# TQMa8MxNL

## Arm® Family

### HIGHLIGHTS

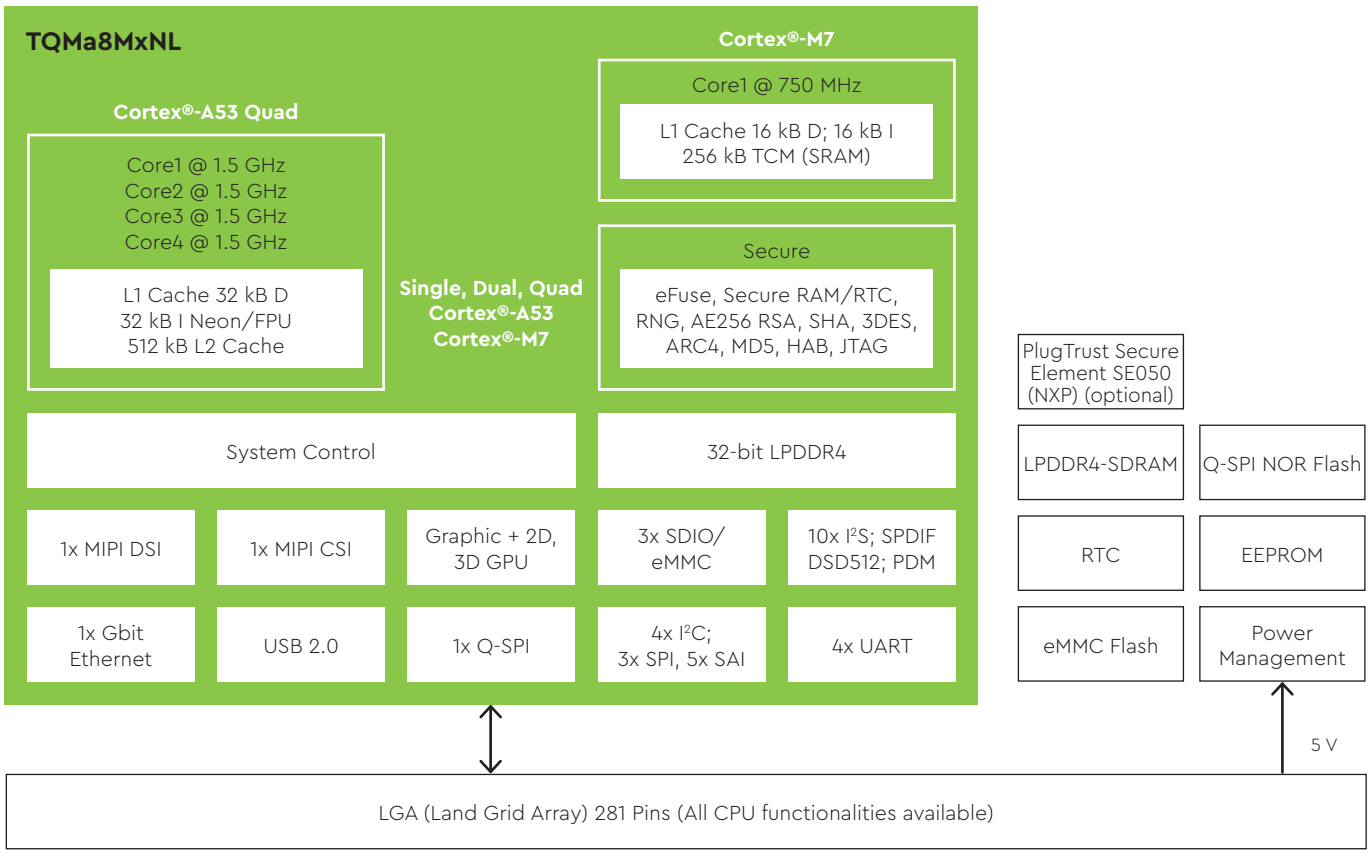
- Advanced Audio properties
- Integrated Cortex® M7
- High-speed communication via 1x Gbit Ethernet and 1x USB 2.0 interface
- Low power consumption (typ. 3 W)
- Integrated security functions

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

### TECHNICAL SPECIFICATION

| | |
|---|---|
| **CPU** | i.MX8M Nano Solo/<br>i.MX8M Nano Solo Lite<br>i.MX8M Nano Dual/<br>i.MX8M Nano Dual Lite<br>i.MX8M Nano Quad/<br>i.MX8M Nano Quad Lite |
| **Interfaces** | Up to 1x Ethernet 10/100/1000 Mbit<br>Up to 1x USB 2.0 Host interface<br>Up to 4x UART |
| **Periphery interfaces** | Up to 3x SDIO/eMMC<br>Up to 4x I2C<br>Up to 3x SPI<br>Up to 1x QSPI<br>Up to 10x I²S<br>Up to 5x SAI<br>Up to 8x PDM Mic.<br>Up to 1x SPDIF |
| **Graphic** | LCD Interface: 1x MIPI DSI; (4 Lanes)<br>Camera: 1x MIPI CSI2 (4 Lanes) |
| **Memory** | LPDDR4-SDRAM: Up to 2 GB<br>Quad SPI NOR: Up to 256 MB<br>eMMC Flash: Up to 256 GB<br>EEPROM: 0/64-kbit |
| **Other** | Real Time Clock (RTC)<br>Temperature sensor<br>CPU JTAG interface |
| **Power supply** | 5 V |
| **Ambient conditions** | Standard temperature range:<br>-25°C...+85°C<br>Extended temperature range:<br>-40°C...+85°C |
| **Dimensions** | 38 mm x 38 mm |
| **Plug-in system** | LGA (Land Grid Array) 281 pins |
| **Operating systems** | Linux |
| **Operating systems on request** | Android |

## BLOCK DIAGRAM TQMA8MXNL




## ORDERING INFORMATION

| | |
|---|---|
| **TQMa8MSNL-AA** | TQMa8MSNL-AA, i.MX8M Nano Single Cortex®-A53/1.4 GHz, 8 GB eMMC Flash, 1 GB LPDDR4, 64 kB EEPROM, RTC, -25°C...+85°C |
| **TQMa8MDNL-AA** | TQMa8MDNL-AA, i.MX8M Nano Dual Cortex®-A53/1.4 GHz, 8 GB eMMC Flash, 1 GB LPDDR4, 64 kB EEPROM, RTC, -25°C...+85°C |
| **TQMa8MQNL-AA** | TQMa8MQNL-AA, i.MX8M Nano Quad Cortex®-A53/1.4 GHz, 8 GB eMMC Flash, 1 GB LPDDR4, 64 kB EEPROM, RTC, -25°C...+85°C |
| | Other configurations on request |
| **STKa8MxNL-AA** | STKa8MxNL (Eval Kit) with TQMa8MxNML-AA, i.MX8M Nano Quad Cortex®-A53/1.4 GHz, 1 GB LPDDR4, 8 GB eMMC Flash, 64 kB EEPROM, RTC, 2x USB 2.0 HOST, 1x ETH 10/100/1000, 1x eDP, 1x LVDS, 1x MIPI CSI, 1x Mini PCIe (only USB) + SIM Card, Audio, Temperature sensor, Reset-Button, SD Card interface, Power Supply, 4 GB SD card, Cables |
| **Starterkit STKa8MxNL set** | The core of the STKa8MxNL set is the TQMa8MxNL 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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