NAT-AMC-LX2

The **NAT-AMC-LX2** is a versatile Processing AMC (PrAMC), covering a wide field of network related applications.

It supports any voice or data application with requirements such as deep packet inspection, encryption, protocol conversion, or Layer 2-7 routing. Moreover, it can serve as, e.g. multi-service switch, edge router, radio network controller (RNC), VoIP/VoP gateway and router, or mobile network equipment.
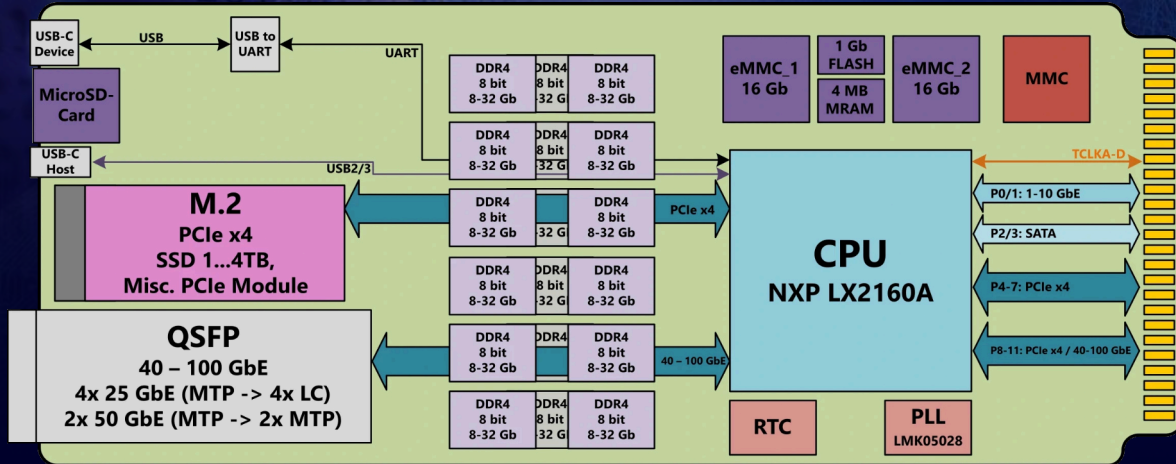
As successor of the **NAMC-QorIQ-P2/P3/P4** series, the **NAT-AMC-LX2** strikes with the latest generation of NXP ARM CPUs. With up to 16 Cortex-A72 cores, PCIe-, and SerDes-Interfaces as well as an Ethernet switch on-chip, the Layerscape LX2160A CPU is ideally suited for networking related usage.

Apart from its 16 cores, multiple PCIe- and 40/100GbE interfaces, special hardware for Ethernet frame processing, and a security hardware engine, the LX2160A processor stands out by its superior power efficiency.

By its onboard M.2 socket, a PCIe-x4- or SATA-coupled SSD can be realized. The M.2 socket can also be used to provide a USB3 or PCIe-x4 extension for any custom application.

The QSFP-Transceiver slot offers various front panel interface options:

- 1x 40G / 100G Ethernet (via x4 optical Lanes)
- 4x 10G / 25G Ethernet (each optical Lane operated separately)
- 2x 50G Ethernet (2x x2 optical Lanes operation)

Key Features

CPU

- 16x ARM A72 cores @ up to 2.2 GHz
- 24 SerDes
- 2x 72bit DDR4 RAM
- TDP ~30W (@2.2 Ghz)
- Embedded Ethernet Switch
- Frame Processing Hardware Engine

Memory

- 2x 64bit wide DRAM with ECC (72bit)
  => up to 64GB total
- 128MB QSPI
- SPI MRAM
- 16 - 128GB eMMC
- MicroSD-Card

Miscellaneous

- Single, mid-size AMC form factor
- Atmel Atxmega128 MMC
- Linux Software / Firmware
- Compliance to AMC.0, CE, RoHS, REACH

Front Panel Connectivity

- QSFP Transceiver:
  - 1x 40G/100G Ethernet
    (via x4 optical Lanes)
  - 4x 10G/25G Ethernet
    (each optical Lane operated seperately)
  - 2x 50G Ethernet
    (2x x2 optical Lanes operation)
- USB3 Type A
- Console via USB Type C
- Standard AMC LEDs
  for Status, Fault, Hot-Swap

Backplane Connectivity

- TCLKA-D
- AMC Ports 0/1: 1G-KX - 10G-KR
- AMC Ports 2/3: SATA
- AMC Ports 4-7: PCIe x4
- AMC Ports 8-11: PCIe x4 / 40-100GbE
  (depending on Backplane)