

TQMa8MPxL

Arm® Family



HIGHLIGHTS

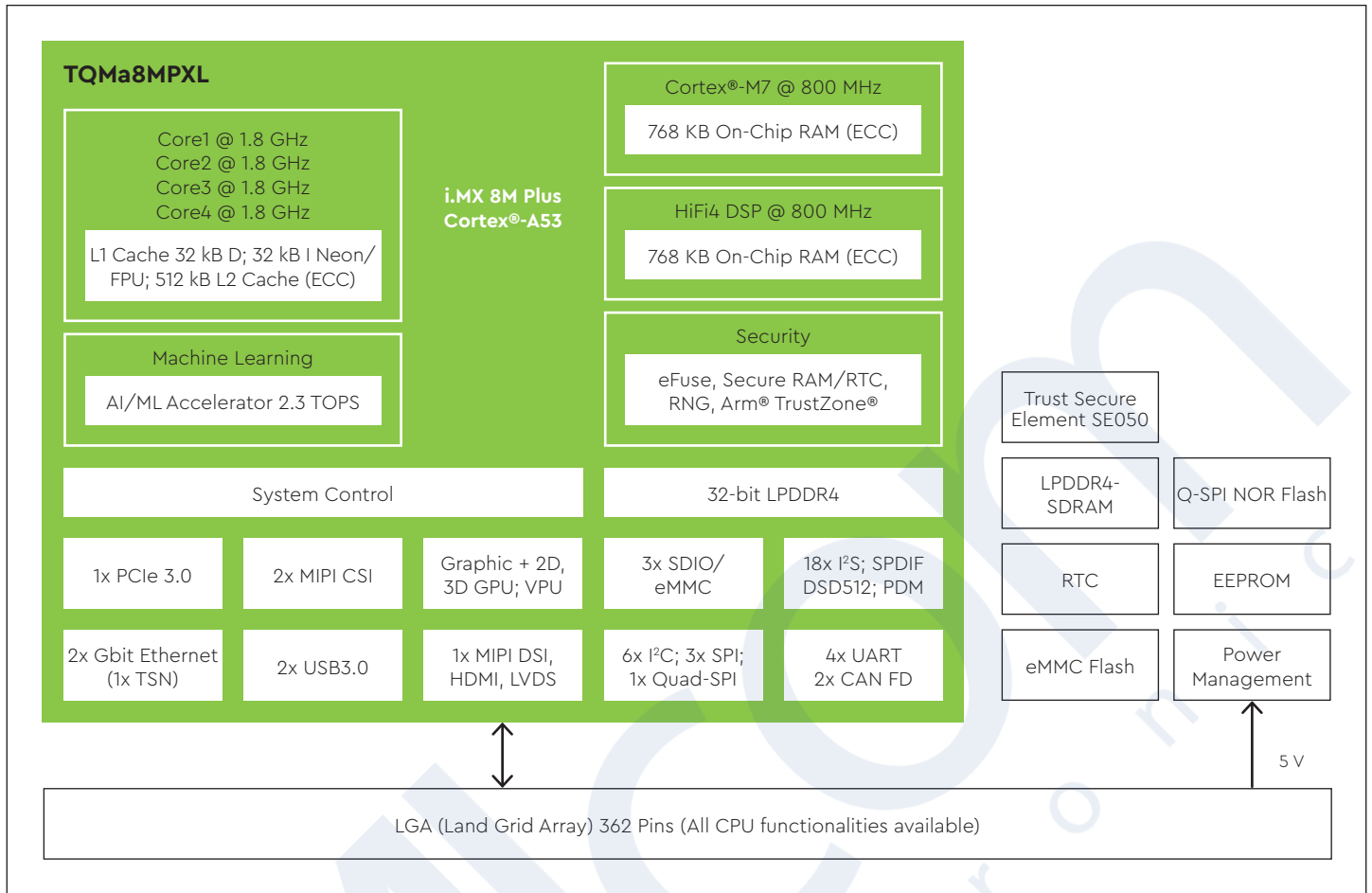
- ▶ Advanced Audio properties with HiFi4 DSP
- ▶ Machine Learning Accelerator 2.3 TOPS
- ▶ Integrated Cortex®-M7
- ▶ High-speed communication via 2x Gbit Ethernet (1x TSN), 1x PCIe and 2x USB 3.0 interface
- ▶ Low power consumption (typ. 4 W)
- ▶ Integrated security functions

Embedded Cortex®-A53 module based on i.MX 8M Plus with Machine Learning Accelerator

TECHNICAL SPECIFICATION

CPU	i.MX 8M Plus Quad 8 ML/AI i.MX 8M Plus Quad 6 Video i.MX 8M Plus Quad 4 Lite	Memory	LPDDR4-SDRAM: Up to 4 GB Quad SPI NOR: Up to 256 MB eMMC Flash: Up to 256 GB EEPROM: 0 / 64-kbit
Interfaces	Up to 2x Gbit-Ethernet (1x TSN) Up to 2x USB 3.0 Up to 2x CAN FD Up to 4x UART	Other	Real Time Clock (RTC) Secure Element SE050 Temperature sensor CPU JTAG interface
Periphery interfaces	Up to 3x SDIO / eMMC Up to 1x PCIe 3.0 Up to 6x I ² C Up to 3x SPI Up to 1x QSPI Up to 18x I ² S Up to 8x PDM Mic. Up to 1x SPDIF	Power supply	5 V
Graphic	LCD Interface: 1x MIPI DSI; (4 Lanes) LVDS (4/8 Lanes), HDMI 2.0a Camera: 2x MIPI CSI2 (4 Lanes)	Ambient conditions	Standard temperature range: -25°C...+85°C Extended temperature range: -40°C...+85°C
		Dimensions	38 mm x 38 mm
		Plug-in system	LGA (Land Grid Array) 362 pins
		Operating systems	Linux
		Operating systems on request	Android

BLOCK DIAGRAM TQMa8MPXL



ORDERING INFORMATION

TQMa8MPQL-AA	TQMa8MPQL-AA, Quad 4 Lite Cortex®-A53/1.6 GHz, 16 GB eMMC Flash, 2 GB LPDDR4, 64 kB EEPROM, RTC, -25°C...+85°C
TQMa8MPQL-AA	TQMa8MPQL-AA, Quad 6 Video Cortex®-A53/1.6 GHz, 16 GB eMMC Flash, 2 GB LPDDR4, 64 kB EEPROM, RTC, -25°C...+85°C
TQMa8MPQL-AB	TQMa8MPQL-AB, Quad 8 ML/AI Cortex®-A53/1.6 GHz, 16 GB eMMC Flash, 2 GB LPDDR4, 64 kB EEPROM, RTC, -25°C...+85°C
	Other configurations on request
STKa8MPxL-AA	STKa8MPxL (Eval Kit) with TQMa8MPxL-Ax, Quad Cortex®-A53/1.6 GHz, 2 GB LPDDR4, 16 GB eMMC Flash, 64 kB EEPROM, RTC, 2x USB 3.0 HOST, 1x USB 3.0 OTG, 2x ETH 10/100/1000, 2x CAN FD, 1x HDMI, 1x DP, 1x Dual LVDS, 2x MIPI CSI, 1x PCIeM.2 + SIM Card, Audio, GPIOs (4x 24V_IN, 4x 24V_OUT, 2x AI_IN), Temperature sensor, Reset-Button, Micro SD Card interface, Power Supply, 4 GB Micro SD card, Cables
Starterkit STKa8MPxL set	The core of the STKa8MPxL set is the TQMa8MPxL module with a Quad Cortex®-A53 CPU. The components contained in the starter kit constitute a modular system enabling you to develop your own product ideas. Development of graphic interfaces can be started immediately using the prepared combination of closed display unit and starter kit that are matched to each other. To develop your own hardware you can use the certified and qualified circuit components of the starter kit in your own designs.

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