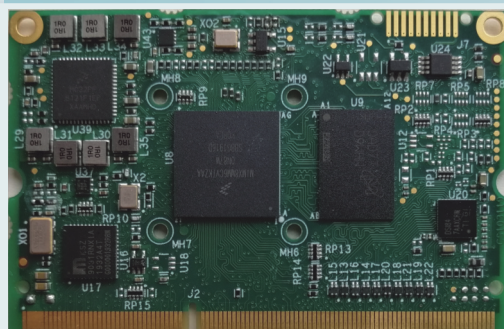


MITO 8M Mini

NXP i.MX8M Mini / NXP i.MX8M Nano
CPU MODULE

LITE LINE

- Unmatched performances thanks to Multimedia MX8M Mini ARM Cortex A53 MPCore + Cortex-M4 technology
- eMMC or NAND SLC on board
- dual LVDS output on board
- Enabling massive computing applications thanks to wide range LPDDR4 RAM memory up to 2GB (4GB OPT)
- MIPI video input interface
- Reduced carrier complexity: dual PCIe, dual MIPI, SDIO, Gb ETH, GPIOs, 3xSAI
- Perfect upgrade of AXEL Lite SOM based on i.MX6
- H264/H265 Video encoding and decoding
- Available NAND interface for cost optimization



NXP

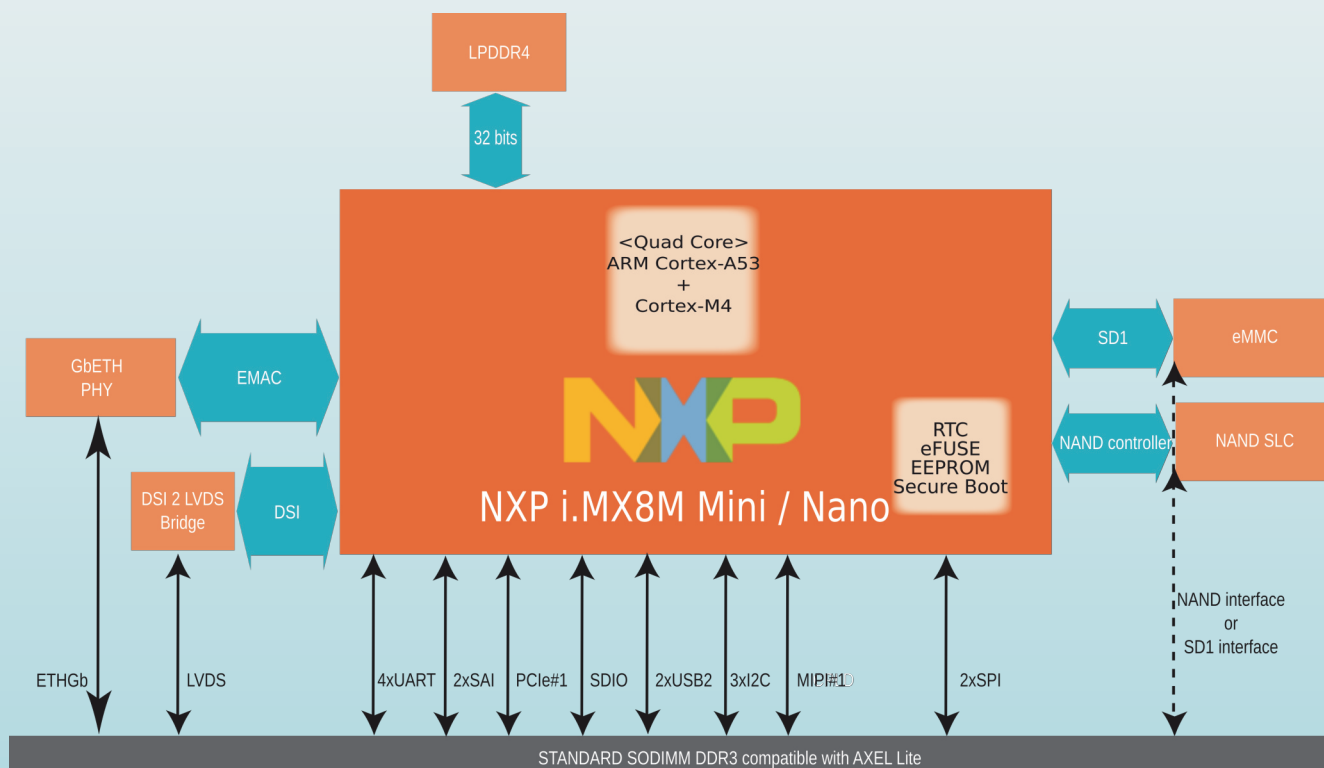
NXP i.MX8M Mini SOM is the new top-class Quad Core ARM Cortex-A53 CPU module by DAVE Embedded Systems, based on the recent NXP i.MX8M Mini and Nano application processor. Thanks to this solution, customers have the chance to save time and resources by using a compact solution that permits to reach scalable performances that perfectly fits the application requirements avoiding complexities on the carrier board.

The use of this processor enables extensive system-level differentiation of new applications in many industry fields, where high-performance and extremely compact form factor (67,5 mm x 43 mm) perfectly plug and play with AXEL Lite SOM and compatible with MITO M SOM are key factors. Smarter system designs are made possible, following the trends in functionalities and interfaces of the new, state-of-the-art embedded products.

i.MX8M Mini SOM offers great computational power, thanks to the rich set of peripherals, the Scalable ARM Cortex-A53 together with a large set of high-speed I/Os such as dual PCIe and USB3.

i.MX8M Mini SOM is compatible with i.MX6 SOM solution AXEL LITE. Customers that want to migrate from previous i.MX6 solution to this new will have a ZERO-effort approach with the great advantage of performance. i.MX8 SOM enables designers to create smart products suitable for harsh mechanical and thermal environments, allowing for the development of high computing and reliable solutions. Thanks to the tight integration between the ARM Core-based processing system and the RTOS integrated on board, designers are able to share the applications through the multicore platform and/or to divide the task on different cores in order to match with specific application requirements.

i.MX8M Mini SOM is designed in order to keep full compatibility with the LITE Line CPU modules, for designs where quality and reliability are important factors PLUS compatibility of AXEL LITE SOM.



CPU NXP i.MX8M Mini / Nano up to Quad core + Cortex-M
ARM Cortex A53 MPCore

Supervisor On-board power supply supervision
and power sequencer

Memory

SDRAM Up to 2GB LPDDR4, x32 data bus width (Mini) and
x16 (Nano)

eMMC Bootable up to 64GB

NAND Available interface on edge connector

NAND interface and SD interface are available alternatively on SODIMM connector
depending on which flash is mounted on board

Interfaces (full-spec models)

LAN Ethernet 1000 Mbps (PHY on board)

UART up to 4x UART ports

USB 2x 2.0 OTG port (PHY on board) - Mini
1x 2.0 OTG port (PHY on board) - Nano

PCIe 1x PCIe interfaces Gen2

SDIO 1x SDIO/MMC

Expansion Bus NAND controller available

Audio up to 3 SAI interfaces (1x on EXP connector)

Video Output Dual LVDS interfaces 24 bit
1x HDMI
H265 decoder/encoder engine up to 1080p60

Video Input Up to 1xMIPI CSI port 4 lanes

Debug JTAG IEEE 1149.1 Test Access Port

Other up to 3x I2C channels
up to 2x SPI channels
GPIOs with interrupt capabilities

Mechanical

Connectors SODIMM 204 pin

Size 67.5mm x 43mm

Temperature Commercial, Automotive and Industrial
temperature range

PSU

Input Single 3.3V, on-board voltage regulation

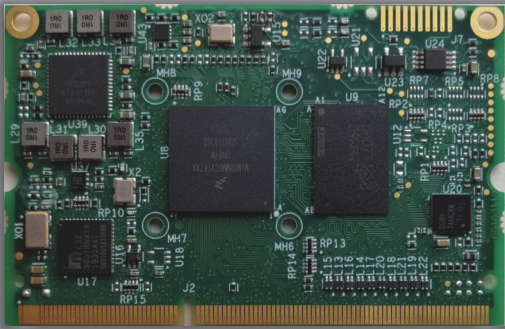
Software

Bootloader U-Boot, Secure Boot

Multitasking Linux 4+, Android 6+, Debian

Evaluation Kit

The i.MX8M Mini evaluation kit is available in a
development kit that includes a SOM, a carrier board and all
accessories required for immediate start-up.



Product code configurator *

Visit our WIKI page:
[wiki.dave.eu/index.p
hp/MITO_8M_Mini_
SOM/Part_number_
composition](http://wiki.dave.eu/index.php/MITO_8M_Mini_SOM/Part_number_composition)



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