

SMARC™ Module with NXP i.MX 8M Plus family processor (Preliminary)

PSMC-M840

- NXP i.MX 8M Plus ARM Cortex-A53 QuadLITE/ Quad processors
- Support LVDS, HDMI, DSI graphic output
- Support one PCI Express Gen3 single lane, two GbE
- Support two USB 3.0, two USB 2.0
- Options for eMMC 5.1 storage



Specifications

General

CPU

NXP i.MX 8M Plus Quad LITE/ Quad Processor

i.MX 8M Plus Quad, 4 cores, 800 MHz, 512 KB L2 cache, 1.6GHz

i.MX 8M Plus Quad LITE, 4 cores, 800 MHz, 512 KB L2 cache, 1.8GHz

Memory

Onboard 2G| 4G| 6G LPDDR4 with 4000 MT/s

Dual memory channel, 32bit

Storage

Support onboard eMMC 5.1 flash up to 256GB

Boot Loader

u-Boot boot loader

Display Output

LVDS Dual-channel up to 1080p60

HDMI 2.0a up to 1080p60

MIPI-DSI 4-Lane up to 1080p60

Camera

1x MIPI-CSI 4-lanes

1x MIPI-CSI 2-lanes

Audio

2x I²S

Ethernet

2x 10/100/1000 GbE

I/O Interfaces

PCIe

1x PCIe Gen3 single lane

USB

2x USB3.0, 2x USB 2.0, 1x USB2.0 OTG

SDIO

1x SDIO

Serial

2x SPI, 4x I²C, 4x UART (2x 2 wires, 2x 4 wires), 2x CAN-FD, 14x GPIO

Video

GPU Feature Support

GC7000UL (2 shaders) | GC520 2D acceleration

OpenVG 1.1|OpenGL ES 1.1, 2.0, 3.0, OpenCL 1.2 | HW video decoding
HEVC/H.265/ AVC/H.265/ VP9/ VP8 | Encoding HEVC/H.264/ AVC/H.265

Mechanical and Environmental

Form Factor

SMARC™ 2.1

Dimension

SMARC module, 82 mm x 50 mm (3.23" x 1.97")

Operating Temperature

Commercial: 0°C to +70°C, w/ 0.5m/s airflow

Industrial: -40°C to +85°C, w/ 0.5m/s airflow

Humidity

0-95% RH, non-condensing

Power

Standard Input

5V DC ±5%

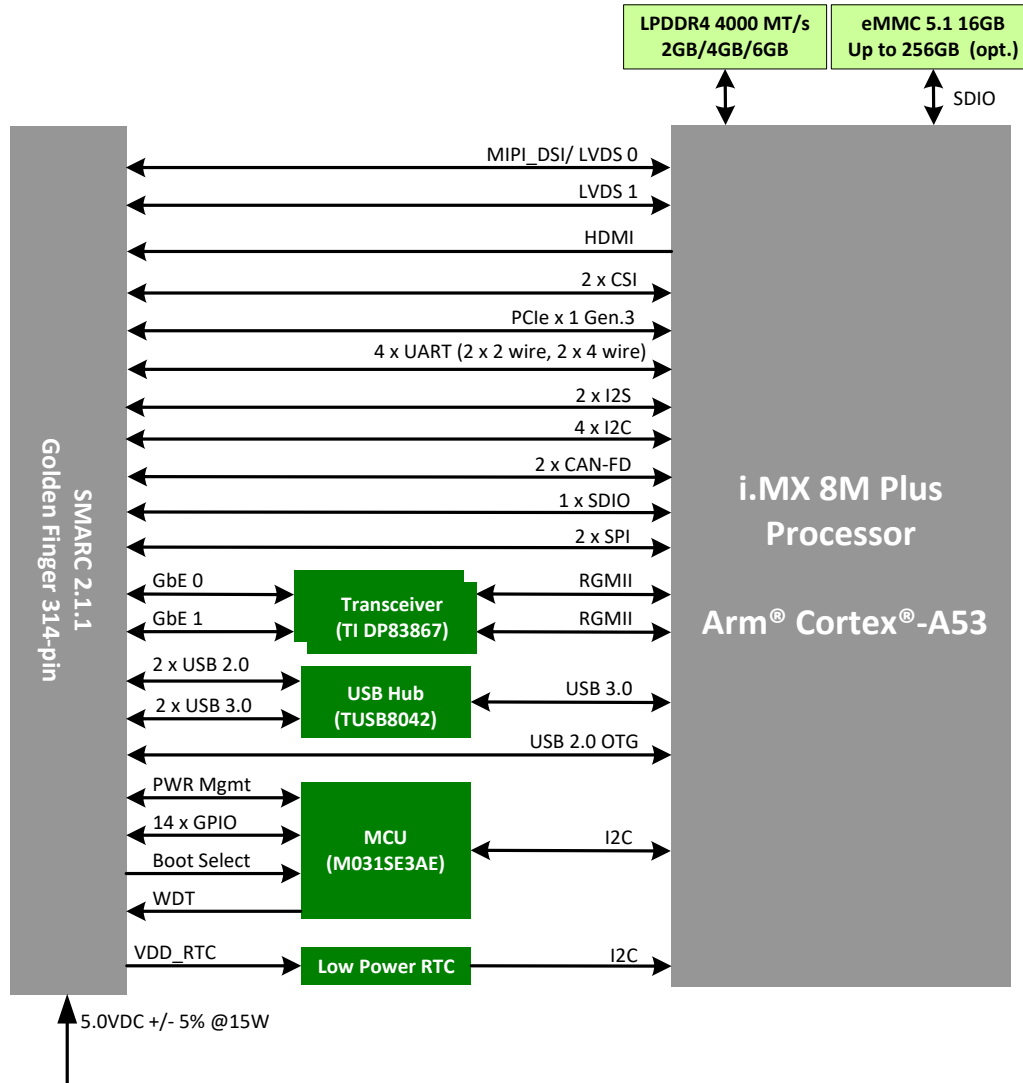
Board Support Backage

Linux Yocto 5.4.70-2.3)

By project request: Android, Vxworks

Functional Diagram

PSMC-M840 Block Diagram



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