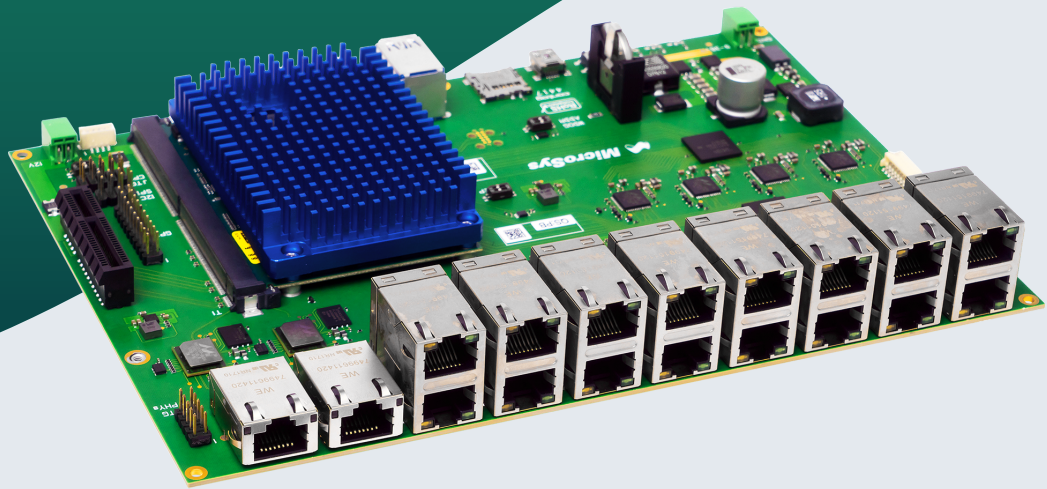


SBC Arm® Architecture

# miriac® SBC-LS1088A-TSN

Single Board Computer based on NXP® QorIQ® LS1088A CPU



## Highlights

- 2x 10 Gb Interfaces for High Speed Ethernet
- 8x 1 Gb TSN connectors (driven by 2 switches) for reliable real time communication over Ethernet
- NXP® QorIQ® LS1088A octal core Arm® Cortex®-A53 CPU
- All on board supply voltages are monitored by a separate  $\mu$ -controller
- ECC Memory, Encryption (optional)





## Product Description

The miriac® SBC-LS1088A-TSN platform is part of a system family to address the increasing communication demand in industrial applications. For that the carrier offers the support of the Time Sensitive Networking Standard (TSN) and holds a high-performance networking infrastructure. It integrates for example 2x 10 Gb and up to 8x 1 Gb Ethernet ports, 1x PCIe x4 port and 8x 1 Gb TSN connectors (driven by 2 switches) for reliable real time communication over Ethernet.



## Features

CPU	
Architecture:	Arm® Cortex®-A53
Processor:	NXP® QorIQ® LS1088A CPU: 8 Arm® Cortex®-A53 64-bit cores at up to 1.6 GHz core frequency
DRAM:	Up to 8 GB 32-bit DDR4 ECC RAM at 2100 MT/s
Memory	
Flash:	Up to 2 GB SLC NAND Flash & up to 64 MB QuadSPI Flash
Flash Card:	Yes
Boot Flash:	QSPI, SD/MMC, NAND Flash
Ethernet	
10GbE:	2x
1GbE:	8x
TSN / IEEE 1588:	8x 1 Gbit TSN
High Speed IO	
USB 3.0:	2x
miniUSB:	1x debug
PCIe:	1x PCIe x4/x1 via edge card connector
Operating Condition	
Power Supply Voltage:	Single 9 to 36 V DC input supply voltage range
RTC:	Yes
RTC-Buffer:	CR2032 battery
Temperature:	0 °C to 70 °C
Mechanical	
Dimensions:	220 mm x 150 mm
Software / Additional	
Software Support:	<ul style="list-style-type: none"> <li>- Linux</li> <li>- VxWorks (on request)</li> <li>- Others (on request)</li> </ul>
Additional:	<ul style="list-style-type: none"> <li>- 4x RGB LED</li> <li>- Compatible variants available with QorIQ® LS1023A,</li> </ul>

LS1043A, LS1046A, LS1048A

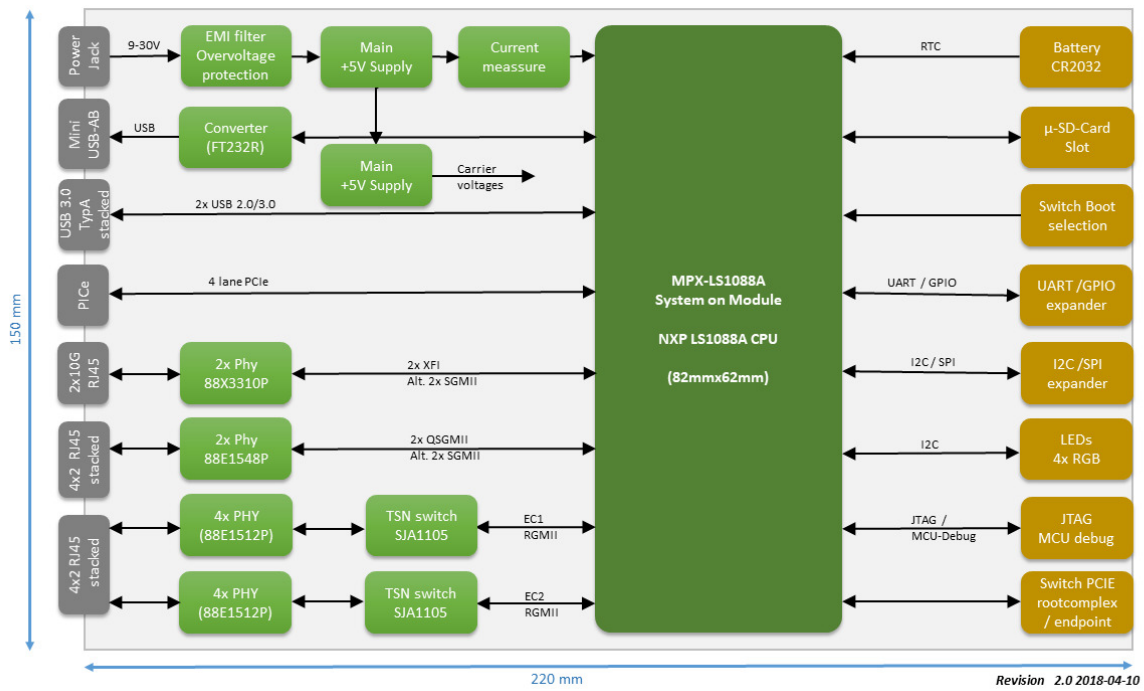
- Temperature sensor
- PCIe rootcomplex or endpoint switchable
- Overvoltage protection
- Dev Kit for immediate start up, e.g. power supply, cables (optional)

**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 Diagrams



miriac® SBC-LS1088A-TSN



## Order Info

Name	Code	Description	Status
miriac® SBC-LS1088A-TSN	856403	includes MPX-LS1088A SoM (order # 855606) with 1.6 GH, 4 GB DDR4 RAM (64 Bit), ECC, 512 MB Flash	active
miriac® SBC-LS1088A-TSN Development Kit	856412	for MPX-LS1088A SoM, includes order # 856403, Linux BSP, accessories	active



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