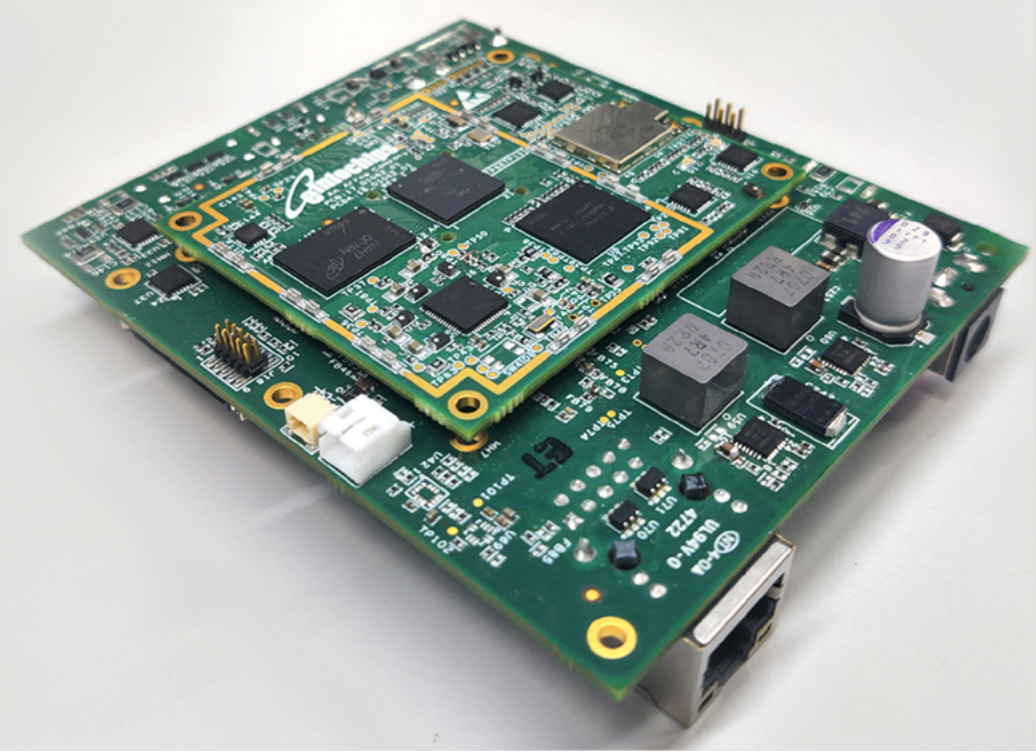
NXP i.MX93-210 Reference Development Platform

eInfochips EIC-i.MX93-210 Reference Development Platform



About eInfochips

eInfochips is a 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.

As an elite design partner of NXP semiconductor, eInfochips has been selected for "Early Access Programs" for all i.MX series platforms. We have designed and developed products for a variety of global customers by leveraging our partnership with NXP.

Engineering Highlights

- **25+ Years** of experience in system design
- **10 Design centers** spread across India, USA, Europe, and Africa
- **500+ Products** designs
- **35+ Product** designs
- **15M+ Product** deployments across the globe
- **ISO 60601** and **IEC 62304** compliant medical design processes

eInfochips EIC-i.MX93-210 Reference Development Platform

The EIC- i.MX93-210 is an RDP based on the i.MX93 application processors. The processor features a scalable Arm Ethos™-U65 microNPU Core for efficient machine learning acceleration, as well as advanced security with an integrated EdgeLock secure enclave to support edge computing. The RDP enables developers to begin creating high-performance, cost-effective, and energy-efficient machine-learning applications. Wi-Fi, Bluetooth, Gigabit Ethernet, CAN, and 3G/4G/LTE connectivity via a Mezzanine Card are all available. The kit includes pre-integrated Linux, making it an excellent choice for applications such as industrial automation, smart home & intelligent appliances, smart buildings, and automotive.

Edge Computing

Infotainment

Smart Home Appliances

AI and ML Applications

Digital Signage/ Industrial

HMI

Machine Vision

Matter 1.0 Ready

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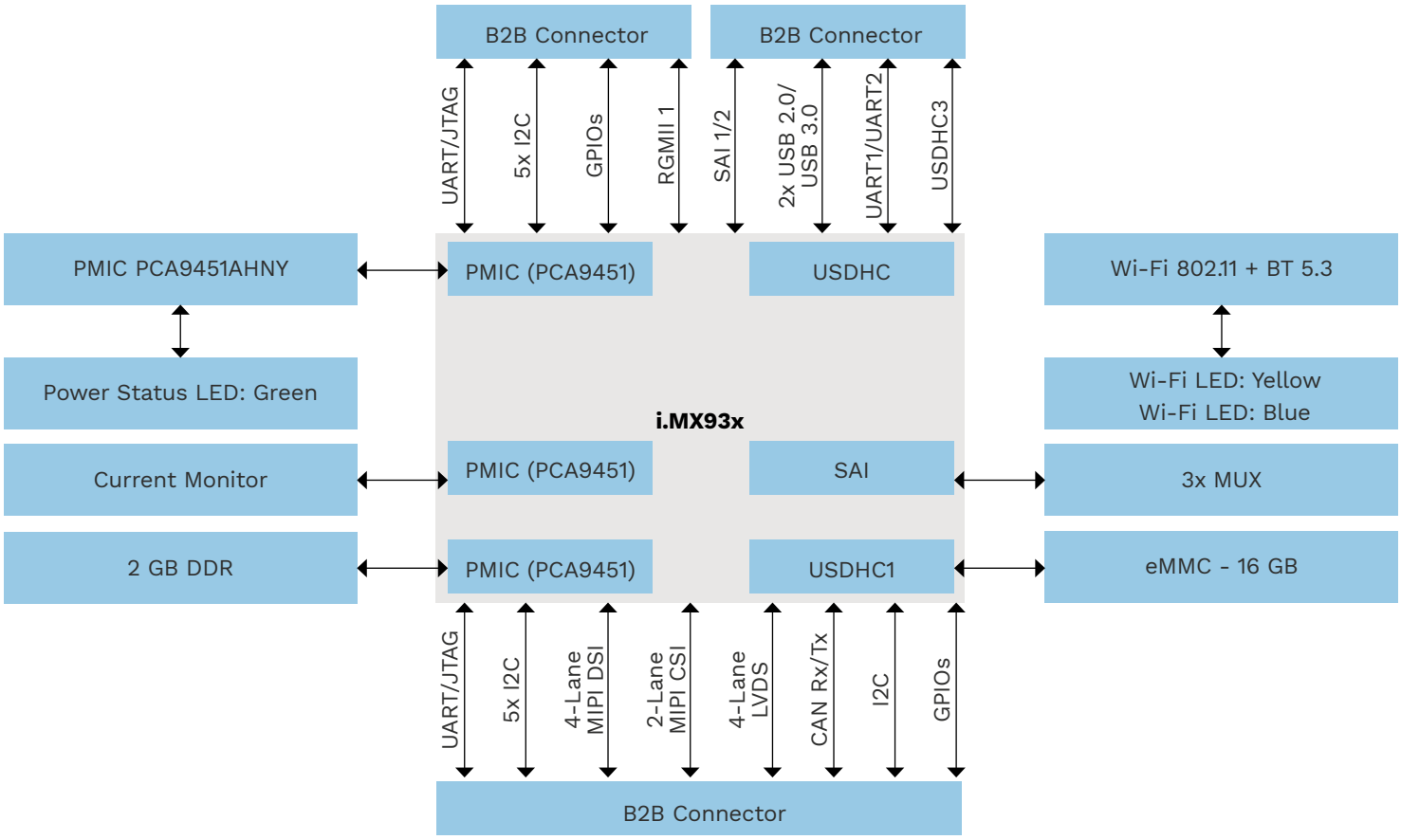
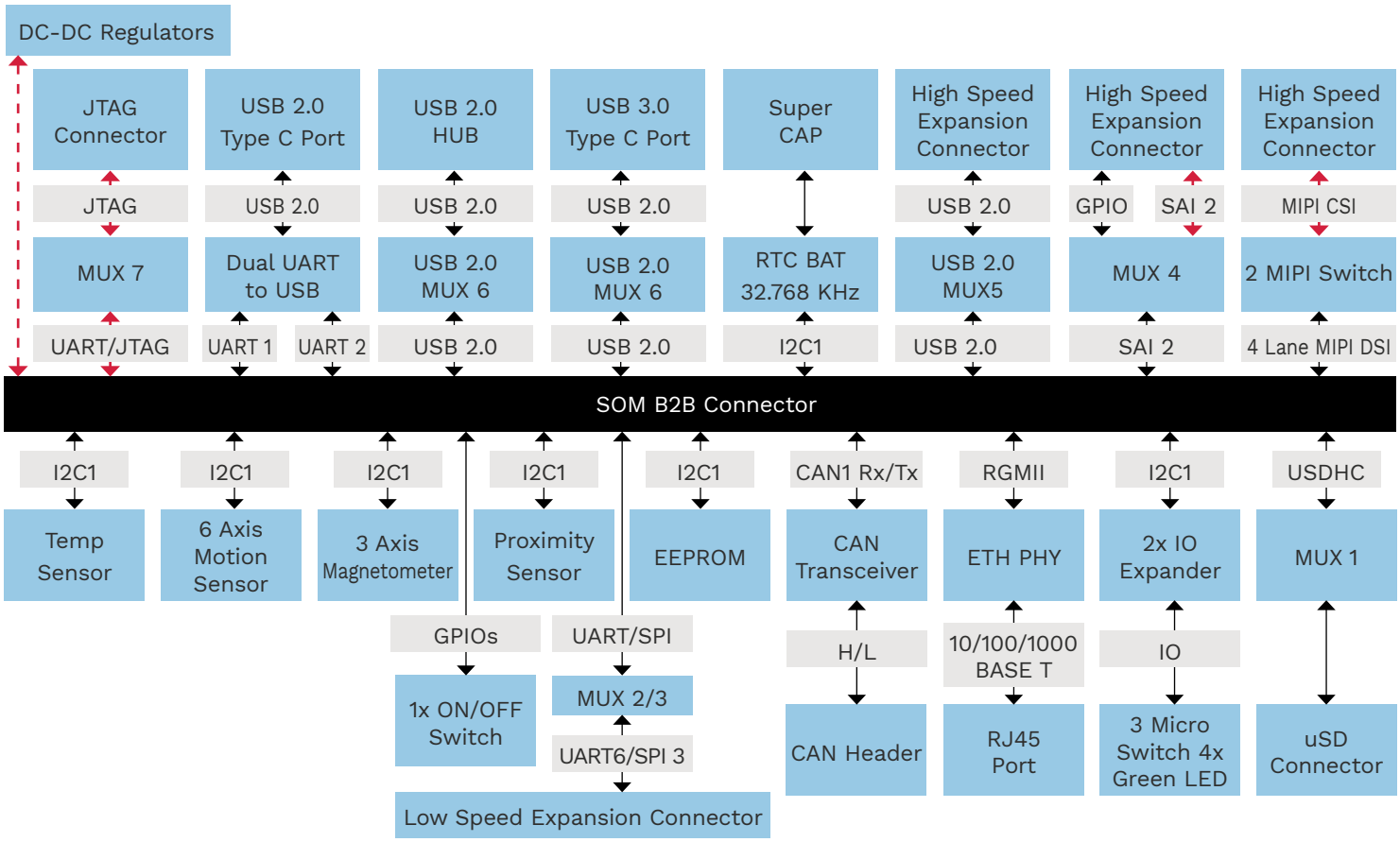
iMX93 - SOM Block Diagram



iMX93 – Carrier Block Diagram



iMX93 Kit (SOM + Carrier) Specifications

CPU

- CPU Name: NXP i.MX935
- CPU Type: 2x Arm Cortex-A55, up to 1.7 GHz frequency
- MCU Type: 1x Arm Cortex-M33, up to 250 MHz frequency
- Neural Processing Unit (NPU): 512 OP/s Neural Network performance up to 1.0 GHz
- Graphics Processing Unit (GPU): 2D GPU

Memory

- DDR: 1x 2GByte LPDDR4x (1Gbit x 16, 4266Mb/s) (Micron MT53E1G16D1FW-046 WT:A)
- Storage Memory
  - 1x 16GByte eMMC 5.1 (Kioxia THGAMVG7T13BAIL)
  - 1x 32 Kbit EEPROM (Microchip 24AA32AFT-I/OT)
  - 1x 128Mbit Quad SPI flash (ISSI IS25WP128-JLLE)
- Micro-SD Card: 1x SD Card 3.0 interface

Connectivity

Wi-Fi:

- IEEE 802.11a/b/g/n/ac, 2.4/5.0GHz (Azurewave AW-CM276NF)

Bluetooth:

- Bluetooth 5.0 compliant with basic rate (BR)/enhanced data rate (EDR) (Azurewave AW-CM276NF)

USB

- 1x USB 3.0 (Type C)
- 2x USB 2.0

Ethernet

- 1x 10/100/1000Mbps interface (VSC8541XMV-02)

Display

- DSI: 1x 4-lane MIPI DSI v1.2 Interface
- LVDS: 1x 4-lane LVDS Interface (Microtech MTF101IA-01B-SPEC(350 NITS))
- HDMI: 1x HDMI 1.4 (Converted from DSI) (Lontium LT9611UXC)

Camera

- CSI: 1x 2-lane MIPI CSI v1.2 Interface
- 1x 8-bit RGB Interface

Audio

- Analog: 1x Stereo Out and Mic In (3.5mm Audio Jack)
- Digital
  - 1x PCM Interface
  - 2x I2S Interface
  - 1x PDM Interface

Sensors

- 1x Ambient Light + Proximity Sensor (Everlight EAAPMST3923A2)
- 1x Temperature Sensor (NXP PCT2075GVX)
- 1x RTC (Micro Crystal RV-3028-C7 32.768KHZ 1PPM-TA-QC)
- 1x 6-axis Motion sensor (Accelerometer + Gyro) (TDK IIM-42652)
- 1x 3-axis Magnetometer (ROHM BM1422AGMVZE2)

Other

- 1x SDIO3.0 Interface
- 4x I2C, 4x 12-bit ADC, 4x UART, 1x JTAG, GPIOs
- 1x CAN, 1x SPI
- 1x ON/OFF Switch
- 1x Reset Switch

Power Specification

- SOM: '+3.8V to +5.5V (Typ. 5V)

Mechanical Specification

- SOM: 55mm x 65mm
- Carrier: 85mm x 100mm

OS Support

- Linux Yocto Langdale 4.1.1

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.