

# TQMLS102xA

ARM® Family



## HIGHLIGHTS

- ▶ Graphic
- ▶ QorIQ QUICC Engine
- ▶ High speed communication via 3x Gbit Ethernet, 2x PCIe and one USB 3.0 interface
- ▶ Low power consumption (typ. 3 W)
- ▶ ECC protection
- ▶ Cache Coherent Interconnect bus system
- ▶ IEEE 1588 hardware support
- ▶ Security functions

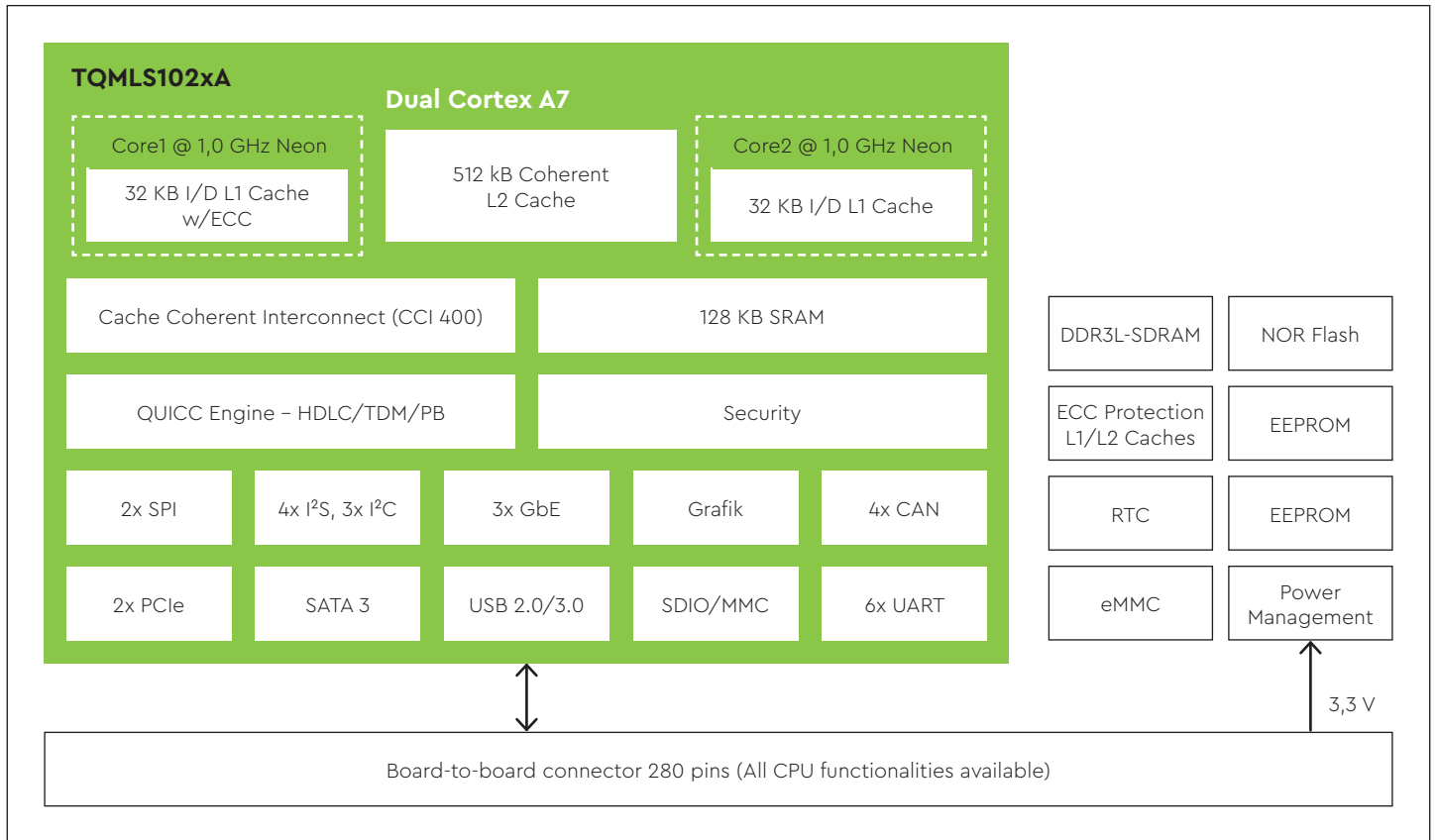
**Embedded Dual Cortex A7 module based on LS102xA with high speed interfaces and graphics for many network applications.**

## TECHNICAL SPECIFICATION

<b>CPU</b>	QorIQ LS1020A, LS1021A, LS1022A
<b>Interfaces</b>	Up to 3x Ethernet 10/100/1000 Mbit (IEEE 1588) Up to 4x FlexCAN Up to 1x USB 2.0 high speed OTG Up to 1x USB 3.0 high speed HOST Up to 6x UART
<b>Periphery interfaces</b>	Up to 1x SDIO/MMC Up to 3x I <sup>2</sup> C Up to 2x SPI Up to 4x I <sup>2</sup> S Up to 1x SATA 3.0 Up to 2x PCIe SPDIF
<b>Graphic</b>	LCD interface (only LS1021A)
<b>Memory</b>	DDR3L-SDRAM: Up to 2 GB Quad SPI NOR: Up to 512 MB eMMC: Up to 16 GB EEPROM: 0/64-kbit ECC protection (only LS1020A, LS1021A)
<b>Other</b>	Real Time Clock (RTC) Temperature sensor CPU JTAG interface Extended power management (optional) Voltage monitoring (optional)
<b>Power supply</b>	3,3 V

<b>Ambient conditions</b>	Extended temperature range: -40°C...+85°C
<b>Dimensions</b>	55 mm x 44 mm
<b>Plug-in system</b>	Board-to-board plug-in system 280 Pins
<b>Operating systems</b>	Linux
<b>Operating systems on request</b>	VxWorks, QNX

## BLOCK DIAGRAM TQMLS102XA



## ORDERING INFORMATION

**TQMLS1020A-AA** TQMLS1020A, Dual Cortex 7/1 GHz, 64 MB NOR flash, 1 GB DDR3L, 64 kbit EEPROM, -40°C...+85°C

**TQMLS1021A-AA** TQMLS1021A, Dual Cortex 7/1 GHz, 64 MB NOR flash, 1 GB DDR3L, 64 kbit EEPROM, -40°C...+85°C

Other variants on request

**STKLS102xA-AA** STKLS102xA (Eval Kit) with TQMLS102xA-AA, Dual Cortex A7/1 GHz (600 MHz), 1 GB DDR3L, 256 MB NOR flash, 64 kbit EEPROM, 1x RS232, 1x RS485, 2x CAN 2.0 B separated, 3x USB 3.0 HOST, 1x USB 2.0 OTG, 2x ETH 10/100/1000, LCD Port, 1x HDMI, LVDS, 2x PCIe, RTC, Temperature sensor, Reset button, SD interface, Power Supply, 4 GB SD card, Cable

**Starterkit STKLS102xA set** The core of the STKLS102xA set is the TQMLS102xA module with a Dual Cortex A7 CPU from NXP. 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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