

TQMa95xxLA

Arm® Family



HIGHLIGHTS

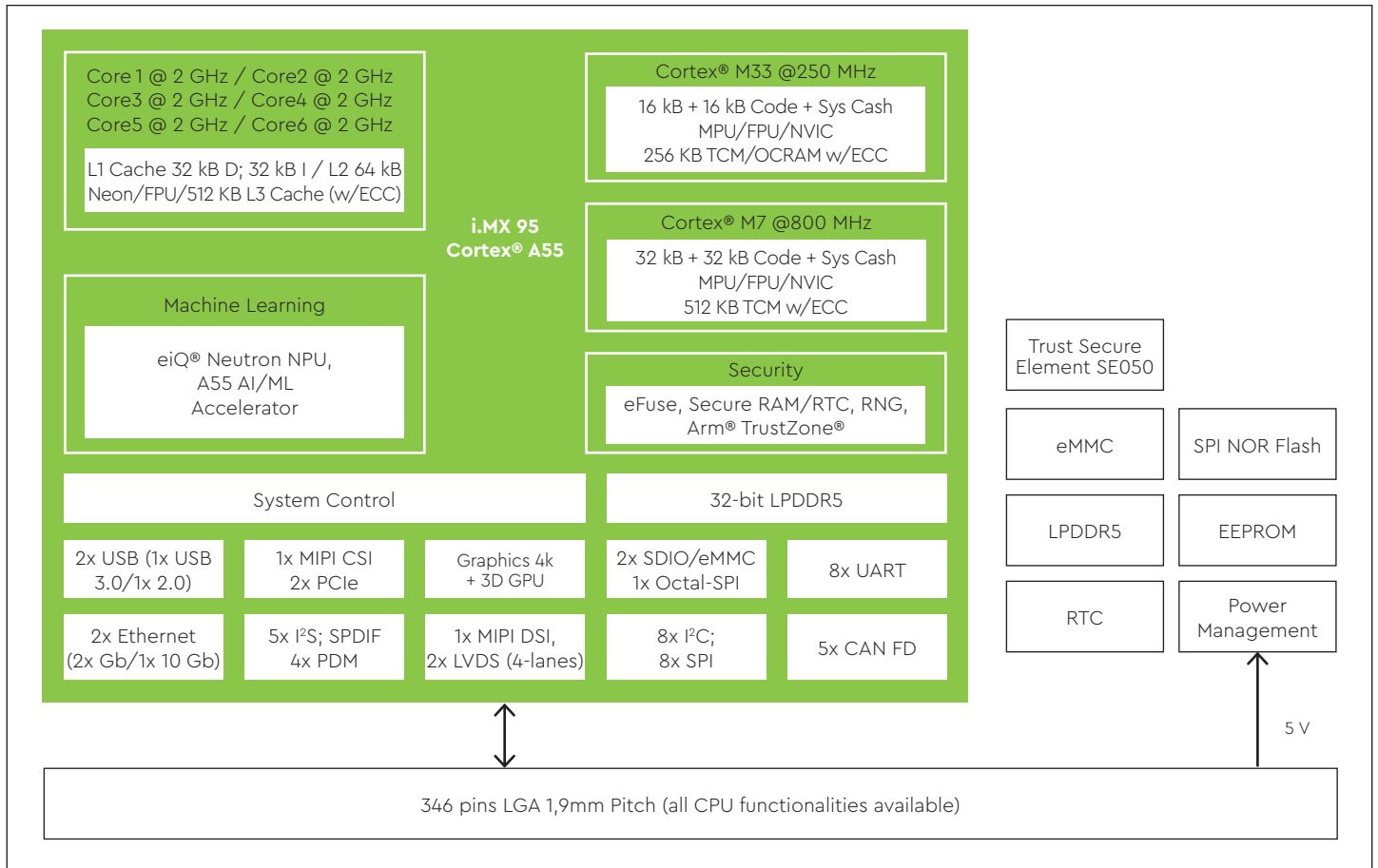
- ▶ Machine Learning Accelerator 2 TOPS
- ▶ Integrated Cortex M33 and M7
- ▶ High-speed communication via 1x 10 Gbit and 2x Gbit Ethernet (1x TSN), 2x PCIe and 1x USB 3.0 interface
- ▶ MIPI CSI with ISP support
- ▶ Low power consumption (typ. 6 W)
- ▶ Integrated security functions

Embedded Cortex®-A55 module based on i.MX 95 with Machine Learning Accelerator

TECHNICAL SPECIFICATION

CPU	i.MX 95 Dual i.MX 95 Quad i.MX 95 Hexa	Other	Real Time Clock (RTC) Secure Element SE050 (optional) Temperature sensor Gyroscope sensor (optional) CPU JTAG interface
Interfaces	Up to 2x Gbit-Ethernet (1x TSN) Up to 1x 10 Gbit Ethernet Up to 1x USB 3.0, 1x USB 2.0 Up to 5x CAN FD Up to 8x UART	Power supply	5 V
Periphery interfaces	Up to 3x SDIO / eMMC Up to 2x PCIe 3.0 Up to 8x I ² C Up to 8x SPI Up to 2x QSPI Up to 5x I ² S Up to 4x PDM Mic. Up to 1x SP/DIF Up to 1x eARC	Ambient conditions	Standard temperature range: -25°C...+85°C Extended temperature range: -40°C...+85°C
Graphic	LCD Interface: Up to 1x MIPI DSI (4-lanes) 2x LVDS (4-lanes) Camera: Up to 2x MIPI CSI2 (4-lanes)	Dimensions	44 mm x 44 mm
Memory	LPDDR5-SDRAM: Up to 16 GB Quad SPI NOR: Up to 256 MB eMMC Flash: Up to 256 GB EEPROM: 0/64-kbit	Plug-in system	346 pins LGA 1,9mm Pitch
		Operating systems	Linux

BLOCK DIAGRAM TQMA95XXLA



ORDERING INFORMATION

TQMa9552LA-AA	TQMa9552LA-AA, Dual Cortex®-A55/1,8 GHz, 16 GB eMMC Flash, 4 GB LPDDR5, 64 kB EEPROM, RTC, -25°C...+85°C
TQMa9554LA-AA	TQMa9554LA-AA, Quad Cortex®-A55/1,8 GHz, 16 GB eMMC Flash, 4 GB LPDDR5, 64 kB EEPROM, RTC, -25°C...+85°C
TQMa9596LA-AA	TQMa9596LA-AA, Hexa Cortex®-A55 w NPU /1,8 GHz, 16 GB eMMC Flash, 4 GB LPDDR5, 64 kB EEPROM, RTC, -25°C...+85°C

Other configurations on request

STKa95xxLA-AA (Prototypes Q3/2024)	STKa95xxLA (Eval Kit) with TQMa9596LA-AA, Hexa Cortex A55 w NPU/1,8 GHz, 4 GB LPDDR5, 16 GB eMMC Flash, 64 kB EEPROM, RTC, 2x USB 3.0 Host, 1x USB Type C, 2x ETH 10/100/1000, 1x 10Gbit Ethernet (SFP+), 2x CAN FD, 1x RS485, 2x LVDS, 1x MIPI CSI, 1x MIPI DSI/CSI, 2x M.2 (1x Key E, 1x Key +SIM), 4x Digital In / Out 24V, 2x Analog In, Audio, Temperature sensor, Reset-Button, SD Card interface, Power Supply, 8 GB SD card, Cables
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Starterkit STKa95xxLA set	The core of the STKa95xxLA set is the TQMa95xxLA module with a Quad Cortex®-A55 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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