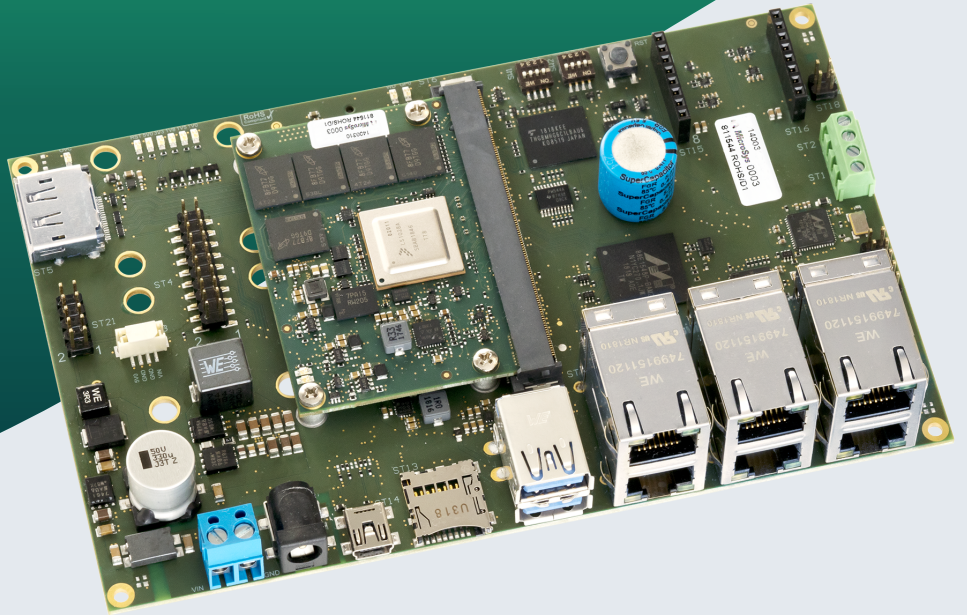**MicroSys**

Creating Embedded Systems

SBC Arm® Architecture

miriac® SBC-LS1028A-TSN

Single Board Computer based on NXP® QorIQ® LS1028A CPU

Highlights

- 1x Ethernet Port 10/100/1000 Base-T

- 5x Ethernet Ports 10/100/1000 Base-T with TSN support

- NXP® QorIQ® LS1028A CPU: two Arm® Cortex®-A72 32/64-bit cores

- Display Port

- ECC memory, rich I/O infrastructure and CAN-FD interfaces

NXP

yocto PROJECT

NXP
Gold
Partner

Product Description

Preliminary information, subject to change: The miriac® SBC-LS1028A-TSN platform is the combination of a miriac LS-1028A System on Module and the carrier board CRX07. The miriac® SBC-LS1028A-TSN platform combines a rich I/O infrastructure, high compute power, high speed communication interfaces with the upcoming requirement of secure real time communication over Ethernet based on TSN (Time Sensitive Networking) on a small board footprint. The integrated graphic interface com-plements the system functionality for versatile applications.

Features

CPU	
Architecture:	Arm® Cortex®-A72
Processor:	NXP® QorIQ® LS1028A CPU: 2 Arm® Cortex®-A72 64-bit cores at up to 1.5 GHz core frequency
DRAM:	Up to 4 GB 32-bit DDR4 ECC RAM 1600 MT/s
Memory	
Flash:	Up to 256 MB Serial NOR Flash & up to 4 GB Serial NAND Flash
Flash Card:	Yes
Boot Flash:	SDHC, emmC, XSPI, NAND Flash
eMMC:	8 GB
Graphic	
HDMI Interface:	1x DisplayPort
Ethernet	
TSN / IEEE 1588:	5x Gbit Eth. With TSN support on RJ45
High Speed IO	
USB 3.0:	2x
miniUSB:	1x debug
µUSB:	1x debug
Operating Condition	
Power Supply Voltage:	Single 9 to 24 V DC input supply voltage range
RTC:	Yes
RTC-Buffer:	Supercap
Temperature:	0 °C to 70 °C
Optional Extended Temperature:	-40 °C to 85 °C
Mechanical	
Dimensions:	160 mm x 100 mm
Software / Additional	
Software Support:	- Linux
	- VxWorks (on request)
	- Others (on request)

Additional:	- Status LEDs
	- Watchdog
	- Reset button
	- Boot mode DIP switch
	- FAN connector (12V / 5V)
	- Compatible variants available with QorIQ LS1018A
	- Temperature sensor

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
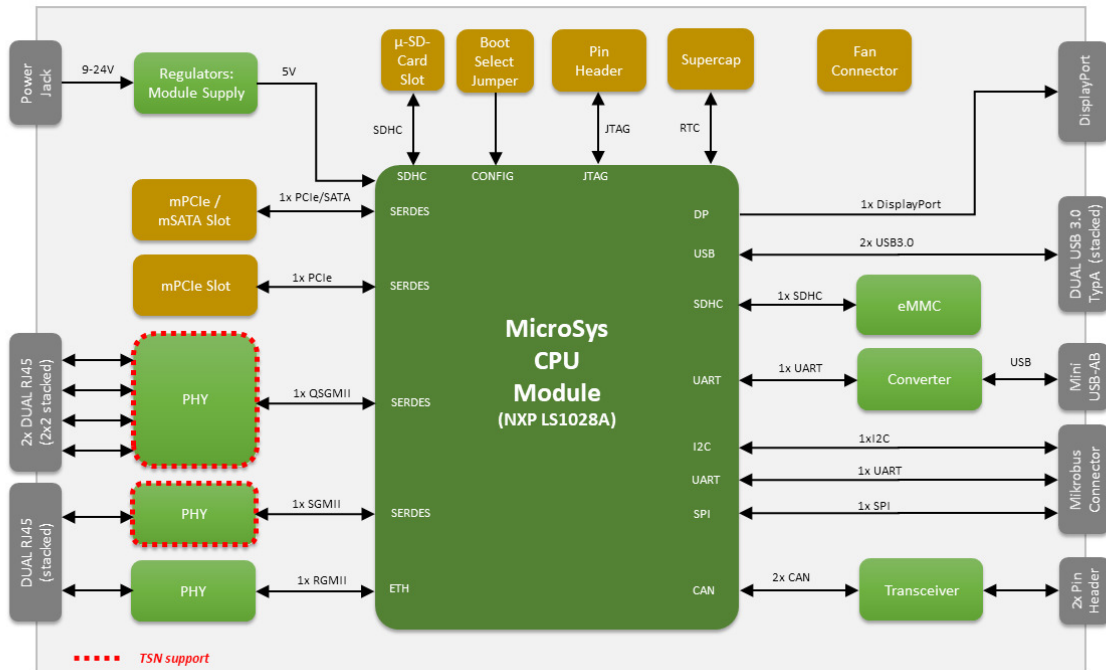
miriac® SBC-LS1028A

Related Products

Name	Description	Image
miriac® MPX-LS1028A	Compact SoM with TSN, security engine and HMI	