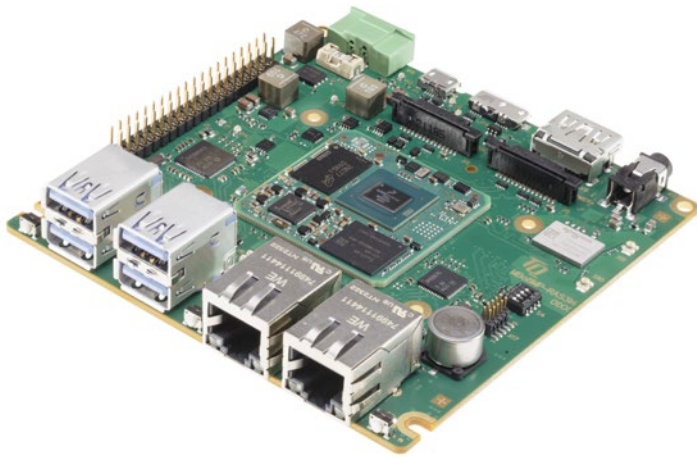


MBa8M-RAS314

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.

HIGHLIGHTS

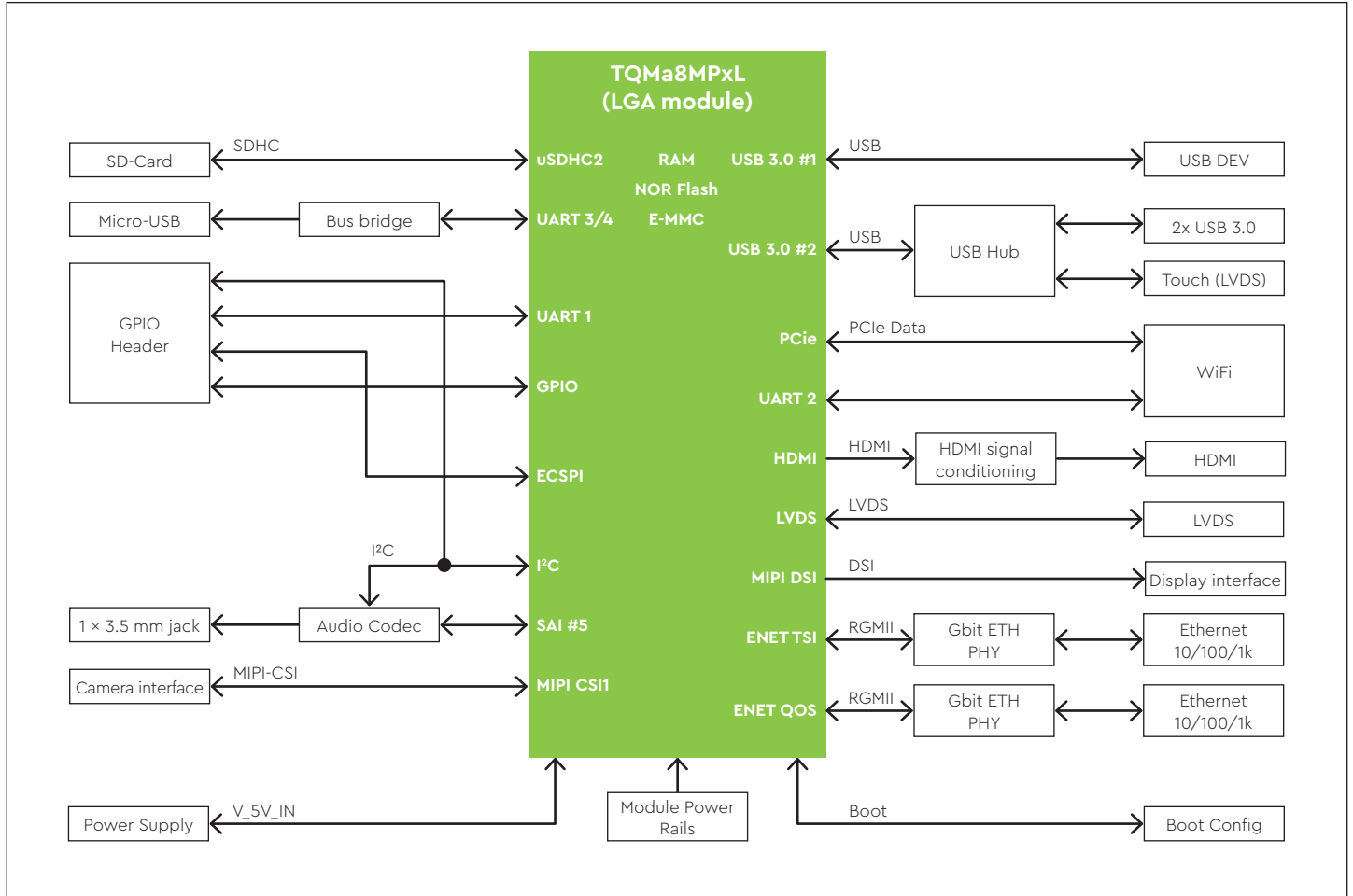
- ▶ Machine Learning Accelerator (2.3 TOPS)
- ▶ HDMI, LVDS, MIPI DSI, MIPI CSI
- ▶ High-speed communication via 2 x Gbit Ethernet (1 x TSN) and 4 x USB 3.0 interface
- ▶ WiFi 5
- ▶ Low power consumption (typ. 3 W)
- ▶ Integrated security functions

TECHNICAL SPECIFICATION

CPU	i.MX 8M Plus Quad 8 ML/AI i.MX 8M Plus Quad 6 Video i.MX 8M Plus Quad 4 Lite
Interfaces	2x Gbit-Ethernet (1x TSN) 4x USB 3.0 Host interface 1x USB 3.0 Device 1x SD Card
Periphery interfaces Pin Header	Up to 2x I2C Up to 1x UART Up to 1x I2S Up to 1x SPI Up to 2x PWM Up to 28x GPIO
Graphic	1x HDMI 1x LVDS Interface (4 Lanes) LCD Interface: 1x MIPI DSI; (2 Lanes) 1x MIPI-CSI (2 Lanes)
Memory	LPDDR4: Up to 8 GB NOR: Up to 256 MB (TBD) eMMC: Up to 256 GB EEPROM: 0/64-kbit

Other	Real Time Clock (RTC) Secure Element SE050 WiFi Temperature sensor CPU JTAG interface
Power supply	12V +/- 10%
Ambient conditions	Standard temperature range: -25°C...+70°C Extended temperature range: -40°C...+70°C
Dimensions	100 mm x 100 mm
Operating systems	Armbian, Yocto-Linux
Operating systems on request	Android

BLOCK DIAGRAM MBA8MP-RAS314



ORDERING INFORMATION

MBa8MP-RAS314-AB

MBa8MP-RAS314 with TQMa8MPQL-AB, Quad Cortex®-A53/1.6 GHz, 2 GB LPDDR4, 16 GB eMMC Flash, 64 kB EEPROM, RTC, 4x USB 3.0 HOST, 1x USB 3.0 Device, 2x ETH 10/100/1000, 1x HDMI, 1x LVDS, 1x MIPI, CSI, 1x MIPI DSI, Audio, GPIO PIN Header, WiFi, 2x User LED, Temperature sensor, Reset-Button, Micro SD

Other configurations on request

**Starterkit
STKa8MP-RAS314 set**

The core of the STKa8MP-RAS314 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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