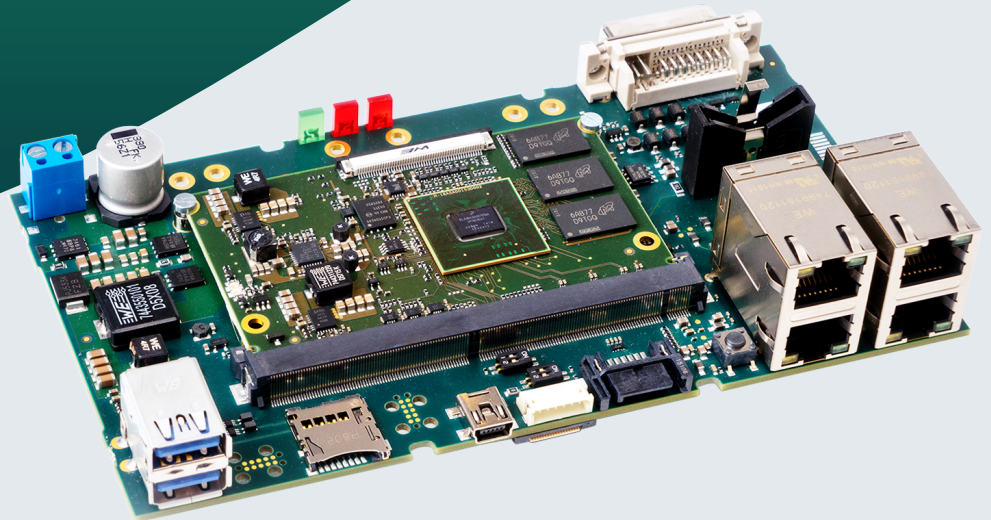


Arm® Architecture

miriac® SBC-LS1043A

Single Board Computer based on
NXP® QorIQ® LS1043A



Single Board Computer at a glance

- Up to 4 GB 32-bit DDR4 ECC RAM at 1600 MTps
- Hybrid 32-bit mode to support legacy software
- Temperature sensor
- All on board supply voltages are monitored by a separate μ -controller





Product Description

The miriac® SBC-LS1043A Single Board Computer is a NXP® QorIQ® LS1043A quad core Arm® Cortex®-A53 based complete system solution by MicroSys. NXP's LS1043A and LS1023A (two cores) CPUs deliver greater than 10 Gbps of performance in a flexible I/O package supporting fanless designs. This SoCs are purpose-built solutions for small-form-factor networking and industrial applications with BOM optimizations for economic low layer PCB, lower cost power supply and single clock design.



Specifications

CPU

Architecture	Arm® Cortex®-A53
Processor	NXP® QorIQ® LS1043A CPU: 4 Arm® Cortex®-A53 64-bit cores at up to 1.6 GHz core frequency
DRAM	Up to 4 GB 32-bit DDR4 ECC RAM

Memory

Flash	Up to 2 GB SLC NAND Flash & up to 16 MB SPI Flash
Flash Card	Yes
Boot Flash	QSPI, SD/MMC, NAND Flash

Ethernet

1GbE	3x
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High Speed IO

USB 3.0	2x
miniUSB	1x debug
PCIe	1x PCIe via extension connector, optional: 1x PCIe via edge card connector
SATA	1x

IO

UART	1x TTL
GPIOs	6x in / 6 out
JTAG Debug Interface	Yes

Extension Card Modules

miniPCIe	1x
mSATA	1x

Operating Condition

Power Supply Voltage	Single 9 to 24 V DC input supply voltage range
RTC	Yes
RTC-Buffer	CR2032 battery
Temperature	0 °C to 70 °C



Specifications

Mechanical

Dimensions 86 mm x 157 mm

Software / Additional

Software Support

- Linux
- VxWorks (on request)
- Others (on request)

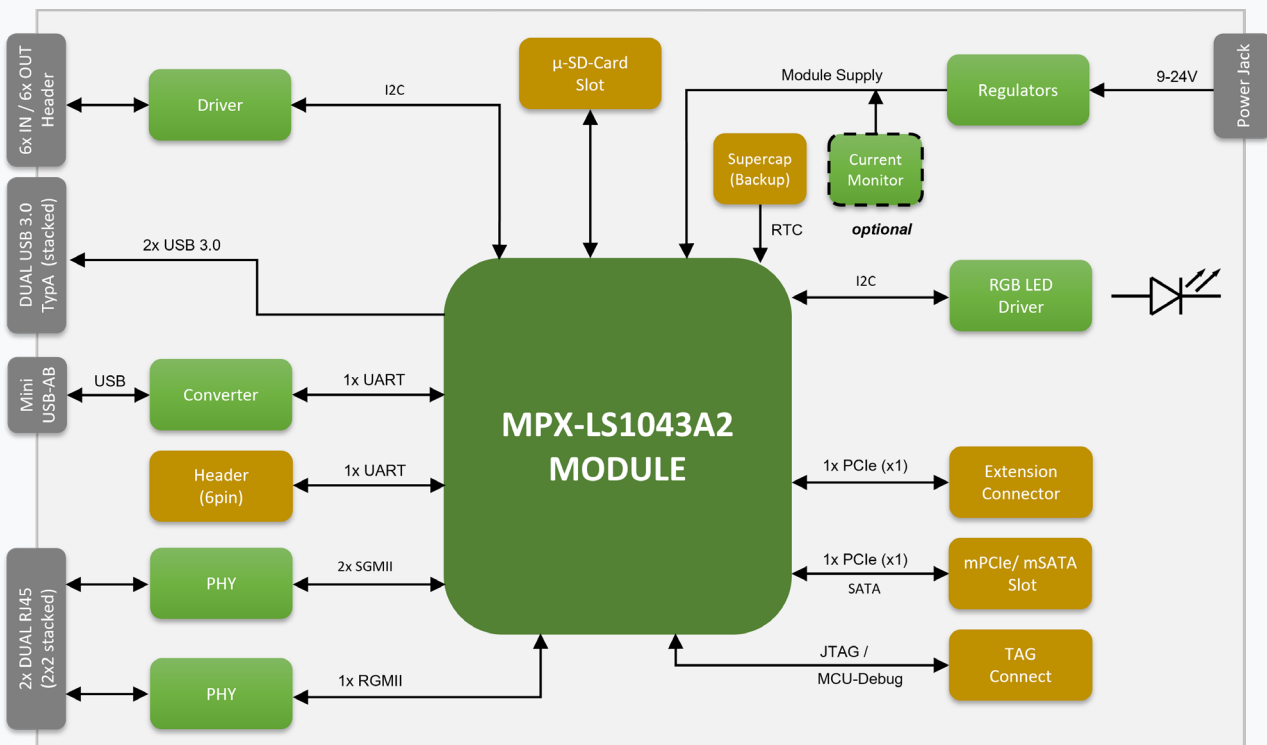
Additional

- Compatible variants available with QorIQ® LS1023A, LS1046A, LS1048A, LS1088A
- Temperature sensor
- 4x RGB LED
- Dev Kit for immediate start up, e.g. power supply, cables (optional)

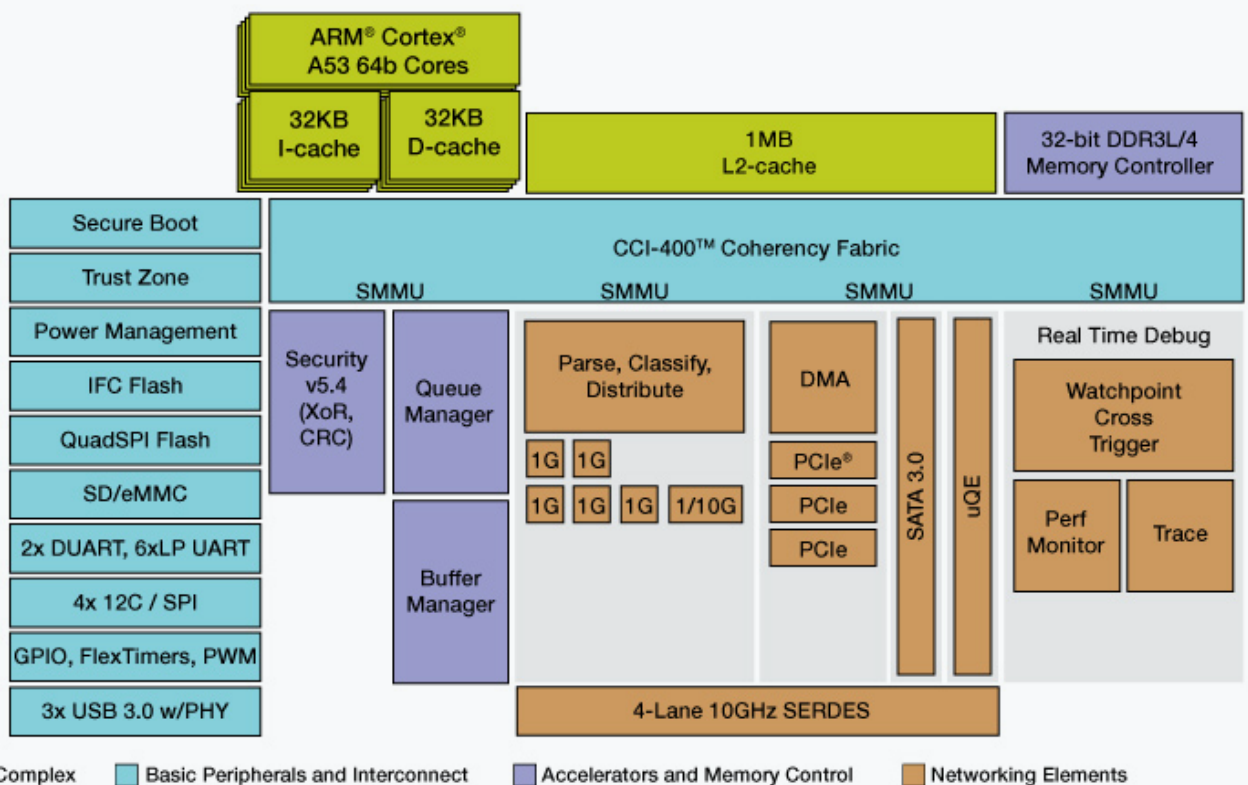
General note:

Our standard product versions offer what we consider to be the optimum configuration in terms of performance, price, usage and TDP. The product features lists specify the maximum range of functions per interface. However, not all interfaces or functions are always available in parallel. Flexible SERDES multiplexing is one of the reasons for this. In addition, we provide multiple memory expansion options and are also happy to accommodate specific customer wishes. So do not hesitate to contact us directly to discuss your desired configuration.

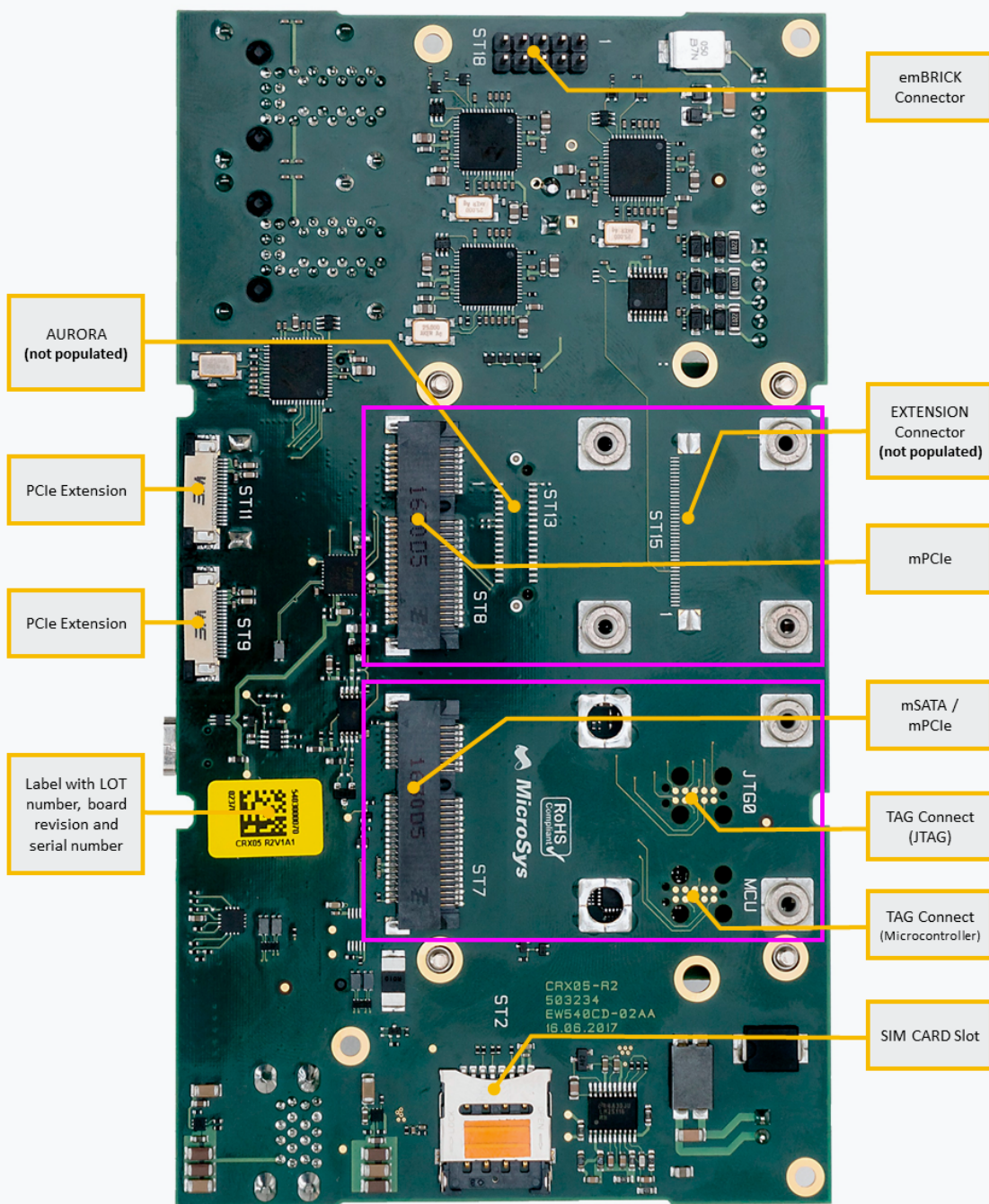
Block diagram



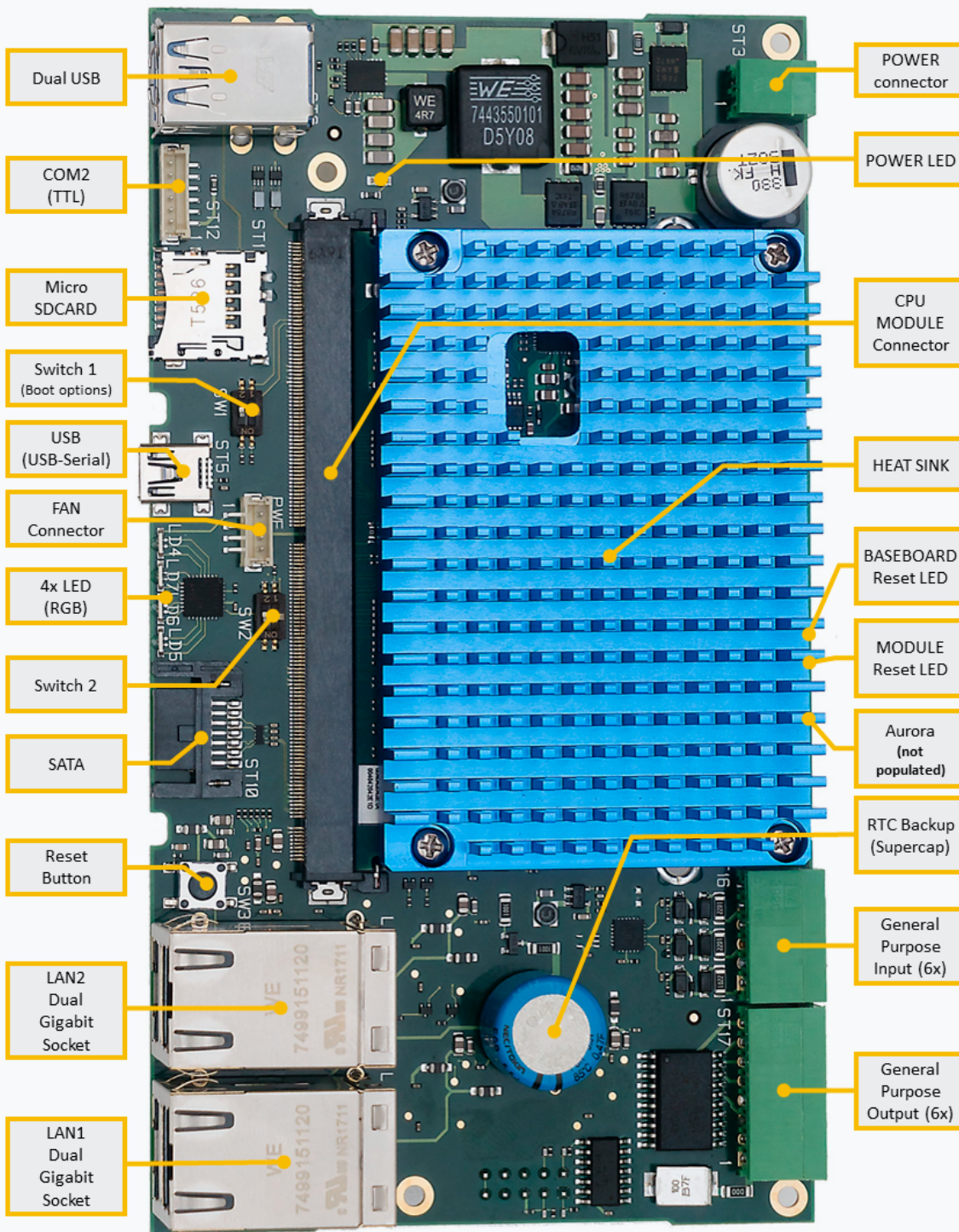
SBC-LS1043A2: Version 2.0.0 – 2017-09-29



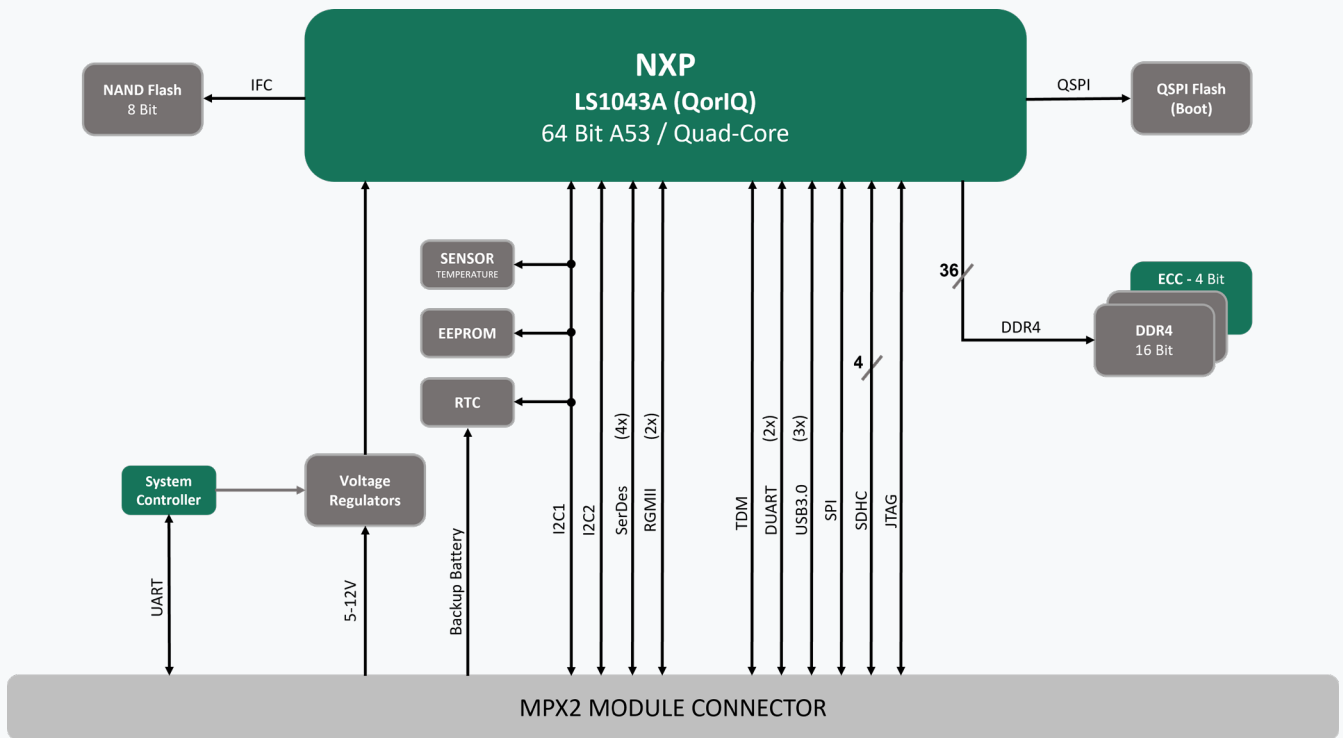
Block diagram



Block diagram



Block diagram





Order Information

Name	Code	Description	Status
miriac® SBC-LS1043A Single Board Computer	854201	LS1043A@1.4 GHz, 1 GB DDR4 RAM, 512 MB Flash memory	active
miriac® SBC-LS1043A Starter Kit	855914	for MPX-LS1043A, incl. order# 855605 (1 GHz, 2 GB DDR4 (32-bit), 512 MB Flash), Carrier Board, Linux BSP, accessories	active



Related Products

Name	Code	Description	Status
miriac® MPX-LS1043A	855605	Low-power module for price sensitive communication	active



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