

Common Terminologies

Applications

- imx8
 - AM57 AI Edge Computing Gateway
 - Renesas G2H
- imx6UL EV Charger
- RK3288 Video Phone
- imx8 Car Infotainment
- A5D2x
 - imx6UL
 - AM335x
 - imx6DL
- A5D2x Telematic Unit
- AM335x Multi Industrial protocol Gateway

Power DC-DC Convertors

- Input
 - 72V
 - 24V
 - 12V
 - 5V
- Output
 - 5V
 - 3.3V
 - 4V
 - 1.8V

MMC / SDIO SD Card

USB

- HOST Device
- OTG
- USB HUB

Ethernet

- 10/100 GigBit
- Connector with Magnetic & ESD Protection
- 2nd ETH PHY
- MII, RGMII, RGMII, SGMII :Data
- MDIO, I2C, SPI :Conf

UART0 Debug Console

UART RS232

UART RS485

CAN CAN

GPIO Digital Inputs

GPIO Digital Outputs

Cellular Connectivity

- 2G / 3G UART
- 4G / 5G USB
- Vendors
 - Quectel
 - Neoway
 - Telit
 - Sierra Wireless
 - Cavli
 - Gimalto
 - Nordic
 - All above
- NBLoT

Wifi

- SDIO
- USB
- PCIe
- Vendors
 - TI WL18xx
 - Atmel ATWILC1000 / 3000
 - Jorjin

GPS

TPU

LCD + Backlight

- UART
- i2C
- SPI
- USB
- SOC Internal / External
- USB
- PCIe
- M.2 Connector
- SPI
- RGB
- LVDS
- MIPI
- Vendors
 - Mobile Grade
 - Tianma
 - EDT
 - Mitsubishi
 - Industrial Grade
 - Innolux
 - StartTeck
 - NVD
 - RayStar
 - AUO

Touch

HDMI

Audio

Analog Inputs

Camera

Expansion Connector

MicroBus Connector

M.2 Connector

- I2C
- UART
- USB
- ESD + Conn
- I2S
- ADC Channel
- SPI
- I2C
- Parallel
- MIPI CSI
- USB
- ETH
- GPIOs, UART, i2c, spi, PWM, PWR
- UART, I2C, SPI, ADCx1, PWM, INT, Pwr
- NGFF
- JTAG

Processor

ARCH CORE

Processor (CORE) + RAM + Flash + Peripherals + Other Subsystems

SOC

Processor (CORE) + RAM + Flash + Peripherals + Other Subsystems

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Spec Table

- HWF#
- Func
- Description
- Interface
- Part#
- Cost
- Notes

Block Diagram

- Device, Interface#, SOC / SOM HW specs
- Draw.io
- Yed
- MS Word / Power Point

Application SBC Specifications

- Computing Power
 - SOM / COM / SMARC
 - Processor Cores, Speed, Additional Feature (GPU, VPU, TPU)
 - OS required
 - Stacks
- Interfaces
 - Carrier Board, Base Board, Application Boards