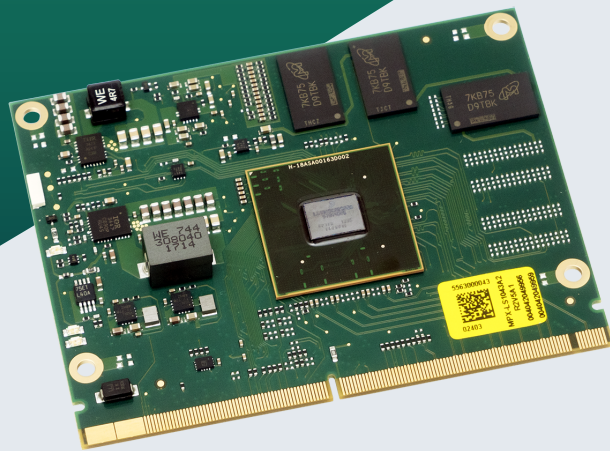


SoMs Arm® Architecture

miriac® MPX-LS1043A

Low-power module for price sensitive communication



Highlights



- 4 Arm® Cortex®-A53 64-bit cores at up to 1.6 GHz core frequency
- Up to 4 GB 32-bit DDR4 ECC RAM at 1600 MTps
- Temperature sensor
- All on board supply voltages are monitored by a separate μ -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). The miriac® MPX-LS1043A SoM is based on the NXP® QorIQ® LS1043A Arm® Cortex® - QorIQ® CPU.



Features

CPU	
Architecture:	Arm® Cortex®-A53
Processor:	NXP® QorIQ® LS1043A CPU: 4 Arm® Cortex®-A53 64-bit cores at up to 1.6 GHz core frequency
DRAM:	Up to 4 GB 32-bit DDR4 ECC RAM
Memory	
Flash:	Up to 2 GB SLC NAND Flash & up to 16 MB SPI Flash
Flash Card:	SDHC
Boot Flash:	QSPI, SD/MMC, NAND Flash
eMMC:	8-bit
EEPROM:	Yes
Ethernet	
10GbE:	1x XFI
RGMII:	2x
SGMII:	4x 1 Gbps, 2x 2.5 Gbps
QSGMII:	2x 5 Gbps
TSN / IEEE 1588:	Yes
High Speed IO	
SerDes lanes:	4x SerDes lanes at 10 Gbps
USB 3.0:	3x
PCIe:	3x PCIe Gen2
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:	5 W
Power Management:	Yes
RTC:	Epson RX-8803LC
Temperature:	0 °C to 70 °C
Optional Extended Temperature:	-40 °C to +85 °C
Mechanical	
Dimensions:	62 mm x 82 mm

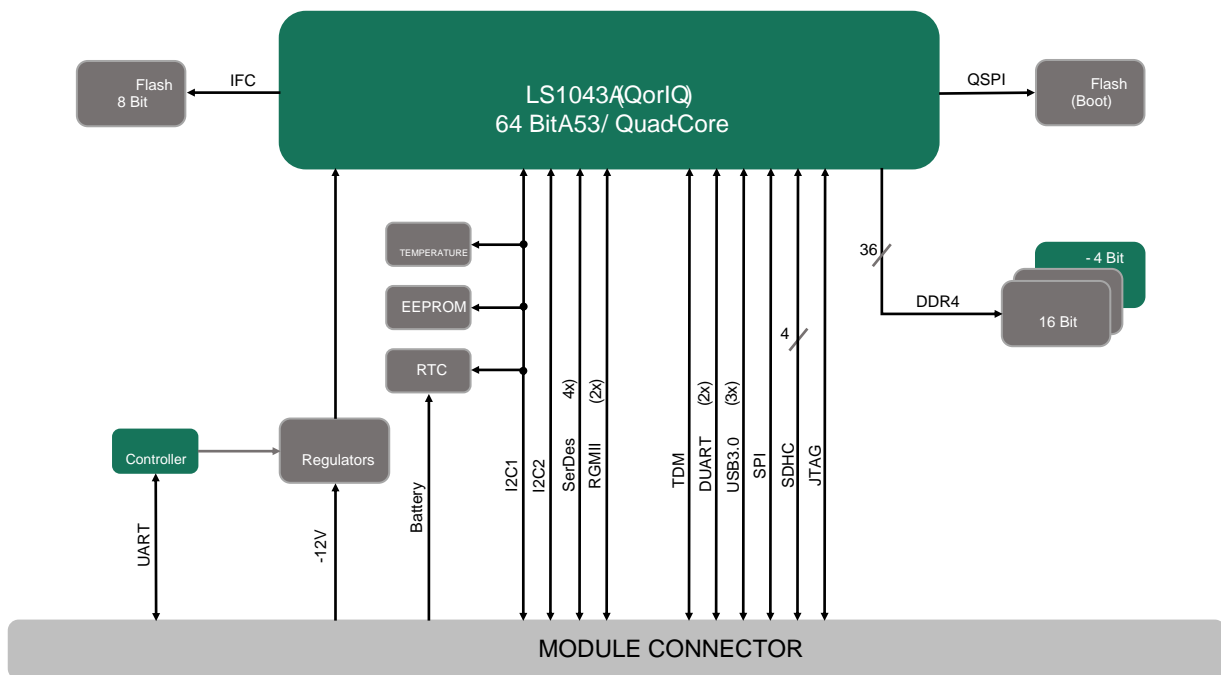
Connector Type:	MPX-2 for MXM3.0 socket
Software / Additional	
Software Support:	<ul style="list-style-type: none"> - Linux - VxWorks (on request) - Others (on request)
Additional:	<ul style="list-style-type: none"> - Compatible variants available with QorIQ LS1023A, LS1046A, LS1048A, LS1088A - Temperature sensor - Dev 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-LS1043A2

NXP® Layerscape LS1043A



Order Info

Name	Code	Description	Status
miriac® MPX-LS1043A2	855605	4 Arm® Cortex®-A53, 1.0 GHz, 2 GB DDR4 w ECC, 16 MB NOR Flash, 512 MB NAND Flash, 0 °C to 70 °C, w/o SEC	active
Development Kit basic for miriac® MPX-LS1043A2	855914	4 Arm® Cortex®-A53, 1.0 GHz, 2 GB DDR4 w ECC, 16 MB NOR Flash, 512 MB NAND Flash, 0 °C to 70 °C, w/o SEC	active
Development Kit pro for miriac® MPX-LS1043A2	856410	4 Arm® Cortex®-A53, 1.0 GHz, 2 GB DDR4 w ECC, 16 MB NOR Flash, 512 MB NAND Flash, 0 °C to 70 °C, w/o SEC	active



Related Products

Name	Description	Image
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miriac® SBC-LS1043A



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