

TQMa8Xx4

Arm® Family



HIGHLIGHTS

- ▶ Graphic with 3D GPU Support
- ▶ DSP for audio processing
- ▶ High-speed communication via 2x Gbit Ethernet, 1x PCIe and 1x USB 3.0
- ▶ Low power consumption (typ. 4 W)
- ▶ Integrated 1x Cortex® M4 CPU (Real Time/Security)
- ▶ 3x CAN FD
- ▶ Integrated security functions

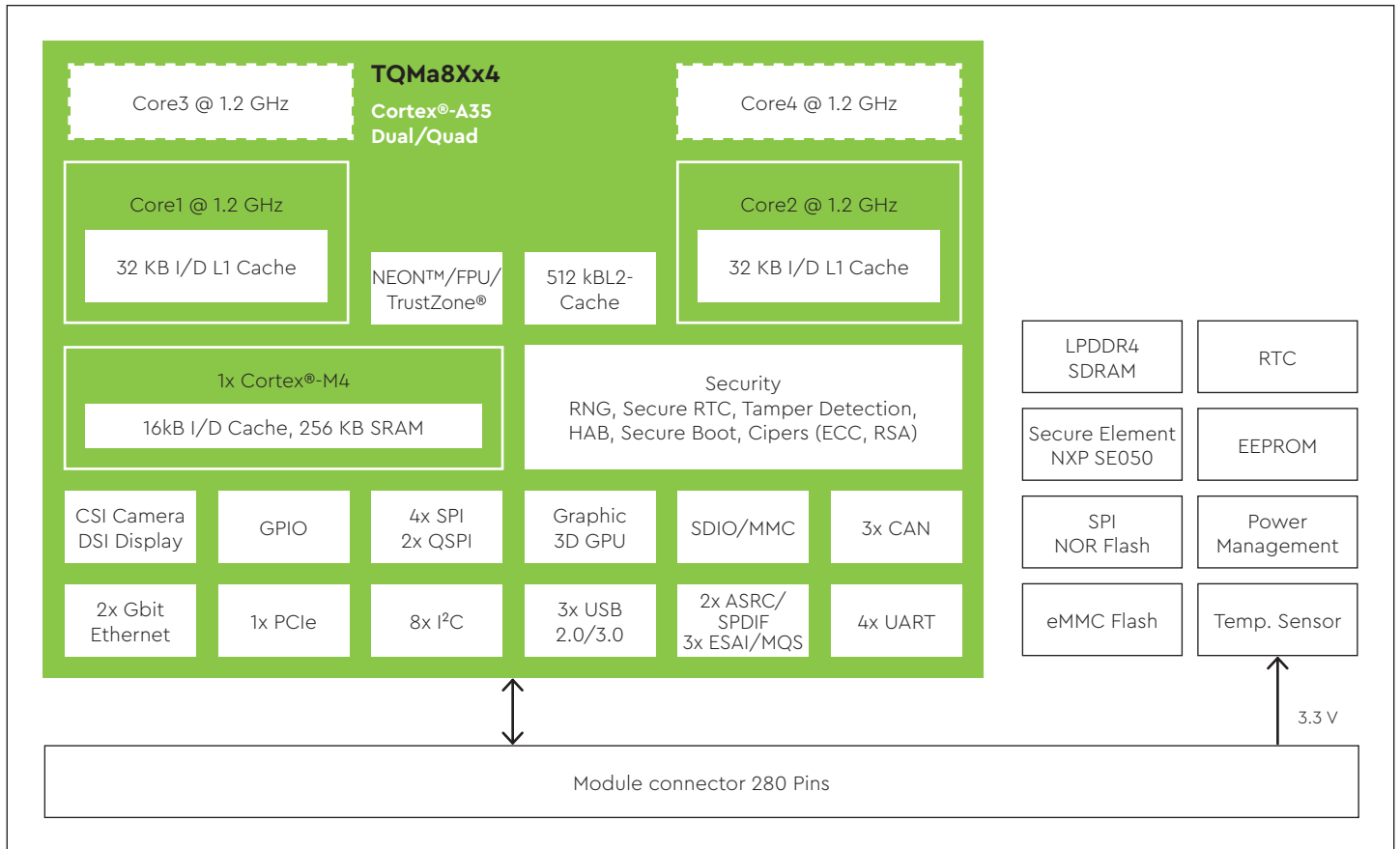
Embedded Cortex®-A35 module based on i.MX8X with high computing power combined with high-speed interfaces.

TECHNICAL SPECIFICATION

CPU	Cortex®-A35 Technology i.MX8X Dual i.MX8X Dual Plus i.MX8X Quad Plus
Interfaces	Up to 2x Ethernet 10/100/1000 Mbit Up to 1x USB 3.0 OTG interface Up to 2x USB 2.0 OTG interface Up to 4x UART Up to 3x CAN FD
Periphery interfaces	1x SDIO/MMC 1x PCIe Up to 8x I ² C Up to 4x SPI Up to 2 Q-SPI Up to 2x SPDIF Up to 4x ESAI Up to 32 GPIO
Graphic	Dual LVDS Interface / 2x MIPI DSI 1x MIPI CSI

Memory	LPDDR4 SDRAM: Up to 4 GB Quad SPI NOR: Up to 256 MB Up to 64 GB eMMC Flash EEPROM: 0/64-kbit
Other	Real Time Clock (RTC) Secure Element SE050 (optional) Temperature sensor CPU JTAG interface
Power supply	3.3 V
Ambient conditions	Standard temperature range: -25°C...+85°C Extended temperature range: -40°C...+85°C
Dimensions	55 mm x 44 mm
Plug-in system	Board-to-board plug-in system 280 pins
Operating systems	Linux, PikeOS, QNX
Operating systems on request	Android

BLOCK DIAGRAM TQMa8XX4



ORDERING INFORMATION

TQMa8XD4-AA	i.MX8X Dual/typ 1.0 GHz/max 1.2 GHz, 8 GB eMMC Flash, 1 GB LPDDR4, 64 kB EEPROM, RTC, -25°C...+85°C
TQMa8XDP4-AA	i.MX8X Dual Plus/typ 1.0 GHz/max 1.2 GHz, 8 GB eMMC Flash, 2 GB LPDDR4, 64 kB EEPROM, RTC, -25°C...+85°
TQMa8XQP4-AA	i.MX8X Quad Plus/typ 1.0 GHz/max 1.2 GHz, 8 GB eMMC Flash, 2 GB LPDDR4, 64 kB EEPROM, RTC, -25°C...+85°

Other configurations on request

STKa8Xx4-AA	STKa8Xx4 (Eval Kit) with TQMa8Xx4-AA, i.MX8X/typ 1.0 GHz/max 1.2 GHz, 2 (1) GB LPDDR4, 8 GB eMMC Flash, 64 kB EEPROM, 1x RS232, 2x CAN FD separated, 1x USB 3.0 OTG, 4x USB 2.0 HOST, 2x ETH 10/100/1000, 1x HDMI/DP, 2x LVDS/DSI, 1x PCIe, RTC, Temperature sensor, Reset-Button, SD interface, Power Supply, 4 GB SD card, Cables
Starterkit STK8Xx4 set	The core of the STKa8Xx set is the TQMa8Xx4 module with a i.MX8X Cortex®-A35 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 a TQ display kit which is adjusted for a starter kit. 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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