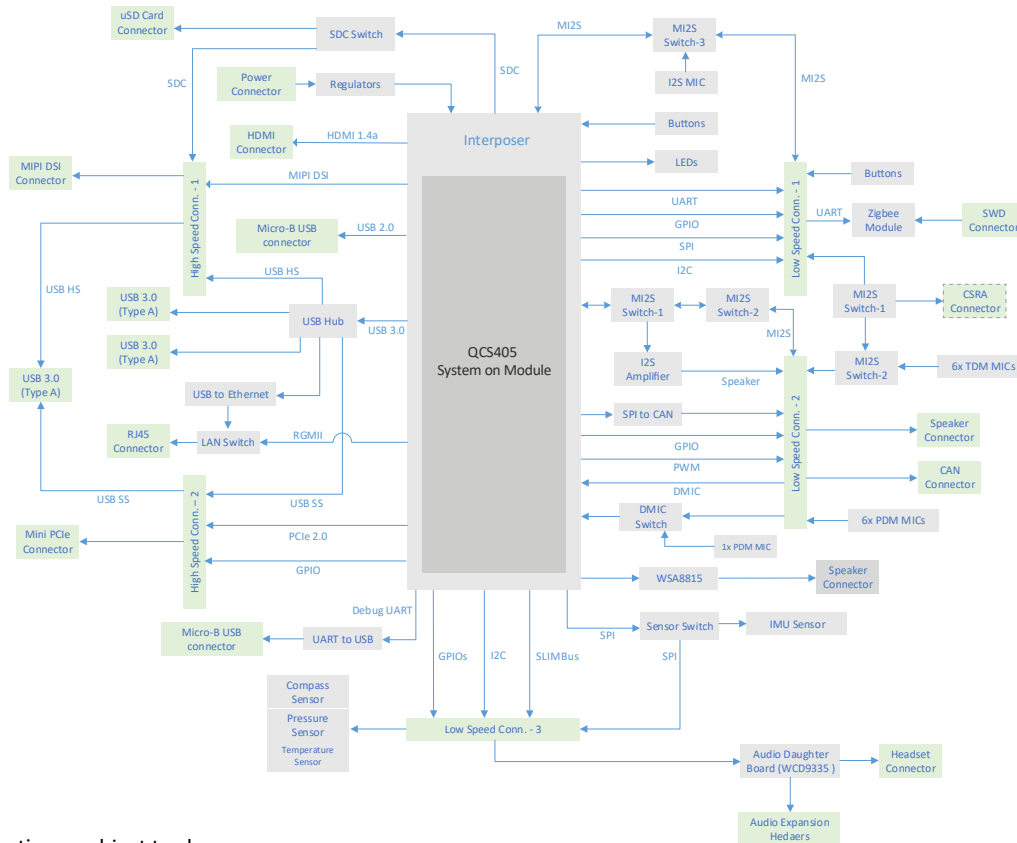
Smart Soundbars

Home Cinema

Premium Smart Speakers
with Display

Smart Assistants

Home Hubs



Preliminary specification – subject to change

System on Module (SoM)

eInfochips Aikri-40X-5LS-1 based on Qualcomm® QCS405

CARRIER BOARD

Display Interface

- HDMIv1.4a support up to 1080p full HD 60fps

Sensor Interface

- 1x IMU sensor

Audio Interfaces

- 1x DMIC
- 1x I2S Mic
- 2x WSA8815 Amplifiers
- 2x I2S Amplifiers

I/O Interfaces

- 2x USB 3.0 Type-A ports
- 1x MicroSD Card
- 1x 10/100/1000 Mbps Ethernet Port
- 1x MicroUSB for Console
- 1x MicroUSB for adb
- 6x User LEDs

Others

- High-speed and low-speed expansion headers (for connecting Mezzanine Board)

MEZZANINE BOARD

Display Interface

- 1x MIPI-DSI 4-lane, 720p@60 LCD with Touch connector - with LCD backlight control

Connectivity

- EFR32MG13 Based Module for Zigbee

Audio Interfaces

- 6x PDM MICs
- 6x TDM MICs
- 1x Headset Jack (from WCD9335)
- 2x Speaker connector for I2S Amplifier
- Provision of Expansion Header for CSRA Daughter Board
- 2x 30 pin board to board connectors for WCD9335 Audio Daughter Board
- 2x Audio Expansion Headers for WCD9335 Interfaces

Sensor Interface

- 1x Compass sensor
- 1x Pressure sensor
- 1x Temperature sensor

I/O Interfaces

- 1x USB 3.0 Type-A
- 1x CAN

- mPCIe Connector
- GPIOs (low-speed expansion connector)
- Battery connector

Operating Environment

- Input voltage: 12V
- Operating temperature: -20 to +55° C

Mechanical Specification

- Carrier board: 85mm x 54mm, 96board CE specification dimensions with headers
- Mezzanine board: 85mm x 54mm, 96board CE specification dimensions with headers

Operating System

- Linux, Yocto Thud, Kernel 4.14

Kit Contents

- 1x Aikri-40X-5LS-1 SoM
- 1x Carrier board
- 1x Mezzanine board
- 1x Quick start guide
- 1x Micro USB 2.0 Cable
- 1x Power Adaptor

Orderable Part

- Development kit: Aikri-40X-5LD-1

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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