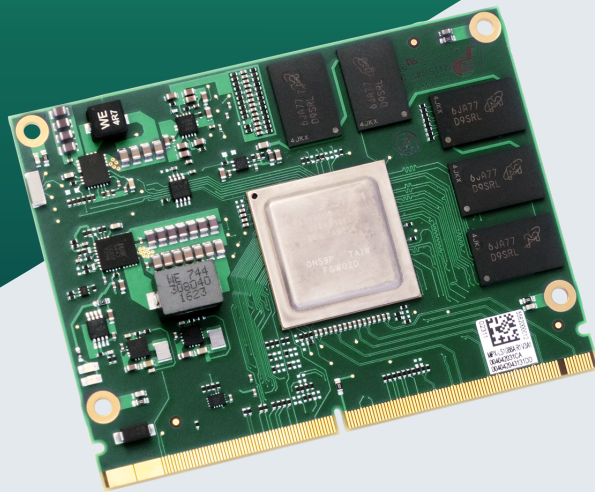


SoMs Arm® Architecture

# miriac® MPX-LS1088A

Multicore networking processor for high-performance communication



## Highlights

- 8 Arm® Cortex®-A53 64-bit cores at up to 1.6 GHz core frequency
- Up to 8 GB 64-bit DDR4 ECC RAM at 2100 MTps
- Temperature sensor
- All on board supply voltages are monitored by a separate  $\mu$ -controller
- Control of on-board voltages and the reset logic offer a wide spectrum of custom functionality, even low-level safety functions





## Product Description

New cost effective MPX-2 System on Module form factor, connecting to a standard edge connector (MXM3.0 socket). Includes NXP® QorIQ® LS1088A CPU: 8 Arm® Cortex®-A53 64-bit cores at up to 1.6 GHz core frequency.



## 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:	SDHC
Boot Flash:	QSPI, SD/MMC, NAND Flash
eMMC:	8-bit
EEPROM:	Yes
Ethernet	
10GbE:	2x XFI
RGMI:	2x
SGMI:	8x 1 Gbps, 2x 2.5 Gbps
QSGMI:	2x 5Gbs
TSN / IEEE 1588:	Yes
High Speed IO	
SerDes lanes:	8x SerDes lanes at 10 Gbps
USB 3.0:	3x (Host / Client / OTG)
PCIe:	3x PCIe Gen3 (x4lane support)
SATA:	1x Gen3
Security / Safety	
Security:	Security Engine (SEC) SFP, CSU
Operating Condition	
Power Supply Voltage:	Single 5 to 12 V DC input supply voltage range
Typical Power Consumption:	8.5 W
Power Management:	Yes
RTC:	Epson RX-8803LC
Temperature:	0 °C to 70 °C
Optional Extended Temperature:	-40 °C to +85 °C
Mechanical	

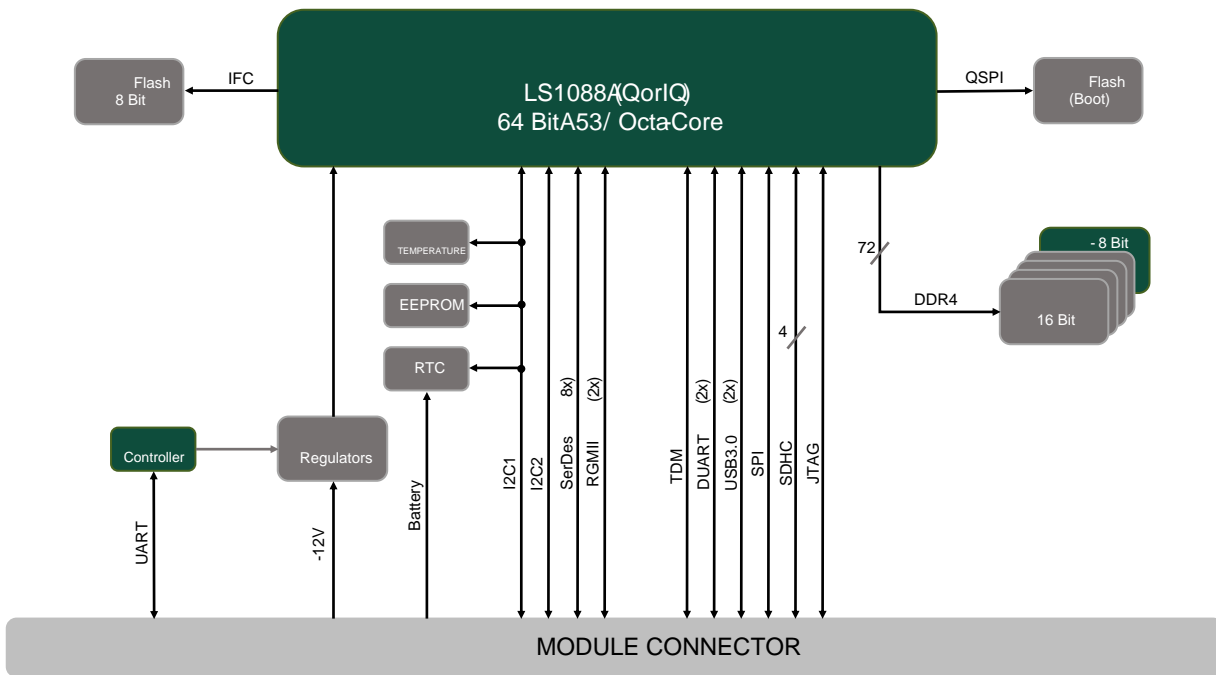
<b>Dimensions:</b>	62 mm x 82 mm
<b>Connector Type:</b>	MPX-2 for MXM3.0 socket
<b>Software / Additional</b>	
<b>Software Support:</b>	<ul style="list-style-type: none"> <li>- Linux</li> <li>- VxWorks (on request)</li> <li>- Others (on request)</li> </ul>
<b>Additional:</b>	<ul style="list-style-type: none"> <li>- Compatible variants available with QorIQ® LS1023A, LS1043A, LS1046A, LS1048A,</li> <li>- Temperature sensor</li> <li>- Dev Kit available for immediate start, includes power supply, cables. Linux on SD card</li> </ul>

**General Note:**

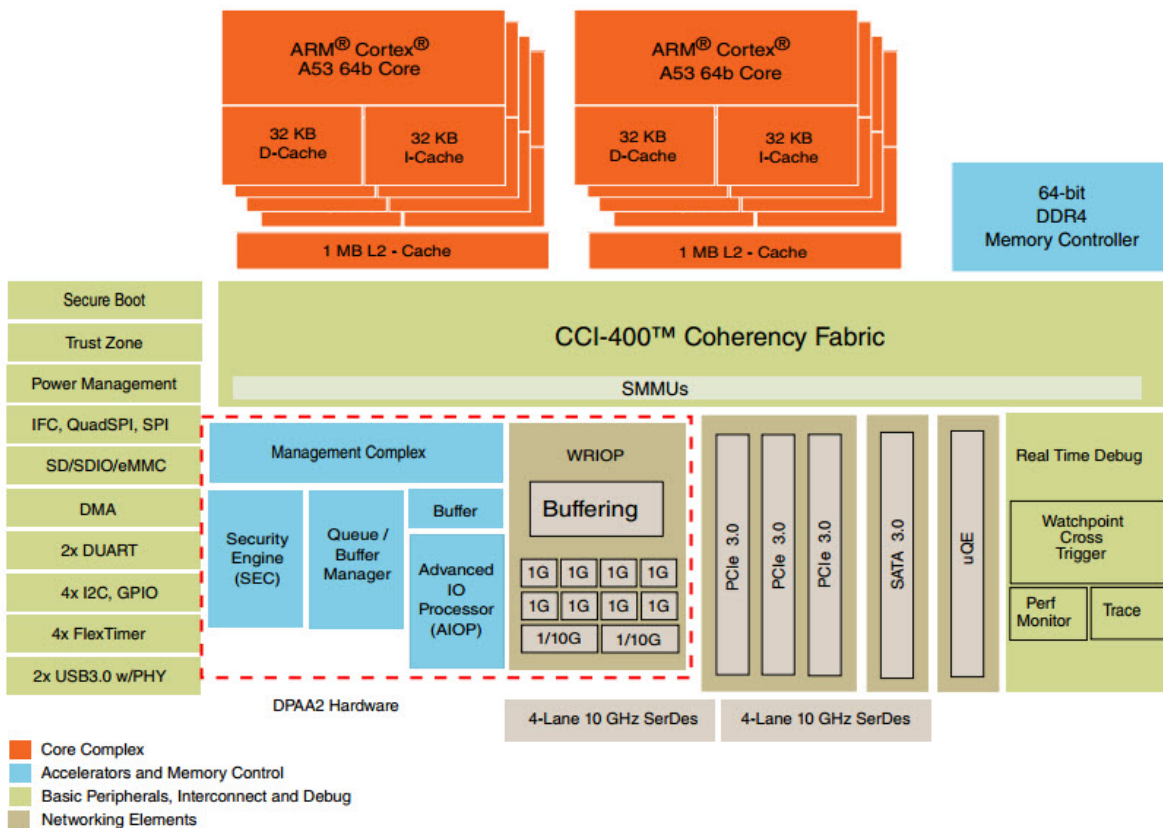
Our standard product versions offer what we consider to be the optimum configuration in terms of performance, price, usage and TDP. The product features lists specify the maximum range of functions per interface. However, not all interfaces or functions are always available in parallel. Flexible SERDES 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® MPX-LS1088A



LS1088A




## Order Info

Name	Code	Description	Status
<a href="#">miriac® MPX-LS1088A</a>	855606	8 Arm® Cortex®-A53, 1.6 GHz, 4 GB DDR4 w ECC, 16 MB NOR Flash, 512 MB Flash, 0 °C to 70 °C, w SEC	active
Development Kit basic for <a href="#">miriac® MPX-LS1088A</a>	8559	<ul style="list-style-type: none"><li>• <a href="#">miriac® MPX-LS1088A</a></li><li>• <a href="#">CRX05</a></li><li>• incl. BSP and accessories</li></ul>	active
Development Kit pro for <a href="#">miriac® MPX-LS1088A</a>	8559	<ul style="list-style-type: none"><li>• <a href="#">miriac® MPX-LS1088A</a></li><li>• <a href="#">CRX06-TSN</a></li><li>• incl. BSP and accessories</li></ul>	active



## Related Products

Name	Description	Image
<a href="#">miriac® SBC-LS1088A</a>		

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Creating Embedded Systems

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Gold  
Partner