

TQMa93xxCA

Arm® Family



HIGHLIGHTS

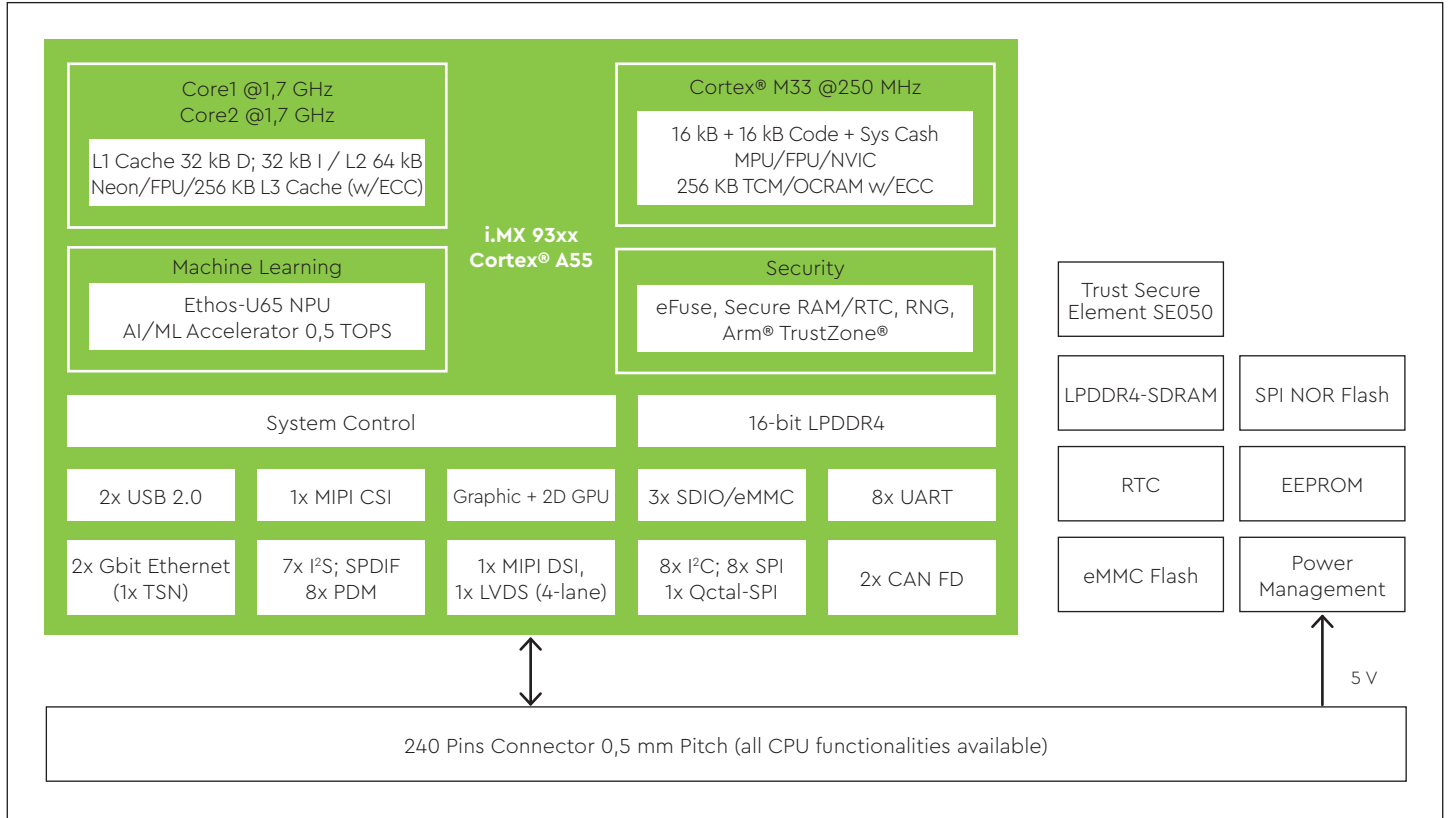
- ▶ Machine Learning Accelerator 0,5 TOPS
- ▶ Integrated Cortex M33
- ▶ High-speed communication via 2x Gbit Ethernet (1x TSN), 2x USB 2.0 interface
- ▶ Low power consumption (typ. 2 W)
- ▶ Integrated security functions

Embedded Cortex®-A55 module based on i.MX 93xx with Machine Learning Accelerator

TECHNICAL SPECIFICATION

CPU	i.MX 93x1 Single Core i.MX 93x2 Dual Core	Memory	LPDDR4-SDRAM: Up to 2 GB Octal 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 2.0 OTG interface Up to 2x CAN FD Up to 8x UART	Other	Real Time Clock (RTC) Secure Element SE050 Temperature sensor Gyroscope sensor CPU JTAG interface
Periphery interfaces	Up to 3x SDIO / eMMC Up to 8x SPI Up to 8x I ² C Up to 1x QSPI Up to 7x I ² S Up to 8x PDM Mic. Up to 1x SP/DIF	Power supply	5 V
Graphic	LCD Interface: 1x MIPI DSI; (4-lanes) LVDS (4-lanes) Camera: 1x MIPI CSI (2-lanes)	Ambient conditions	Standard temperature range: -25°C...+85°C Extended temperature range: -40°C...+85°C
		Dimensions	54 mm x 32 mm
		Plug-in system	Board-to-board plug-in system 240 pins 0.5 mm Pitch
		Operating systems	Linux
		Operating systems on request	Free RTOS

BLOCK DIAGRAM TQMA93XX



ORDERING INFORMATION

TQMa93×1CA-AA TQMa93×1CA-AA, Single Cortex®-A55/1,5 GHz, 8 GB eMMC Flash, 1GB LPDDR4, 64 kB EEPROM, RTC, -25°C...+85°C

TQMa93×2CA-AA TQMa93×2CA-AA, Dual Cortex®-A55/1,5 GHz, 8 GB eMMC Flash, 1GB LPDDR4, 64 kB EEPROM, RTC, -25°C...+85°C

Other configurations on request

STKa93xxCA-AA (Prototypes Q1/2023) STKa93xxCA (Eval Kit) with TQMa93×2CA-AA, Dual Cortex A55/1,5 GHz, 1 GB LPDDR4, 8 GB eMMC Flash, 64 kB EEPROM, RTC, 2x USB 2.0 HOST, 1x USB Type C, 2x ETH 10/100/1000, 2x CAN FD, 1x RS485, 1x LVDS, 1x MIPI CSI, 1x DP, 1x Mini PCIe + SIM Card (USB only), WLAN, Temperature sensor, Reset-Button, Micro SD Card interface, Power Supply, 8 GB SD card, Cables, Connectors

Starterkit STKa93xxCA set The core of the STKa9xxCA set is the TQMa93xxCA module with a Dual 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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