

Preliminary

TQMLS1012A

The module based on ARM® 64 Bit and QorIQ™ technology opens new frontiers

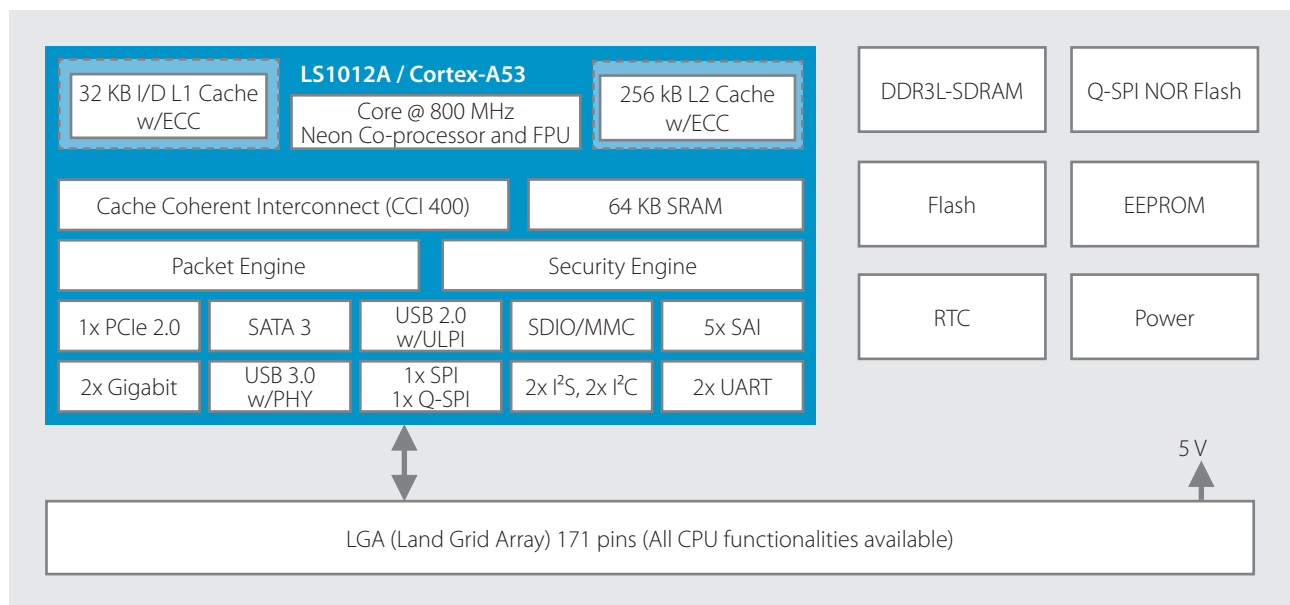
The Minimodule TQMLS1012A, based on the processor LS1012A from NXP, combines the 64Bit ARM Core architecture with the QorIQ high speed communication technology. This module is for various applications such as networking, industrial automation, gateways and controls with requirements for trusted, fast and secure data processing.

The 800MHz ARM Cortex™ A53 core integrated with high-speed peripherals and hardware acceleration provide the TQMLS102x a balance of high performance and low power.

The highlights:

- Extended temperature range
- High-Speed communication via 2x Gigabit Ethernet, 1x PCIe and one USB 3.0 interface
- Low power consumption (typ. 1-2 W)
- QorIQ Trust Architecture and ARM TrustZone
- Packet Acceleration Engine

Block diagram TQMLS1012A



Technical specification

Microprocessor

QorIQ LS1012A

System interfaces

Up to 2x Ethernet 10/100/1000 Mbit
2.5G N-BASE T
1x USB 2.0 high speed w/ULPI
1x USB 3.0 high speed w/PHY
Up to 2x UART

Periphery interfaces

Up to 2x SDIO/MMC 3.0
Up to 2x I²C
Up to 1x SPI
Up to 5x I²S
Up to 1x SATA 3.0
Up to 1x PCIe
Up to 1 QSPI (NOR Flash)

Memory

DDR3L-SDRAM: Up to 1 GB
Quad SPI NOR: Up to 256 MB (TBD)
EEPROM: 0 / 64 kbit

Other

Real Time Clock (RTC)
Temperature sensor
CPU JTAG interface

Power supply

3,3 V

Ambient conditions

Extended temperature range: -40°C...+85°C

Dimensions

31 mm x 31 mm (TBD)

Plug-in system

LGA (Land Grid Array) 171 Pins

Operating systems

Linux

Operating systems on request

QNX, INTEGRITY

Ordering information (preliminary)

TQMLS1012A-AA (Prototypes Q4/17)

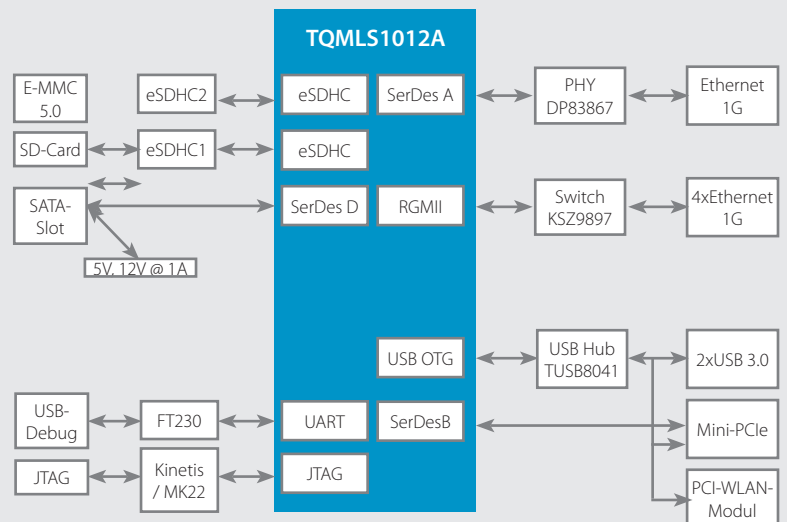
TQMLS1012A, Cortex A53 / 800 MHz, 64 MB Q-SPI NOR Flash, 4GB eMMC, 512 MB DDR3L, 64kB EEPROM, -40°C ...+85°C

STKLS1012x-AA (Prototypes Q4/17)

STKLS1012A(Eval Kit) with TQMLS1012A-AA, Cortex A53 / 800 (800) MHz, 512 MB DDR3L, 64 MB Q-SPI NOR Flash, 4GB eMMC, 64kB EEPROM, 1x RS232, 1x RS485, 1x USB 3.0 OTG, 4x USB 2.0, 2x ETH 10/100/1000, 1x PCIe ,RTC, Temperature sensor, Reset-Button, SD interface, Power Supply, 4GB SD card, Cables

STKLS1012x-AA (Prototypes Q4/17)

STKLS1012A(Eval Kit) with TQMLS1012A-AA, Cortex A53 / 800 (800) MHz, 512 MB DDR3L, 64 MB Q-SPI NOR Flash, 4GB eMMC, 64kB EEPROM, 1x USB Debug (RS232), 2x USB 3.0, SATA, 5x ETH 10/100/1000, 2x mini PCIe (1x only USB), RTC, Temperature sensor, Reset-Button, SD interface, Power Supply, 4GB SD card, Cables



TQ-Systems GmbH

Mühlstr. 2 | Gut Delling | 82229 Seefeld | Germany

Phone: +49 8153 9308-0 | Fax: +49 8153 4223

info@tq-group.com | www.tq-group.com

>> Quicklink: www.tq-group.com/en/TQMLS1012A