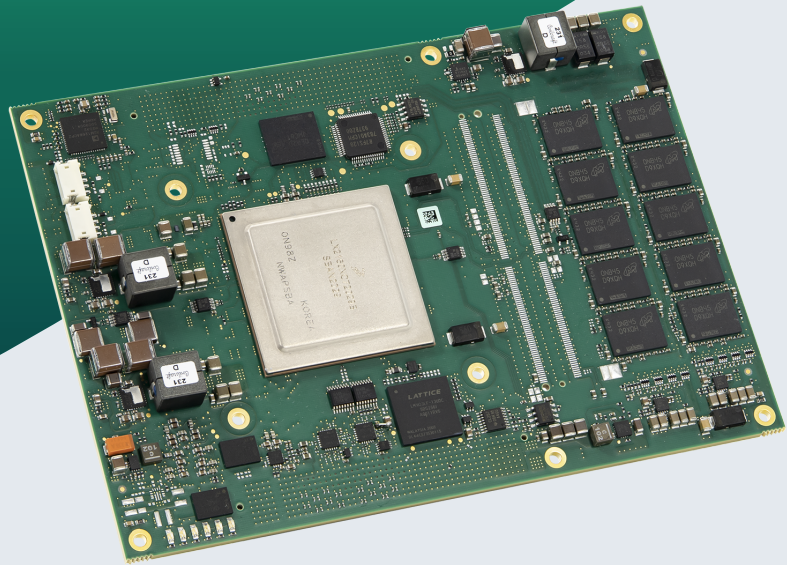


SoMs Arm® Architecture

miriac® MPX-LX2160A

Rugged edge server class SoM for high-end communication applications



Highlights



- NXP® Layerscape® LX2160A with 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 3200 MT/s with ECC) support up to 128 GB DDR4 RAM, ECC
- Boot select: XSPI, eMMC or external SD card
- Single 5-12 V DC input supply voltage range





Product Description

NXP's flagship processor, the LX2160A, offers 16 Arm® Cortex®-A72 cores at 2.2GHz. In addition, the LX2160A offers 24 SerDes lanes (PCIe Gen3 x8, 100 GbE/40 GbE/25 GbE/10 GbE, SATA) and up to 128 GB DDR4 RAM driven by 2x DDR4 controllers (up to 3200 MT/s with ECC). This means that the MPX-LX2160A module is designed for applications that are highly compute-intensive and require numerous high-speed I/O.



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 200MHz, double operation / golden image
Flash Card:	Interface for external SD card
Boot Flash:	Boot select: XSPI, eMMC or external SD card
eMMC:	Up to 256 GB, HS400, JEDEC 5.1 standard support
Ethernet	
100GbE:	Yes
40GbE:	Yes
25GbE:	Yes
10GbE:	Yes
100BASE-T1:	Yes
High Speed IO	
SerDes lanes:	24 SerDes lanes (PCIe Gen3 x8, 100GbE/40GbE/25GbE/10GbE, SATA)
USB 3.0:	2x
USB 2.0:	Yes
PCIe:	PCIe Gen3 x8
SATA:	Yes
Security / Safety	
Security:	Secure boot, trust zone
Operating Condition	
Power Supply Voltage:	Single 5 to 12 V DC input supply voltage range
Typical Power Consumption:	25 W

Power Management:	Yes
RTC:	PCF85263
Temperature:	0 °C to 70 °C
Optional Extended Temperature:	-40 °C to +85 °C
Mechanical	
Dimensions:	155 x 110 mm
Connector Type:	2x high-speed/high-density open-pin-field connectors á 400 pins
Software / Additional	
Software Support:	<ul style="list-style-type: none"> - Linux - VxWorks (on request) - Others (on request)
Additional:	<ul style="list-style-type: none"> - Temperature sensors, cooling controller, RTC, Management Engine - All I/O pins available on SEARAY™ Connectors - Development Kit available for immediate start; includes power supply, cables; Linux on SD card

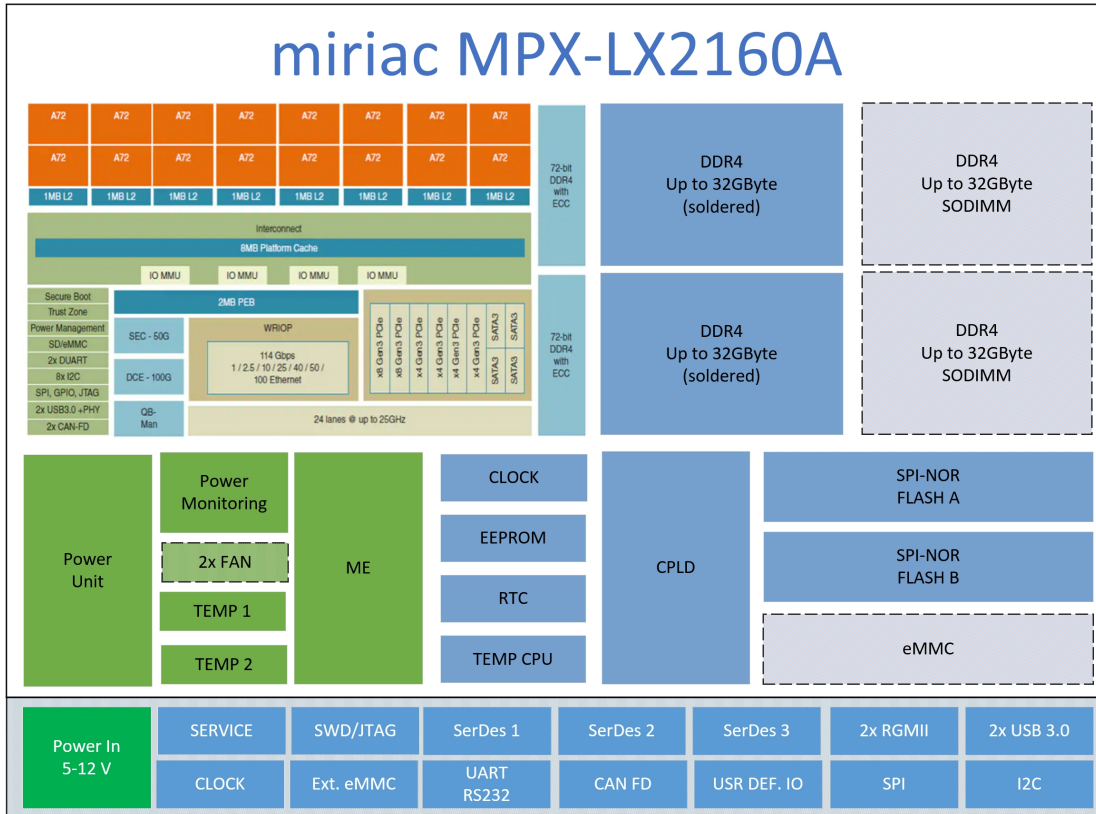
General Note:

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-LX2160A



miriac® MPX-LX2160A

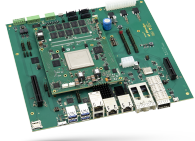


Order Info

Name	Code	Description	Status
miriac® MPX-LX2160A	858402	16 Arm® Cortex®-A72, 2.0 GHz, 32 GB DDR4 w ECC, 16 MB NOR Flash, 512 MB NAND Flash, 32 GB eMMC, 0 °C to 70 °C, w SEC	active
Development Kit basic for miriac® MPX-LX2160A	8597	<ul style="list-style-type: none">• miriac® MPX-LX2160A• CRX08• incl. BSP and accessories	active



Related Products

Name	Description	Image
miriac® SBC-LX2160A		

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