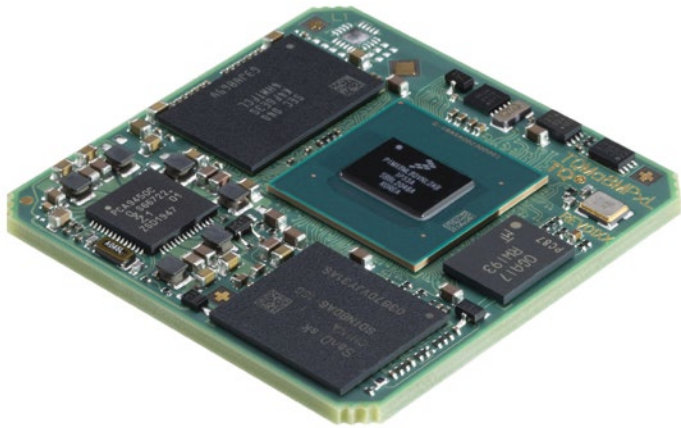


TQMa8MPxL

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

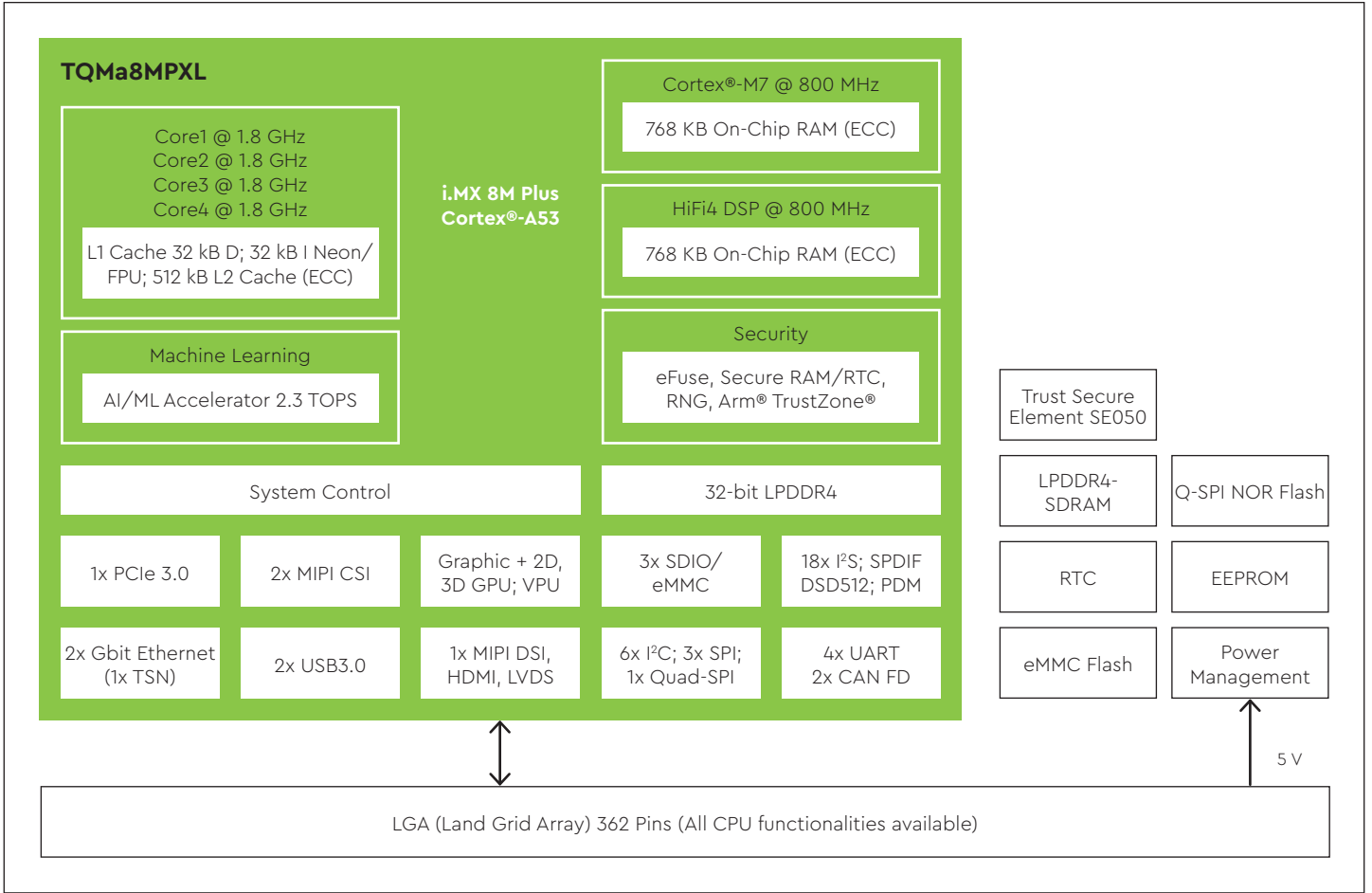
Embedded Cortex®-A53 module based on i.MX 8M Plus with Machine Learning Accelerator

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 |
| Interfaces | Up to 2x Gbit-Ethernet (1x TSN) Up to 2x USB 3.0 Up to 2x CAN FD Up to 4x UART |
| 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 |
| Graphic | LCD Interface: 1x MIPI DSI; (4 Lanes) LVDS (4/8 Lanes), HDMI 2.0a Camera: 2x MIPI CSI2 (4 Lanes) |

| | |
|-------------------------------------|---|
| Memory | LPDDR4-SDRAM: Up to 4 GB Quad SPI NOR: Up to 256 MB eMMC Flash: Up to 256 GB EEPROM: 0 / 64-kbit |
| Other | Real Time Clock (RTC) Secure Element SE050 Temperature sensor CPU JTAG interface |
| Power supply | 5 V |
| 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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