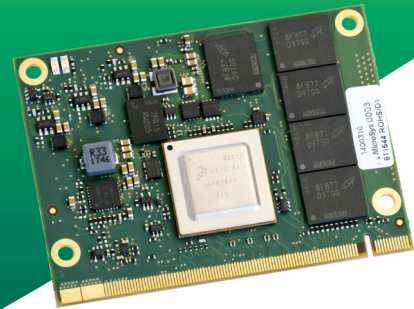


miriac® MPX-LS1028A

Compact SoM with TSN, security engine and HMI. It combines high compute power by two powerful 64-bit Arm® Cortex®-A72 cores with TSN based Real Time Ethernet communication.

- Two 64-bit Arm® Cortex®-A72 cores
- TSN based Real Time Ethernet communication
- Security engine
- Integrated graphics unit for HMI functions
- Small, highly integrated SoM, a perfect fit for IIoT devices and nodes

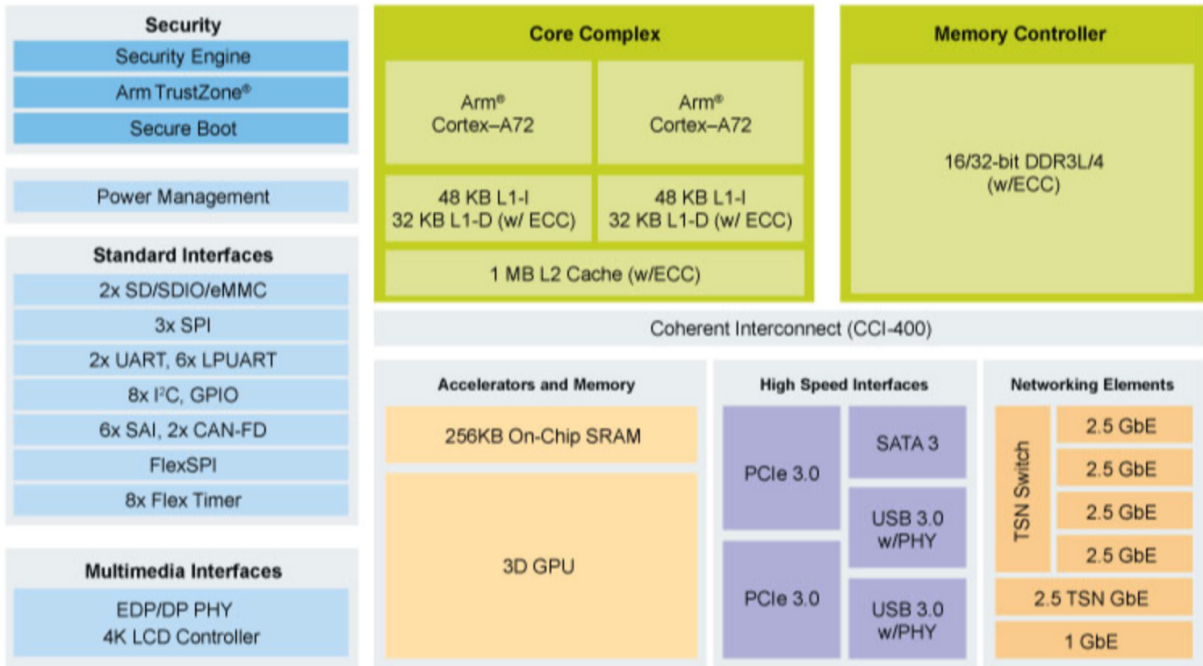
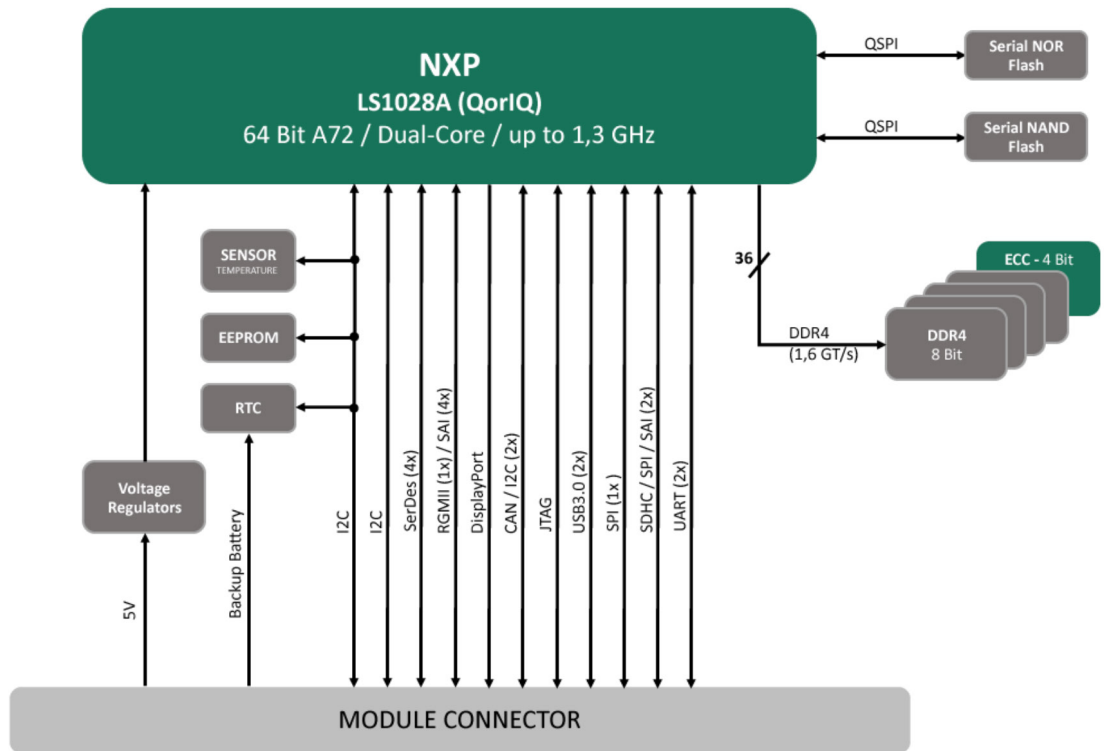


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Compact SoM with TSN, security engine and HMI

It combines high compute power by two powerful 64-bit Arm® Cortex®-A72 cores with TSN based Real Time Ethernet communication, a security engine and an integrated graphic unit for HMI functions.





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 512 MB Serial NAND Flash
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Flash Card	2x SDHC
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Boot Flash	SDHC, eMMC, XSPI, NAND Flash
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eMMC	8-bit
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EEPROM	Yes
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Graphic

Graphics Controller	Yes
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Display	Display Port 1.3 and eDP1.4
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Ethernet

10GbE	1x SxGMII / QxGMII
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RGMI	1x
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SGMI	4x 1.25 Gbps
------	--------------

QSGMI	1x 5 Gbps
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TSN / IEEE 1588	Yes (4 Port TSN Switch on board) IEEE 802.1
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High Speed IO

SerDes lanes	4x SerDes lanes at 10 Gbps
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USB 3.0	2x
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PCIe	4x PCIe Gen3
------	--------------

SATA	1x GEN3
------	---------

IO

FlexSPI	3x
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UART	2x
------	----

CAN FD	2x
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I2C	8x
-----	----

Audio	Yes (SAI)
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GPIOs	Yes
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JTAG Debug Interface	Yes
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Security / Safety

Security Trust Architecture

Operating Condition

Power Supply Voltage Single 5 V DC input supply voltage range

Typical Power Consumption 5W

Power Management Yes

RTC PCF85063

Temperature 0 °C to 70 °C

Optional Extended Temperature -40 °C to +85 °C

Mechanical

Dimensions 45 mm x 62 mm

Connector Type 230 pin 0.5 mm pitch

Software / Additional

Software Support

- Linux
- VxWorks (on request)
- Others (on request)

Additional

Graphics processing unit:

- Supports Geometry rate 100 Mtri/sec, Pixel rate 650 Mpixel/sec, GFLOPS(32-bit high precision) = 10.4
- Supports OpenGL ES 3.0, 2.0, 1.1
- Supports OpenCL 1.1, 1.2

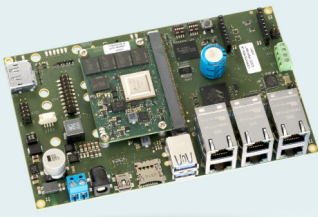
- Compatible variants available with QorIQ® LS1018A
- Temperature sensor
- Dev Kit available for immediate start, includes power supply, cables
- Linux on SD card

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.

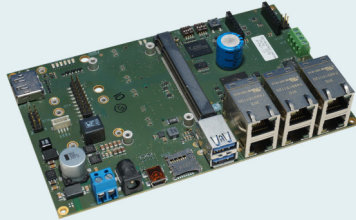
Order Info

Name	Code	Description	Status
miriac® MPX-LS1028A	857001	2 Arm® Cortex®-A72, 1.3 GHz, 4 GB DDR4 w ECC, 16 MB NOR Flash, 512 MB Nand Flash, 0 °C to 70 °C, w SEC	active
Development Kit basic for miriac® MPX-LS1028A	8576	<ul style="list-style-type: none">• miriac® MPX-LS1028A• CRX07-TSN• incl. BSP and accessories	active

Take a look at related products



miriac® SBC-LS1028A-TSN



CRX07-TSN