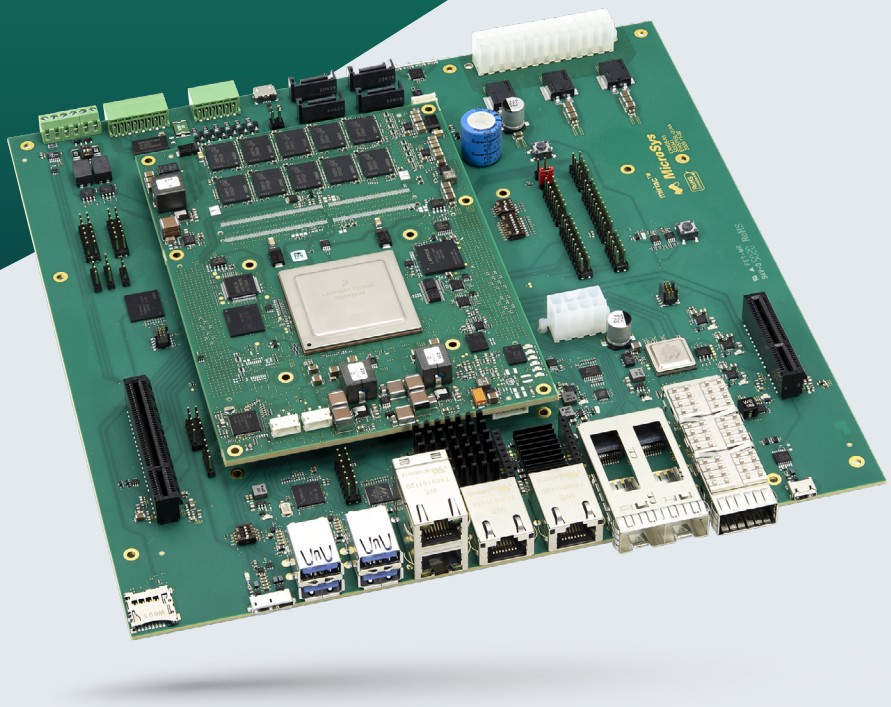
MicroSys
Creating Embedded Systems

Arm® Architecture

miriac® SBC-LX2160A

Single Board Computer based on NXP® Layerscape® LX2160A Processor



Single Board Computer at a glance

- 16 Arm® Cortex®-A72 64-bit cores up to 2.2 GHz
- 24 SerDes lanes (PCIe Gen3 x8, 100 GbE/40 GbE/25 GbE/10 GbE, SATA, ...)
- 2x DDR4 controllers (up to 3200MT/s with ECC) support up to 128 GB DDR4 RAM, optional ECC
- Temperature sensors, cooling controller, RTC, management engine
- Boot select: XSPI, eMMC or external SD card

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Product Description

The miriac® SBC-LX2160A Single Board Computer is a high-end platform consisting of a MicroSys designed carrier board and the miriac® MPX-LX2160A SoM based on NXP's multicore communication processor offering 16 Arm® Cortex®-A72 cores at up to 2.2 GHz. The target application is a ready-to-use evaluation system of the miriac® MPX-LX2160A as well as direct use as an industrial edge computing solution requiring high compute performance and numerous high-speed I/O.

Specifications

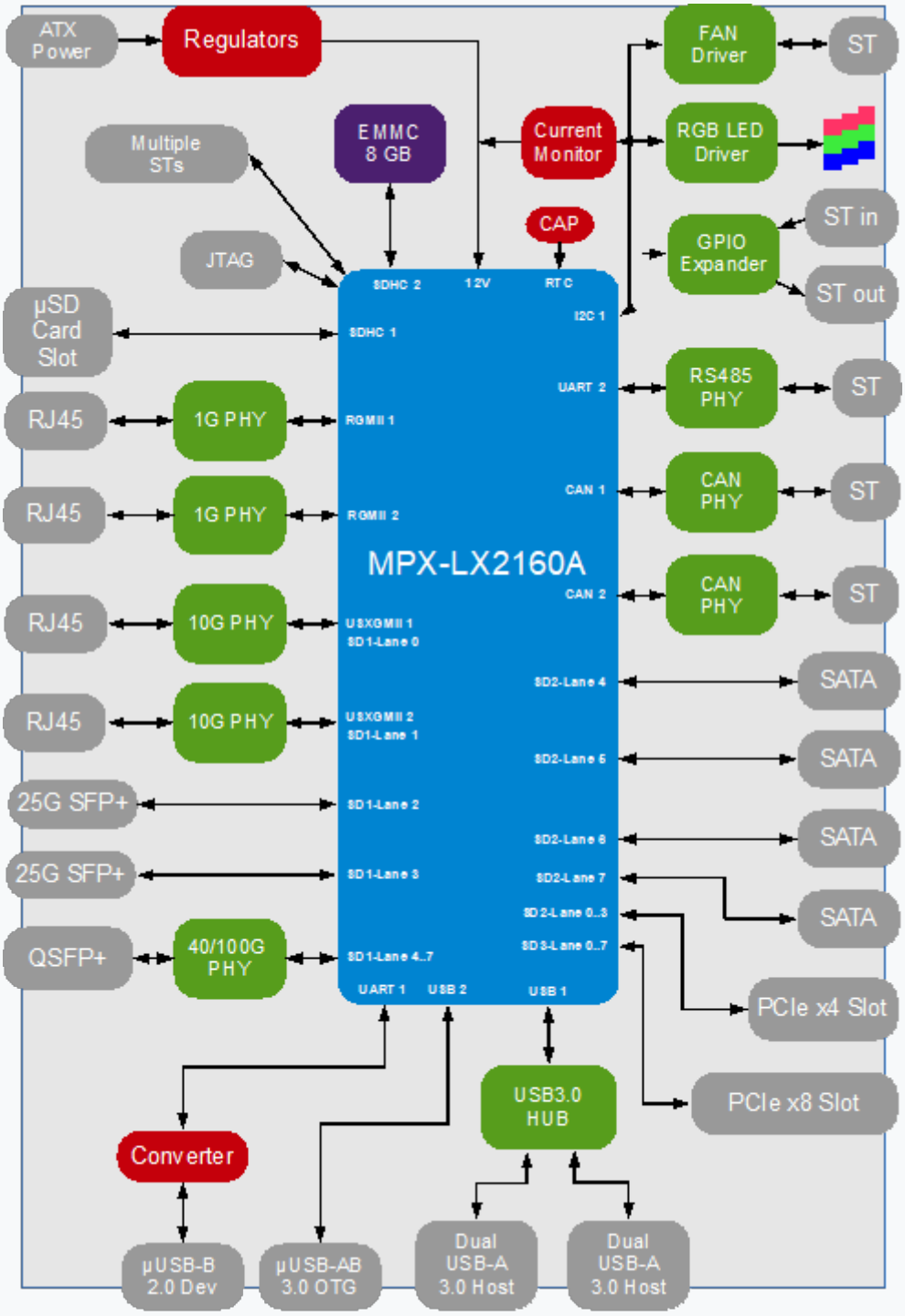
CPU	
Architecture	Arm® Cortex®-A72
Processor	NXP® Layerscape® LX2160A with 16 Arm® Cortex®-A72 64-bit cores up to 2.2 GHz
DRAM	▪ Up to 128 GB DDR4 RAM & optional ECC, up to 3200MT/sec, ▪ Up to 4 ranks using a combined design: discrete & SODIMM
Memory	
Flash	Up to 2 Gb Octal SPI Flash at up to 200 MHz, double operation / golden image
Flash Card	Yes
Boot Flash	Boot select: XSPI, eMMC or external SD card
eMMC	8 GB
Ethernet	
100GbE	1x QSFP+
40GbE	1x QSFP+
25GbE	2x (SFP+)
10GbE	2x
1GbE	2x
High Speed IO	
USB 3.0	4x
µUSB	2x
PCIe	PCIe x8 & PCIe x4 (Gen3)
SATA	4x
IO	
UART	RS485
CAN FD	2x
GPIOs	6x in / 8x out
JTAG Debug Interface	Yes
Operating Condition	
Power Supply Voltage	Single +12 V DC power input ATX
RTC	Yes
RTC-Buffer	Supercap
Temperature	0 °C to 70 °C

Specifications

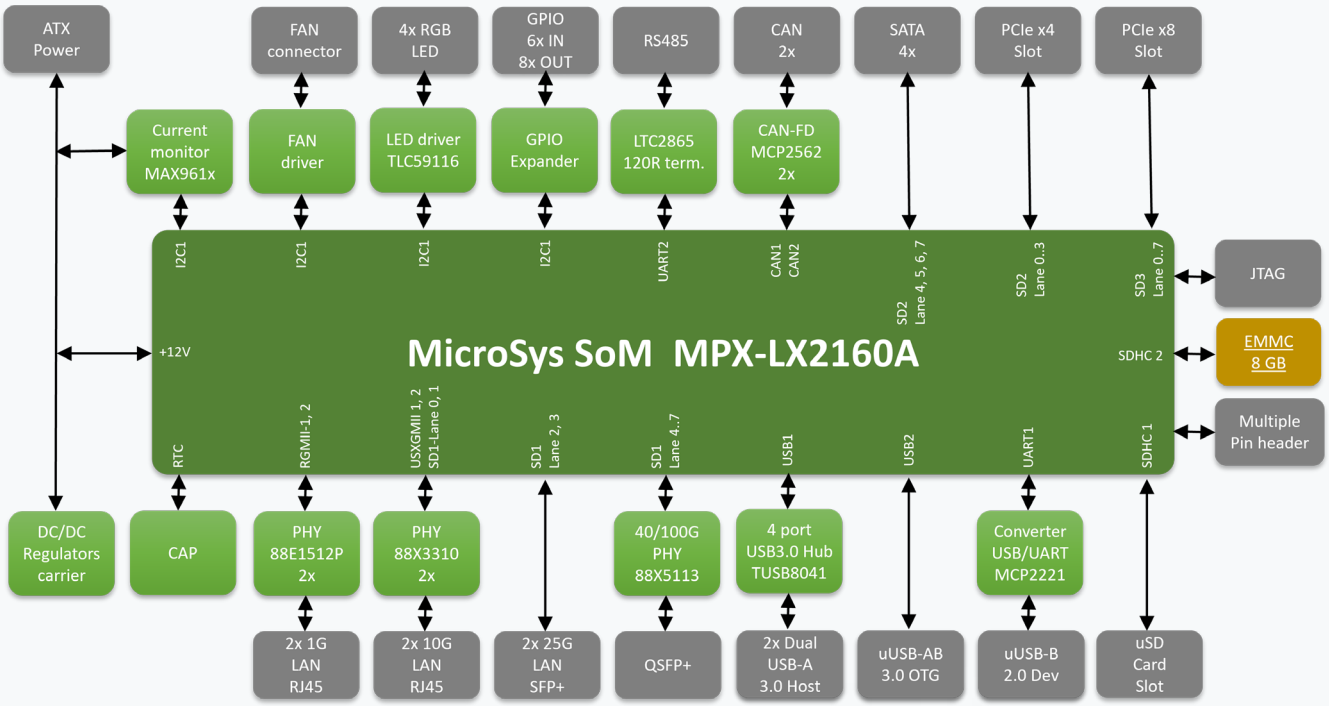
Mechanical	
Dimensions	244 mm x 244 mm
Software / Additional	
Software Support	■ Linux ■ VxWorks (on request) ■ Others (on request)
Additional	■ Board is powered by an ATX power supply with separate 12 V line, delivering 200 W minimum. ■ 4x RGB LED ■ FAN Driverc ■ Current Monitor ■ Development Kit for immediate start up; includes power supply, Linux pre-installed

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



Block diagram



Order Information

Name	Code	Description	Status
miriac® SBC-LX2160A Development Kit	859702	miriac® SBC-LX2160A Development Kit for MPX-LX2160A with 32 GB RAM, 16 MB NOR Flash, 2.0 GHz processor, Security enabled, extended temperature, Linux BSP, accessories	active

Related Products

Name	Code	Description	Status
miriac® MPX-LX2160A SoM	858402	Rugged edge server class SoM for high-end communication applications	active

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