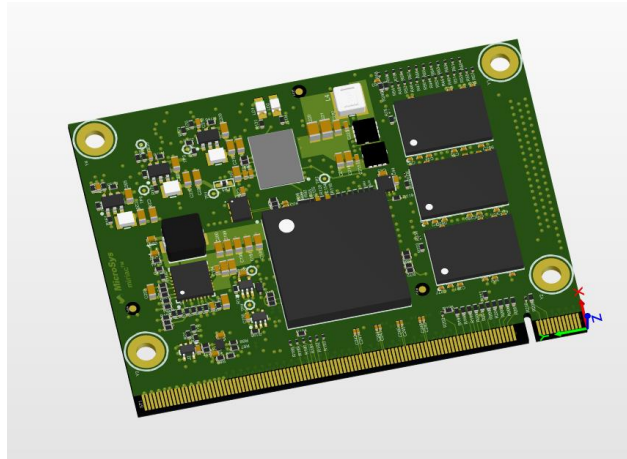


miriac[®] MPX-LS1028A SoM

based on the QorIQ[®] NXP LS1028A CPU

Product Description (preliminary)



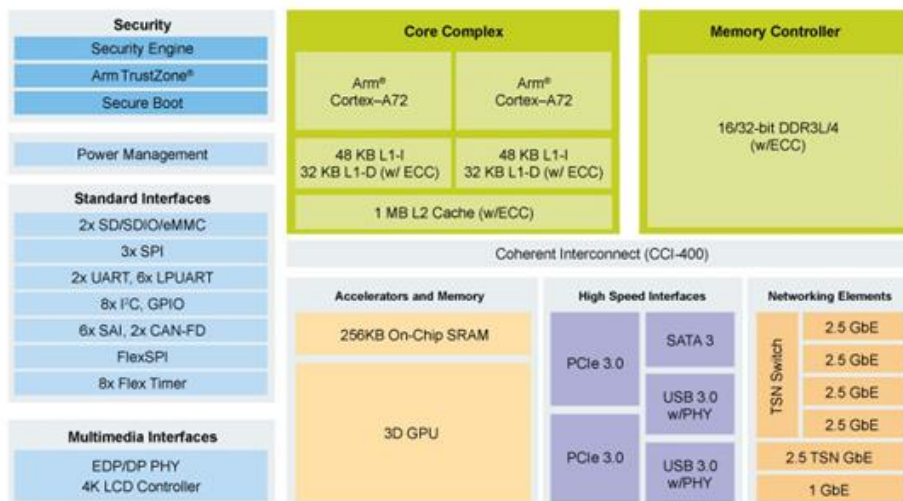
miriac MPX-LS1028A SoM, planned layout

Disclaimer

This preliminary datasheet is based on preproduction information by NXP and information herein is subject to change without notice.

Introduction

The Layerscape LS1028A industrial applications processor includes a TSN-enabled Ethernet switch and Ethernet controllers to support converged IT and OT networks. Two powerful 64-bit ARM[®] v8 cores support real-time processing for industrial control, as well as virtual machines for edge computing in the IoT. The integrated GPU and LCD controller enable Human Machine Interface (HMI) systems with next-generation interfaces. Integrated Trust Architecture with cryptographic offload provides a trusted platform with encrypted communications for secure applications and services.

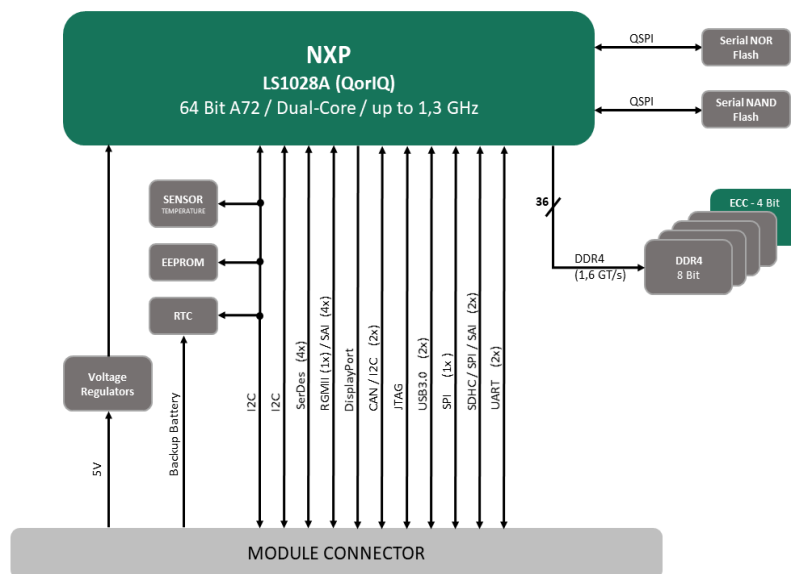


**Fig.1 Blockdiagram
QorIQ LS1028A CPU**

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Feature Overview: miriac MPX-LS1028A

- NXP QorIQ LS1028A CPU: Two ARM® Cortex® A72 32/64-bit cores at up to 1.3 GHz core frequency
- Variants available with QorIQ LS1018A (single core)
- New small and cost-effective System on Module form factor connecting to a standard edge connector (MXM2.0 socket)
- Up to 4GB 32 Bit DDR4 ECC RAM at 1600 MT/s
- Up to 256MB Serial NOR Flash
- Up to 4GB Serial NAND Flash
- One RGMII interface
- IEEE Std. 1588 support
- Up to five TSN-capable Ethernet ports
- Four SerDes lanes at 10 Gbps maximum, configurable in different options:
 - Two PCIe 3.0 interfaces (two x1 or one x2 configuration)
 - One SATA 3.0 interface
 - Up to one QSGMII & up to four SGMII interfaces
 - Up to one 10G-QXGMII & one 10G-SXGMII interface
- Two USB 2.0/3.0 ports
 - Host / Device Mode (USB 3.0)
 - OTG (USB 2.0)
- Up to two eSDHC interfaces (SD3.0, up to eMMC 5.1)
- Up to two CAN interfaces (CAN FD)
- DisplayPort / eDP interface
- UART, SPI, JTAG & I²C interfaces
- Temperature Sensor
- Realtime Clock (RTC)
- EEPROM

Fig.1 Blockdiagram: miriac MPX-LS1028A SoM

Software Support

- Linux

Order Information

- tbd

Availability

- planned: Q2 2019

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