

# TQMa8MxML

Arm® Family



**Embedded Cortex®-A53 module based on i.MX8M Mini with enhanced Audio properties.**

## HIGHLIGHTS

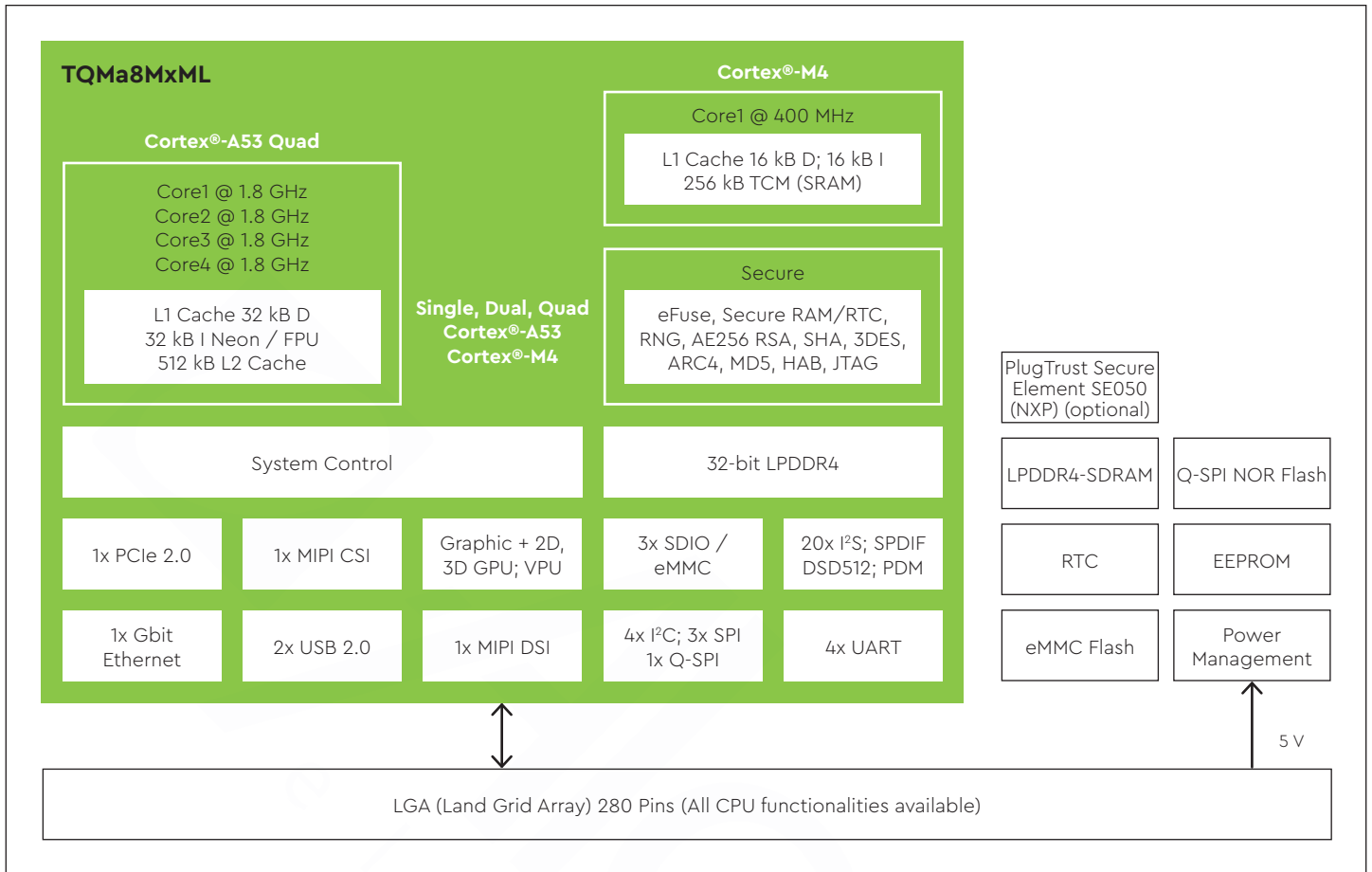
- ▶ Advanced Audio properties
- ▶ Integrated Cortex® M4
- ▶ High-speed communication via 1x Gbit Ethernet, 1x PCIe and 2x USB 2.0 interface
- ▶ Low power consumption (typ. 4 W)
- ▶ Integrated security functions

## TECHNICAL SPECIFICATION

<b>CPU</b>	i.MX8M Mini Solo i.MX8M Mini Dual / Dual Lite i.MX8M Mini Quad / Quad Lite
<b>Interfaces</b>	Up to 1x Ethernet 10 / 100 / 1000 Mbit Up to 1x USB 2.0 OTG interface Up to 1x USB 2.0 Host interface Up to 4x UART
<b>Periphery interfaces</b>	Up to 3x SDIO / eMMC Up to 1x PCIe 2.0 Up to 4x I2C Up to 3x SPI Up to 1x QSPI Up to 20x I <sup>2</sup> S Up to 8x PDM Mic. Up to 1x SPDIF
<b>Graphic</b>	LCD Interface: 1x MIPI DSI; (4 Lanes) Camera: 1x MIPI CSI2 (4 Lanes)
<b>Memory</b>	LPDDR4-SDRAM: Up to 4 GB Quad SPI NOR: Up to 256 MB eMMC Flash: Up to 64 GB EEPROM: 0 / 64-kbit

<b>Other</b>	Real Time Clock (RTC) Temperature sensor CPU JTAG interface
<b>Power supply</b>	5 V
<b>Ambient conditions</b>	Standard temperature range: -25°C...+85°C Extended temperature range: -40°C...+85°C
<b>Dimensions</b>	38 mm x 38 mm
<b>Plug-in system</b>	LGA (Land Grid Array) 280 pins
<b>Operating systems</b>	Linux
<b>Operating systems on request</b>	Android

## BLOCK DIAGRAM TQMa8MxML



## ORDERING INFORMATION

**TQMa8MSML-AA  
(Prototypes Q1/20)**

TQMa8MSML-AA, i.MX8M Mini Single Cortex®-A53/1.6 GHz, 8 GB eMMC Flash, 2 GB LPDDR4, 64 kB EEPROM, RTC, -25°C...+85°C

**TQMa8MDML-AA  
(Prototypes Q1/20)**

TQMa8MDML-AA, i.MX8M Mini Dual Cortex®-A53/1.6 GHz, 8 GB eMMC Flash, 2 GB LPDDR4, 64 kB EEPROM, RTC, -25°C...+85°C

**TQMa8MQML-AA  
(Prototypes Q1/20)**

TQMa8MQML-AA, i.MX8M Mini Quad Cortex®-A53/1.6 GHz, 8 GB eMMC Flash, 2 GB LPDDR4, 64 kB EEPROM, RTC, -25°C...+85°C

Other configurations on request

**STKa8MxML-AA  
(Prototypes Q1/20)**

STKa8MxML (Eval Kit) with TQMa8MxML-AA, i.MX8M Mini Quad Cortex®-A53/1.6 GHz, 2 GB LPDDR4, 8 GB eMMC Flash, 64 kB EEPROM, RTC, 2x USB 2.0 HOST, 1x USB 2.0 OTG, 1x ETH 10/100/1000, 1x eDP, 1x LVDS, 1x MIPI CSI, 1x Mini PCIe + SIM Card, Audio, Temperature sensor, Reset-Button, SD Card interface, Power Supply, 4 GB SD card, Cables

**Starterkit  
STKa8MxML set**

The core of the STKa8MxML set is the TQMa8MxML module with a Quad Cortex®-A53 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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