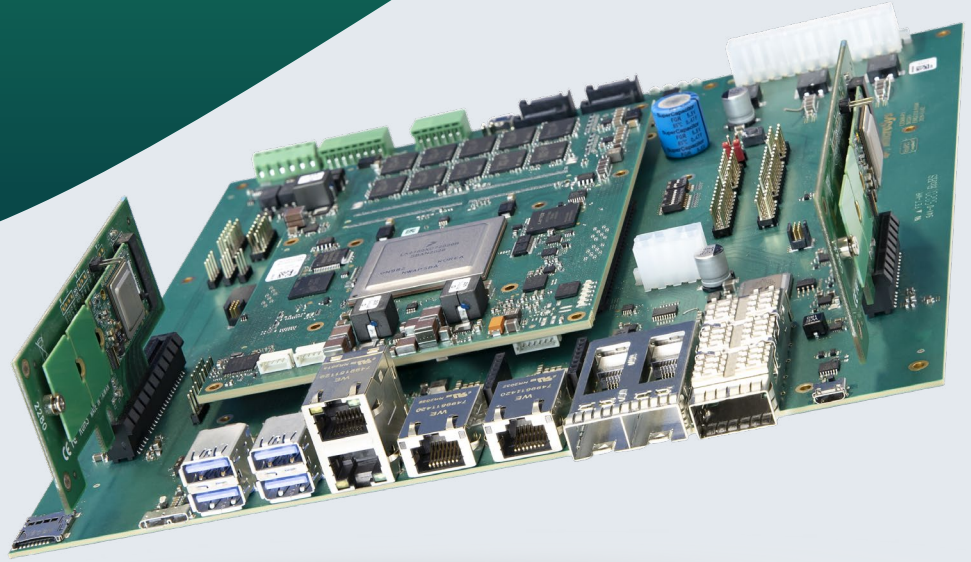


Off the Shelf

# miriac® AIP-LX2160A

High-performance embedded AI platform



## System & Device at a glance



- Up to 5 parallel Hailo-8™ AI processors for massive processing performance up to 130 TOPS
- Full Hailo-8™ performance combined with maximum power efficiency (FPS / W ratio) compared to other solutions from competition
- Comprehensive Hailo AI ecosystem incl. AI toolchain and developer tools
- Deep learning pre-trained models for various computer vision tasks to create fast prototypes on the AI platform



## Product Description

The AI platform for predictive maintenance, collaborative robotics, video surveillance servers in infrastructures with distributed cameras, communication servers for autonomous vehicles in logistics, agriculture and heavy equipment for construction, as well as edge servers in trains where multiple GigE Vision camera streams are analyzed with AI for security and surveillance reasons – for instance, to monitor wagon doors, passenger compartments, or sections of railroad.



## Specifications

### CPU

Architecture	Arm® Cortex®-A72
Processor	NXP® Layerscape® LX2160A with 16 Arm® Cortex®-A72 64-bit cores up to 2.2 GHz
DRAM	<ul style="list-style-type: none"><li>■ Up to 128 GB DDR4 RAM &amp; optional ECC, up to 3200MT/sec,</li><li>■ Up to 4 ranks using a combined design: discrete &amp; SODIMM</li></ul>
Extensions	2x Hailo-8™ M.2 AI Acceleration Modules, opt. up to 5 Modules (NGFF M.2 2242 / 2260 / 2280 Key M Card) 52 TOPS (up to 130 TOPS)

### Memory

Flash	Up to 2 Gb Octal SPI Flash at up to 200 MHz, double operation / golden image
Flash Card	Yes
Boot Flash	Boot select: XSPI, eMMC or external SD card
eMMC	8 GB

### Ethernet

100GbE	1x QSFP+
40GbE	1x QSFP+
25GbE	2x (SFP+)
10GbE	2x
1GbE	2x

### High Speed IO

USB 3.0	4x
µUSB	2x
PCIe	PCIe x8 & PCIe x4 (Gen3)
SATA	4x

### Operating Condition

Power Supply Voltage	Single +12 V DC power input ATX
RTC	Yes
RTC-Buffer	Supercap
Temperature	0 °C to 70 °C



# Specifications

## Mechanical

Dimensions 244 mm x 244 mm

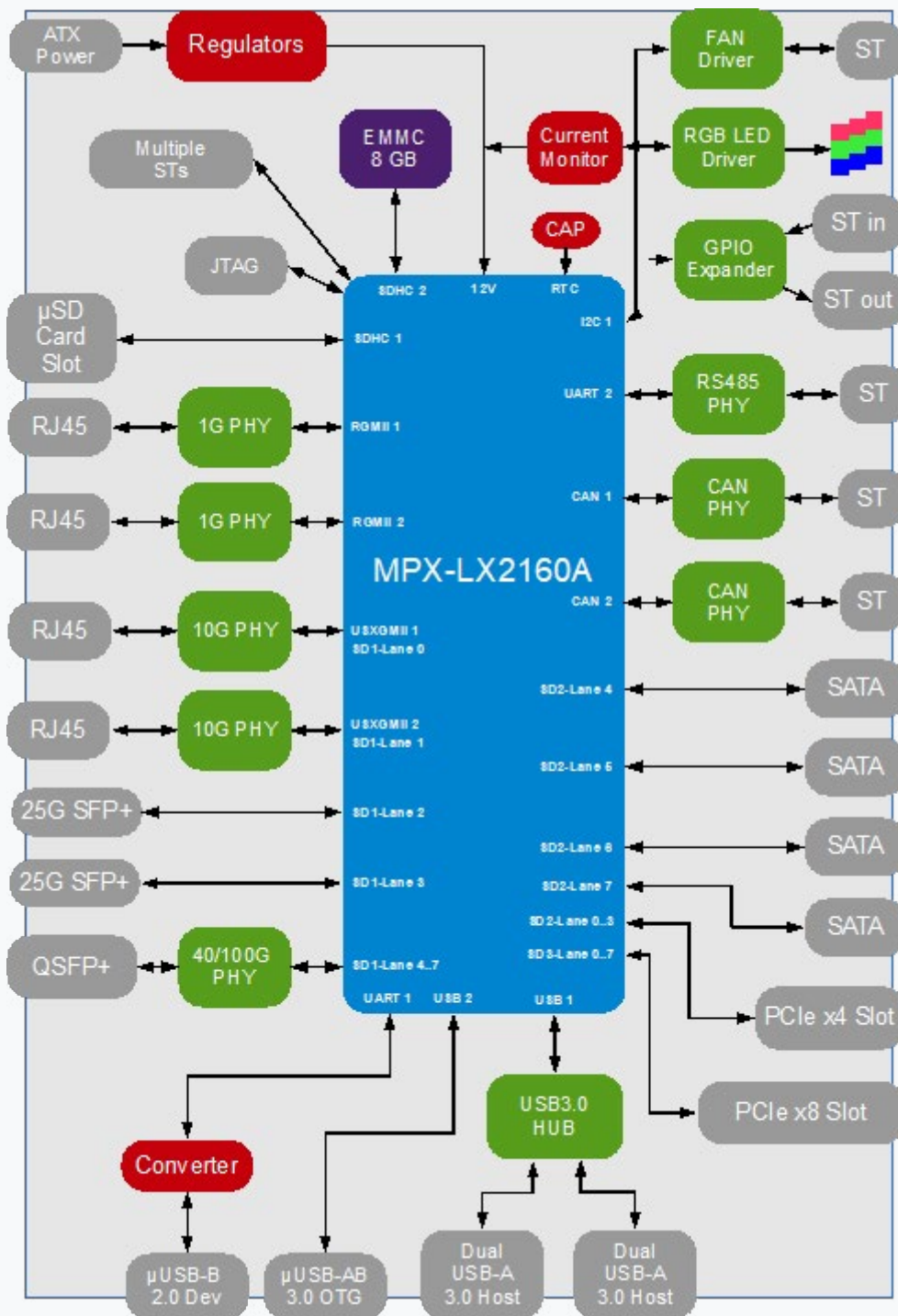
## Software / Additional

- |                  |  |
|------------------|--|
| Software Support | <ul style="list-style-type: none"><li>■ Linux</li><li>■ VxWorks (on request)</li><li>■ Others (on request)</li></ul>   |
| Additional       | <ul style="list-style-type: none"><li>■ Board is powered by an ATX power supply with separate 12 V line, delivering 200 W minimum.</li><li>■ 4x RGB LED</li><li>■ FAN Driverc</li><li>■ Current Monitor</li><li>■ Development Kit for immediate start up; includes power supply, Linux pre-installed</li></ul> |

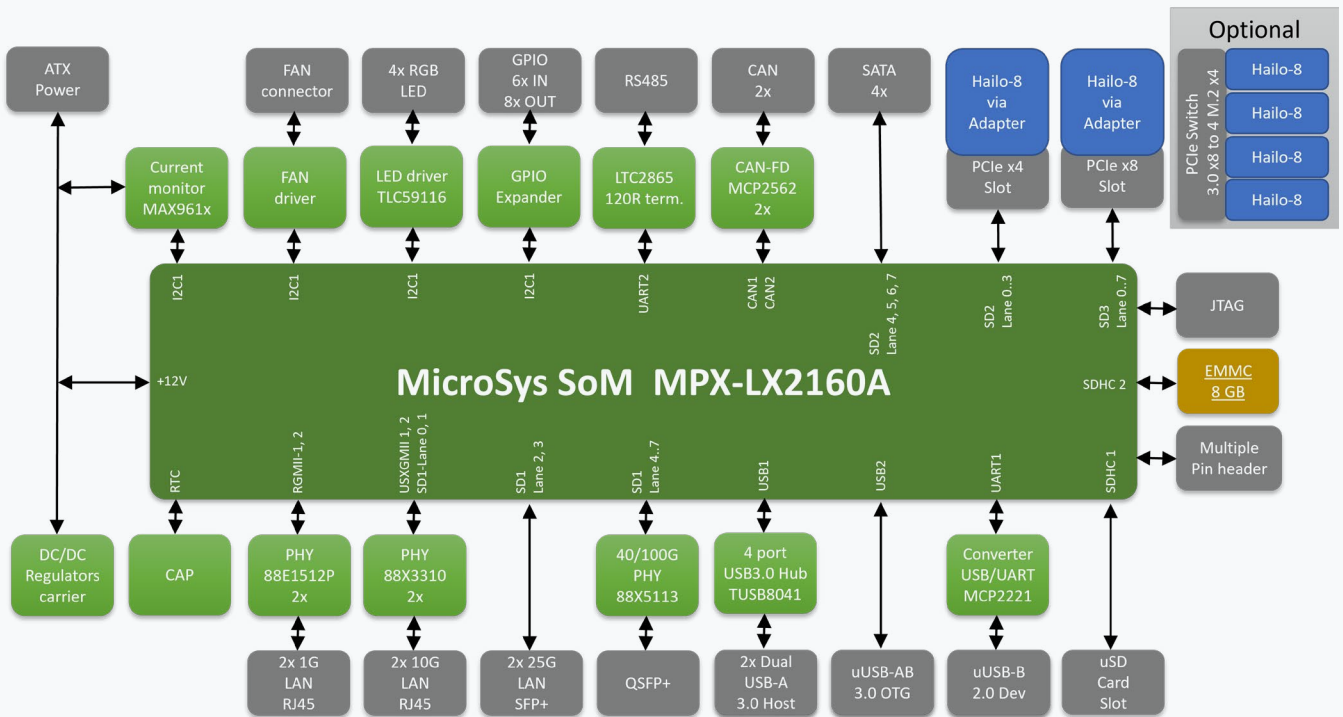
### General note:

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 diagram



# Block diagram





## Order Information

Name	Code	Description	Status
AIP-LX2160A Development Kit for miriac® MPX-LX2160A with 2x Hailo-8™	859705	16 Arm® Cortex®-A72, 2.0 GHz, 32 GB DDR4 w ECC, 16 MB NOR Flash, 512 MB NAND Flash, 32 GB eMMC, 0 °C to 70 °C, SEC, 2x Hailo-8™	active



## Related Products

Name	Code	Description	Status
miriac® MPX-LX2160A SoM	858402	Rugged edge server class SoM for high-end communication applications	active
miriac® SBC-LX2160A	859702	Single Board Computer based on NXP® Layerscape® LX2160A Processor	active
miriac® AIP-S32G274A	859013	High-performance embedded AI platforms	active



Mühlweg 1  
82054 Sauerlach  
Germany

Sales: +49 8104 801-130  
E-Mail: [info@microsys.de](mailto:info@microsys.de)  
[www.microsys.de](http://www.microsys.de)

