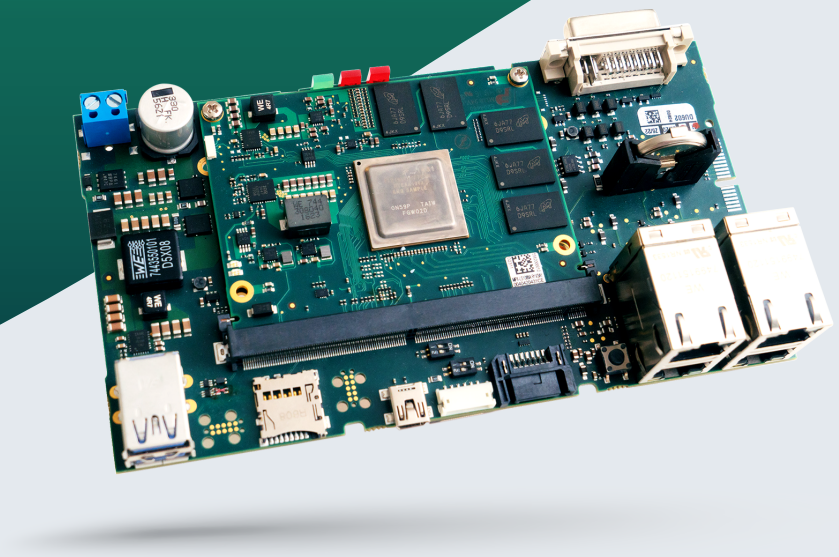
MicroSys
Creating Embedded Systems

SBC Arm® Architecture

miriac® SBC-LS1046A

Single Board Computer based on NXP® QorIQ® LS1046A CPU



Highlights

- Up to 8 GB 64-bit soldered DDR4 ECC RAM at 2100 MTp/s
- Hybrid 32-bit mode to support legacy software
- Temperature sensor
- All on board supply voltages are monitored by a separate µ-controller

NXP Gold Partner

Product Description

The miriac SBC-LS1046A Single Board Computer is a NXP® QorIQ® LS1046A quad core Arm® Cortex®-A72 based complete system solution by MicroSys. NXP's LS1046A and LS1026A (two cores) 64-bit high performance CPUs offer integrated packet processing acceleration and high speed peripherals for up to 10 GbE (4x 1GbE on this SBC), PCIe Gen3, SATA 3.0 and USB 3.0 for a wide range of Industry 4.0 applications.

Features

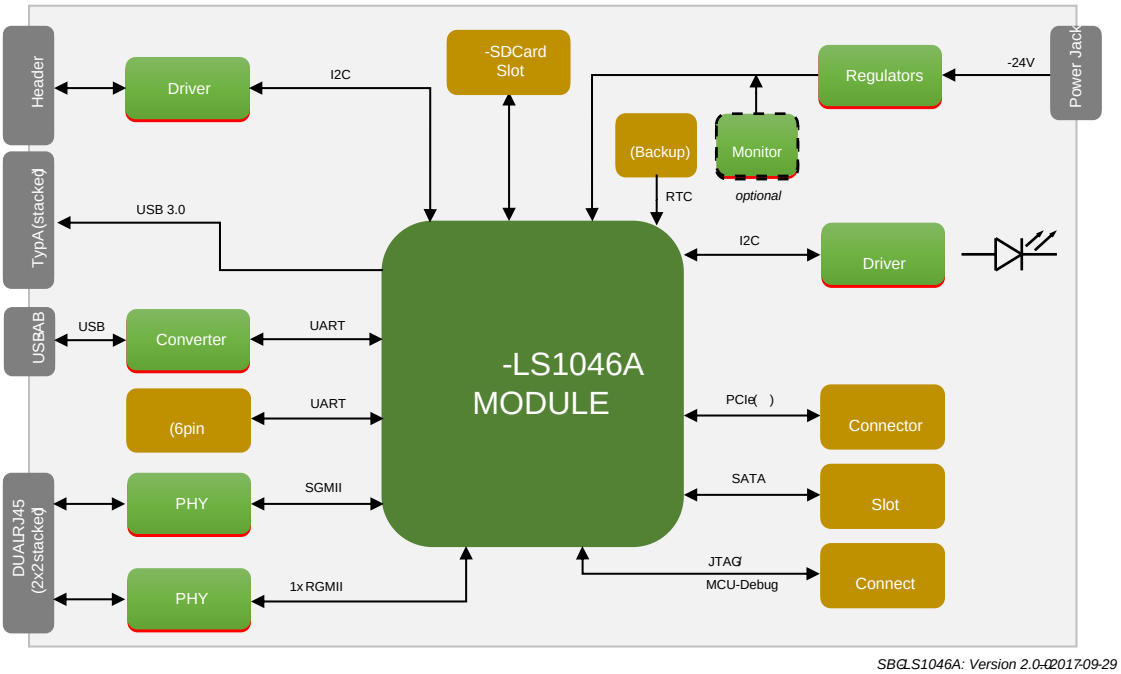
CPU	
Architecture:	Arm® Cortex®-A72
Processor:	NXP® QorIQ® LS1046A CPU: 4 Arm® Cortex®-A72 64-bit cores at up to 1.6 GHz core frequency
DRAM:	Up to 8 GB 64-bit DDR4 ECC RAM at 2100 MT/s
Memory	
Flash:	Up to 2 GB SLC NAND Flash & up to 64 MB QuadSPI Flash
Flash Card:	Yes
Boot Flash:	QSPI, SD/MMC, NAND Flash
Ethernet	
1GbE:	4x
High Speed IO	
USB 3.0:	2x
miniUSB:	1x debug
PCIe:	1x PCIe via extension connector, optional: 1x PCIe via edge card connector
SATA:	1x
Operating Condition	
Power Supply Voltage:	Single 9-24 V DC input supply voltage range
RTC:	Yes
RTC-Buffer:	CR2032 battery
Temperature:	0 °C to 70 °C
Mechanical	
Dimensions:	86 mm x 157 mm
Software / Additional	
Software Support:	- Linux - VxWorks (on request) - Others (on request)
Additional:	- Compatible variants available with QorIQ® LS1023A, LS1043A, LS1048A, LS1088A

	- Temperature sensor - 4x RGB LED - 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-LS1046A

Order Info

Name	Code	Description	Status
miriac® SBC-LS1046A	855917	4 Arm Cortex® A72, 1.6 GHz, 4 GB DDR4 w ECC, 16 MB NOR Flash, 512 MB NAND Flash, -40 °C to 85 °C, w/o SEC	active
Development Kit basic for miriac® MPX-LS1046A	8559	• miriac® MPX-LS1046A • CRX05 • incl.BSP and accessories	active
Development Kit pro for miriac® MPX-LS1046A	8564	• miriac® MPX-LS1046A • CRX06-TSN • incl. BSP and accessories	active

Related Products

Name	Description	Image
miriac® MPX-LS1046A	Low energy class server module with quad Arm® Cortex®-A72 cores and up to two 10 GbE	
miriac® SBC-LS1046A-TSN		
CRX06-TSN	Carrier Boards	

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