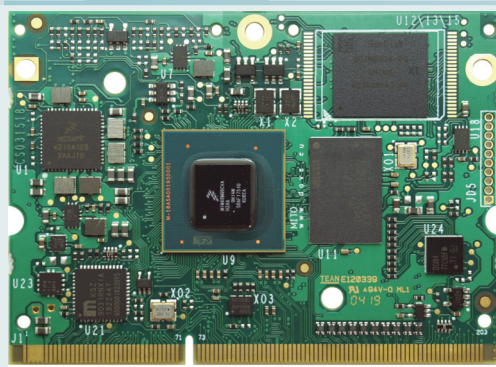


# MITO 8M

NXP i.MX8M D/Q  
CPU MODULE

- Unmatched performances thanks to Multimedia MX8M 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)
- Compatibility with i.MX6 AXEL Lite SOM
- Reduced carrier complexity: dual PCIe, dual MIPI, SDIO, Gb ETH, GPIOs, 3xSAI
- Expansion Connector for 100% SOC Usability
- H264/H265 Video encoding and decoding
- Available NAND interface for cost optimization



NXP

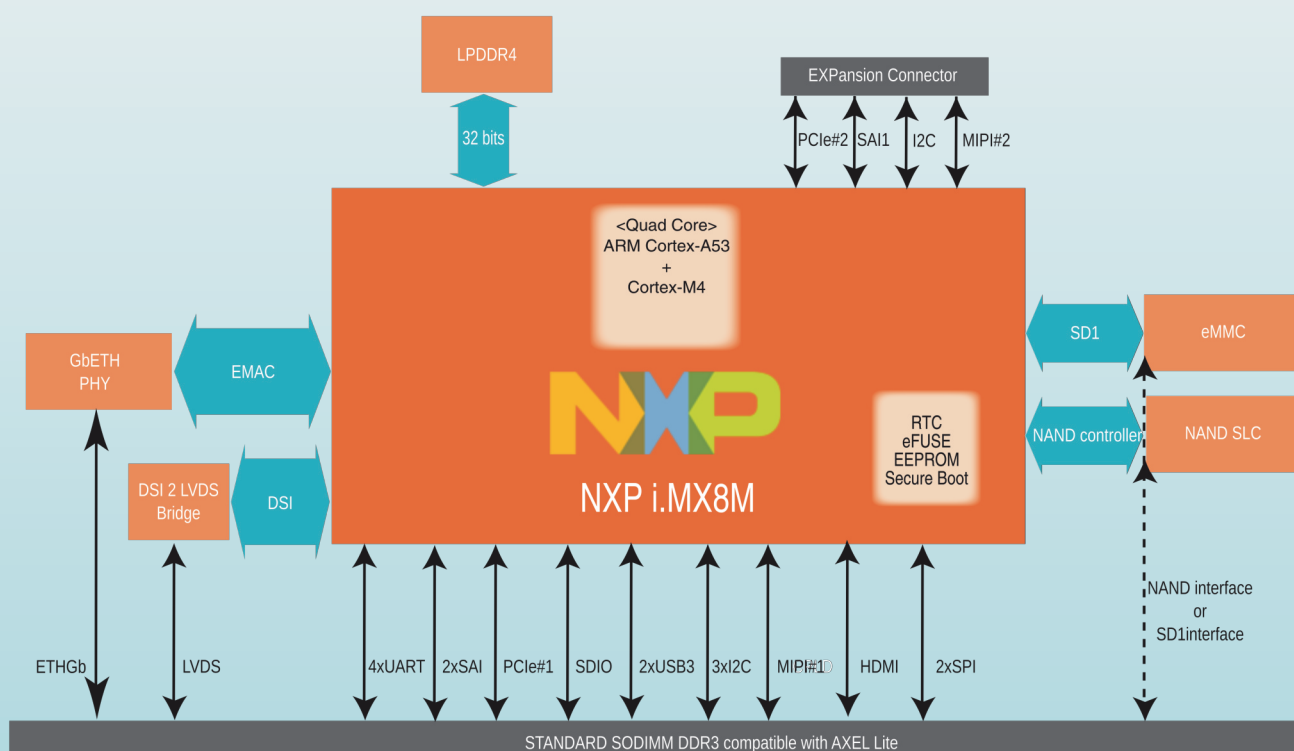
NXP i.MX8M SOM is the new top-class Quad Core ARM Cortex-A53 CPU module by DAVE Embedded Systems, based on the recent NXP i.MX8M application processor. Thanks to this solution, customers have the chance to save time and resources by using a compact solution that permits to reach scalable performances 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) 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 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 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.MX8 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 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
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	1x 3.0 OTG port (PHY on board) 1x 3.0 OTG port (PHY on board)
PCIe	2x PCIe interfaces Gen2 (1x on EXP connector)
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 H264 decoder engine up to 4Kp60 H265
Video Input	Up to 2xMIPI CSI ports 4 lanes (1x on EXP connector)
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 49mm
Temperature	Commercial, Automotive and Industrial temperature range

### PSU

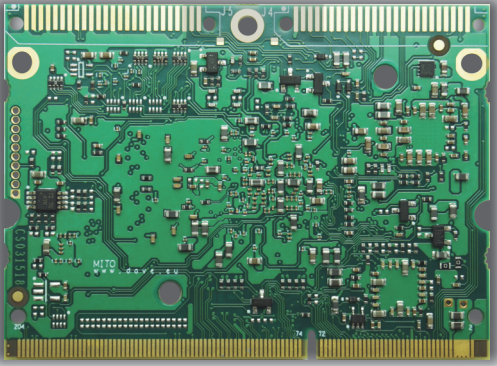
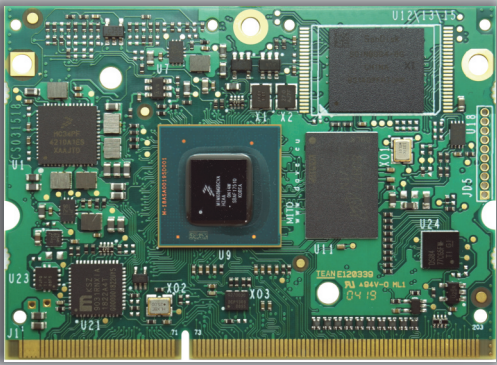
Input	Single 3.3V, on-board voltage regulation
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### Software

Bootloader	U-Boot, Secure Boot
Multitasking	Linux 4+, Android 6+, Debian

### Evaluation Kit

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



### Product code configurator \*

Visit our WIKI page:  
[https://wiki.dave.eu/index.php/MITO\\_8M\\_SO\\_M/Part\\_number\\_composition](https://wiki.dave.eu/index.php/MITO_8M_SO_M/Part_number_composition)



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