

# TQMa95xxLA

Arm® Family



## HIGHLIGHTS

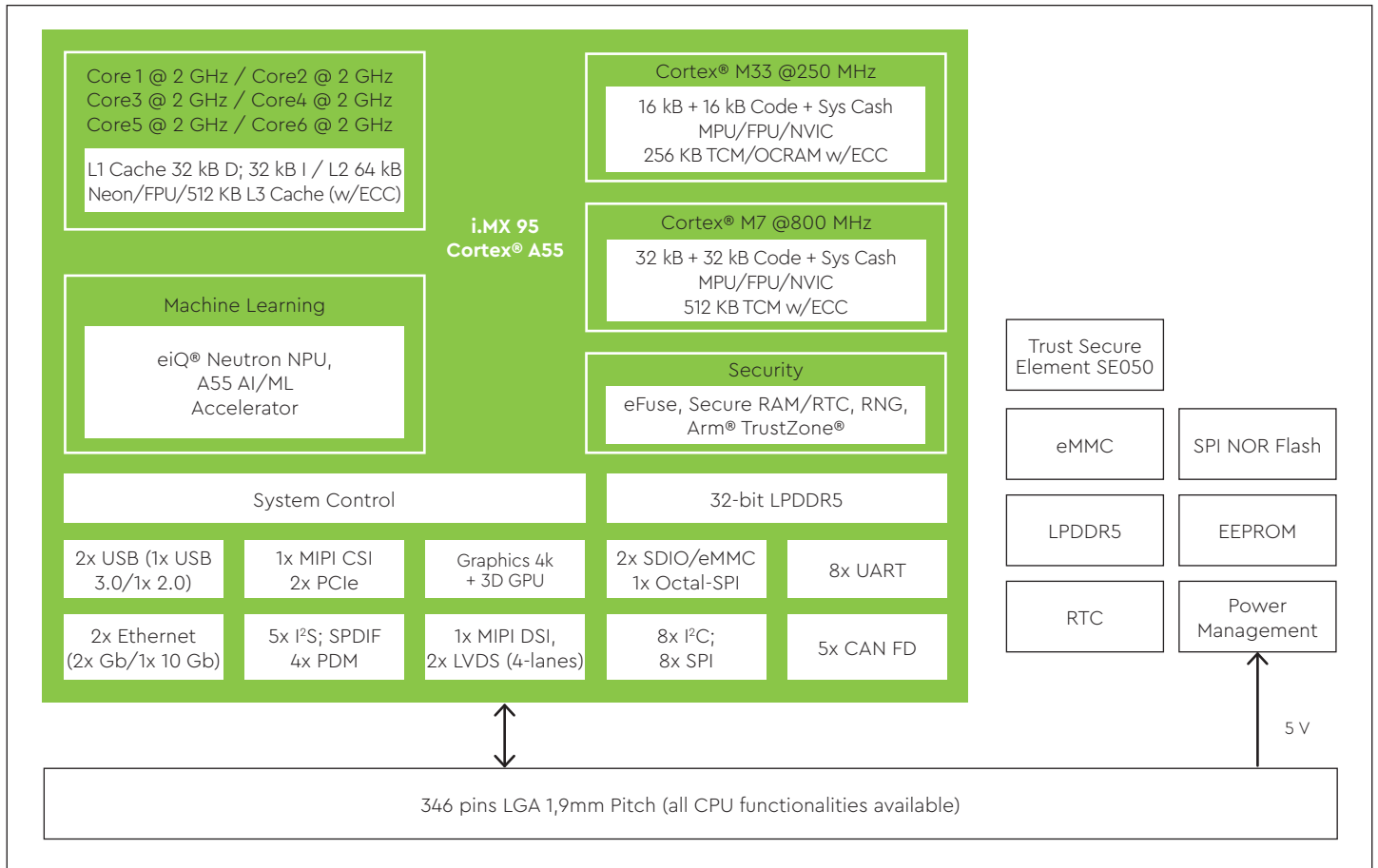
- ▶ Machine Learning Accelerator 2 TOPS
- ▶ Integrated Cortex M33 and M7
- ▶ High-speed communication via 1x 10 Gbit and 2x Gbit Ethernet (1x TSN), 2x PCIe and 1x USB 3.0 interface
- ▶ MIPI CSI with ISP support
- ▶ Low power consumption (typ. 6 W)
- ▶ Integrated security functions

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

## TECHNICAL SPECIFICATION

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

## BLOCK DIAGRAM TQMA95XXLA



## ORDERING INFORMATION

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

**TQMa9556LA-AA** TQMa9556LA-AA, Hexa Cortex®-A55 with NPU/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 with NPU + ISP /1,8 GHz, 16 GB eMMC Flash, 4 GB LPDDR5, 64 kB EEPROM, RTC, -25°C...+85°C

Other configurations on request

**STKa95xxLA-AA** STKa95xxLA (Eval Kit) with TQMa9596LA-AA, Hexa Cortex A55 with NPU + ISP /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

**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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