

# TQMa8XxS

Arm® Family



**Embedded Cortex®-A35 SMARC 2.0/2.1 module based on i.MX8X with high computing power combined with high-speed interfaces.**

## HIGHLIGHTS

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

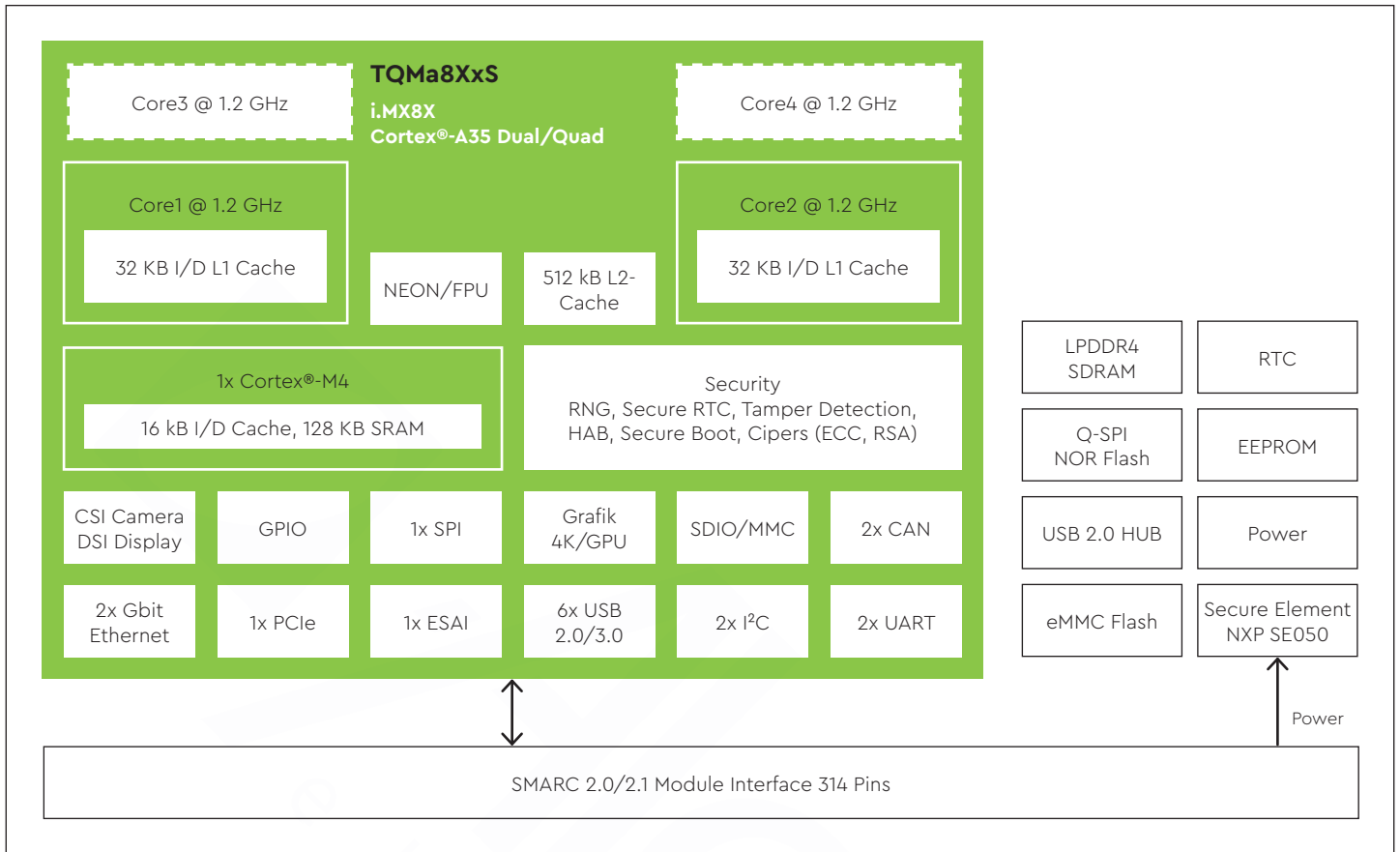
Based on



## TECHNICAL SPECIFICATION

<b>CPU</b>	Cortex®-A35 Technology i.MX8 QuadXPlus i.MX8 DualXPlus i.MX8 DualX	<b>Memory</b>	LPDDR4-SDRAM: Up to 4 GB Quad SPI NOR: Up to 256 MB Up to 64 GB eMMC Flash EEPROM: 0/64 kbit
<b>Interfaces</b>	Up to 2x Ethernet 10/100/1000 Mbit (IEEE 1588) Up to 1x USB 3.0 Up to 2.0 OTG Up to 5x USB 2.0 (USB Hub) Up to 2x UART Up to 2x CAN FD	<b>Other</b>	Real Time Clock (RTC) Secure Element SE050 (optional) Temperature sensor CPU JTAG interface (optional)
<b>Periphery interfaces</b>	Periphery interfaces 1x SDIO/MMC 2x I <sup>2</sup> C 1x SPI 1x I <sup>2</sup> S 1x PCIe GPIO	<b>Power supply</b>	3.3 V (optional 3.0 V ... 5.25 V)
<b>Graphic</b>	2x LVDS, 1x eDP 1x Camera Sensor Interface (CSI MIPI)	<b>Ambient conditions</b>	Standard temperature range: -25°C...+85°C Extended temperature range: -40°C...+85°C
		<b>Dimensions</b>	82 mm x 50 mm
		<b>Plug-in system</b>	SMARC 2.0/2.1 Board-to-board plug-in system 314 pins
		<b>Operating systems</b>	Linux, PikeOS
		<b>Operating systems on request</b>	QNX, Android

## BLOCK DIAGRAM TQMa8XXS



## ORDERING INFORMATION

<b>TQMa8XDS-AA</b>	i.MX8XD/typ 1.0 GHz/max 1.2 GHz, 8 GB eMMC-Flash, 1 GB LPDDR4 SDRAM, 64 kB EEPROM, RTC, 2x ETH, w/o eDP, -25°C...+85°C
<b>TQMa8XDPS-AA</b>	i.MX8X Dual Plus/typ 1.0 GHz/max 1.2 GH, 8 GB eMMC-Flash, 2 GB LPDDR4 SDRAM, 64 kB EEPROM, RTC, 2x ETH, w/o eDP, -25°C...+85°C
<b>TQMa8XQPS-AA</b>	i.MX8X Quad Plus/typ 1.0 GHz/max 1.2 GH, 8 GB eMMC-Flash, 2 GB LPDDR4 SDRAM, 64 kB EEPROM, RTC, 2x ETH, w/o eDP, -25°C...+85°C
Other configurations on request	

<b>STKa8XxS-AA</b>	STKa8XxS (Eval Kit) with TQMa8XxS-AA, i.MX8Xx/typ 1.0 GHz/max 1.2 GHz, 2 (1) GB LPDDR4, 8 GB eMMC Flash, 64kB EEPROM, 3x RS232, 2 x CAN FD separated, 1x USB 3.0 OTG, 1x USB 3.0 HOST, 1x USB 2.0 HOST, 2x ETH 10/100/1000, 1x Display Port, 2x LVDS/DSI, 1x PCIe, Audio, RTC, Temperature sensor, Reset-Button, SD interface, Power Supply, 4 GB SD card, Cables
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**Starterkit STK8XxS set**

The core of the STKa8XxS set is the TQMa8XxS 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 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.