

# MBa8MPxL

Arm® Family



**Single Board Computer (SBC) based on TQMa8MPxL as a high-end platform with TSN Gigabit Ethernet, ML-Accelerator and Multi-display Graphics support.**

## TECHNICAL SPECIFICATION

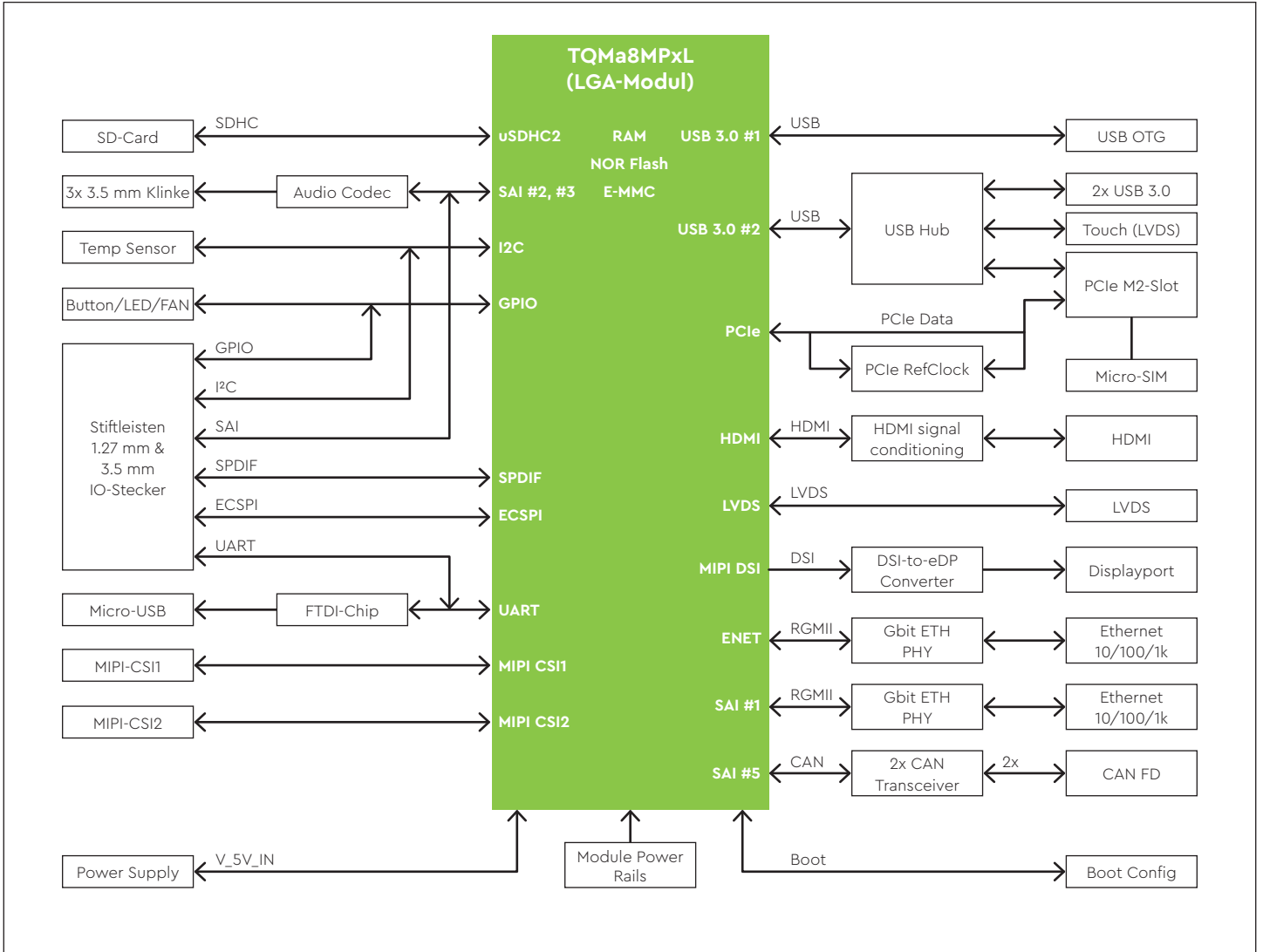
<b>CPU</b>	i.MX 8M Plus Quad 8 ML/AI i.MX 8M Plus Quad 6 Video i.MX 8M Plus Quad 4 Lite
<b>Interfaces</b>	2x Gbit-Ethernet (1x TSN) 2x USB 3.0 interface 2x CAN FD 4x Digital 24 Input 4x Digital 24 Output 2x Analog Input 1x Micro SD Card 1x M.2 PCIe (B-Key) 1x Audio (Line In, Line Out, MIC)
<b>Periphery interfaces Pin Header</b>	Up to 4x I2C Up to 4x UART Reset, Soft Reset On/Off Button ISO7816/ISO14443 Up to 2x SPI SAI/SPDIF
<b>Graphic</b>	1x HDMI 1x Display Port 1x LVDS Interface (4/8 Lanes) LCD Interface: 1x MIPI DSI; (4 Lanes) 2x MIPI-CSI (4 Lanes)

## HIGHLIGHTS

- ▶ Advanced Audio properties with HiFi4 DSP
- ▶ Machine Learning Accelerator 2.3 TOPS
- ▶ 2x CAN FD, Digital IN/OUT
- ▶ High-speed communication via 2x Gbit Ethernet (1x TSN) and 2x USB 3.0 interface
- ▶ Low power consumption (typ. 4W)
- ▶ Integrated security functions

<b>Memory</b>	LPDDR4: Up to 8 GB NOR: Up to 256 MB eMMC: Up to 256 GB EEPROM: 0/64-kbit
<b>Other</b>	Real Time Clock (RTC) Secure Element SE050 Temperature sensor CPU JTAG interface
<b>Power supply</b>	18-28 V
<b>Ambient conditions</b>	Standard temperature range: -25°C...+70°C Extended temperature range: -40°C...+70°C
<b>Dimensions</b>	160 mm x 100 mm
<b>Operating systems</b>	Linux
<b>Operating systems on request</b>	Android Windows 10 IOT

## BLOCK DIAGRAM MBA8MPXL



## ORDERING INFORMATION

### MBa8MPxL-AA

MBa8MPxL (Eval Kit) with TQMa8MPxL-Ax, Quad Cortex®-A53/1.6 GHz, 2 GB LPDDR4, 16 GB eMMC Flash, 64 kB EEPROM, RTC, 2x USB 3.0 HOST, 1x USB 3.0 OTG, 2x ETH 10/100/1000, 2x CAN FD, 1x HDMI, 1x DP, 1x Dual LVDS, 2x MIPI CSI, 1x PCIe M.2 + SIM Card, Audio, GPIOs (4x 24V\_IN, 4x 24V\_OUT, 2x AI\_IN) Temperature sensor, Reset-Button, Micro SD

Other configurations on request

### Starterkit STKa8MPxL set

The core of the STKa8MPxL set is the TQMa8MPxL 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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