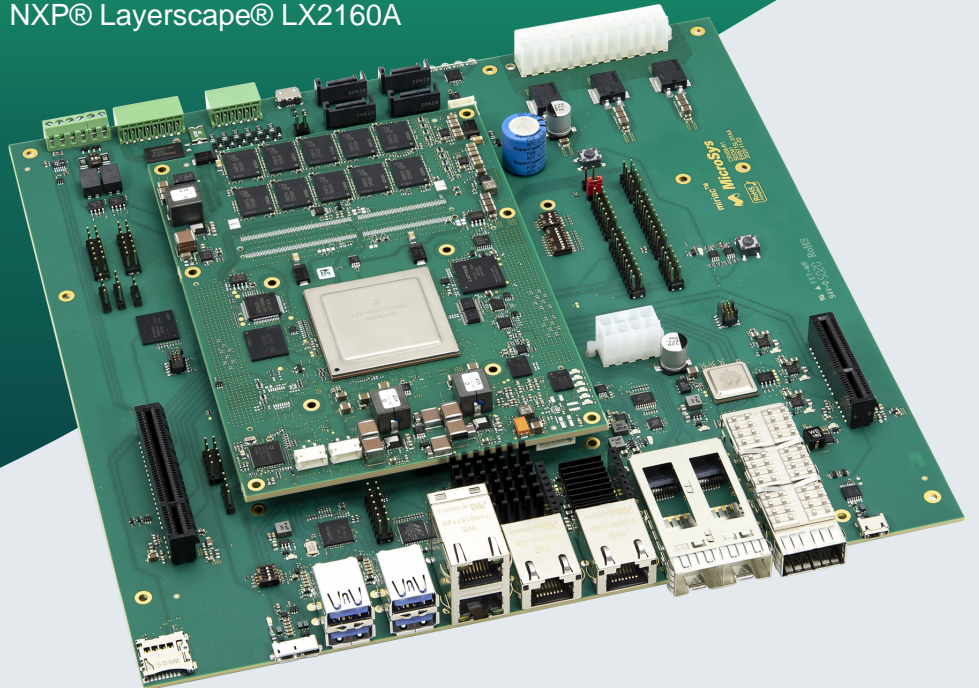![MicroSys — Creating Embedded Systems]

SBC Arm® Architecture

miriac® SBC-LX2160A

Single Board Computer based on NXP® Layerscape® LX2160A Processor

Highlights

- 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

NXP Gold Partner

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.

The miriac® SBC-LX2160A is optionally available in a rugged chassis for applications in harsh environments, e.g. as a control unit.

Features

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
Operating Condition	
Power Supply Voltage:	Single +12 V DC power input ATX
RTC:	Yes
RTC-Buffer:	Supercap
Temperature:	0 °C to 70 °C

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 Diagrams
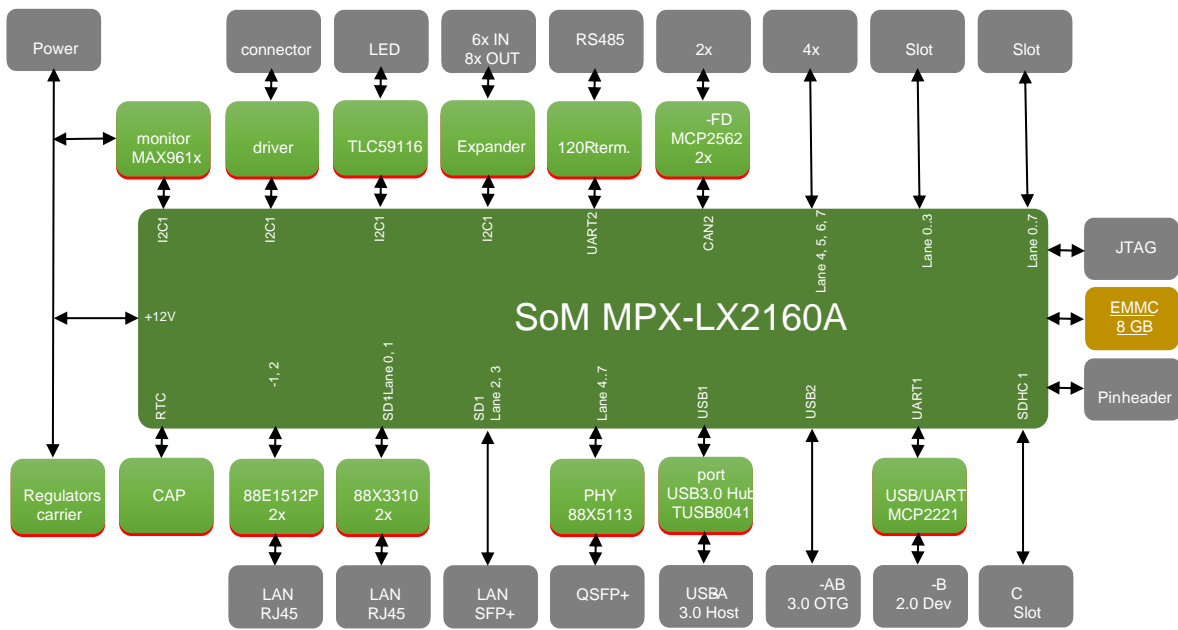
miriac® SBC-LX2160A

Order Info

Name	Code	Description	Status
miriac® SBC-LX2160A Development Kit	859702	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	Description	Image
miriac® MPX-LX2160A	Rugged edge server class SoM for high-end communication applications	
CRX08		