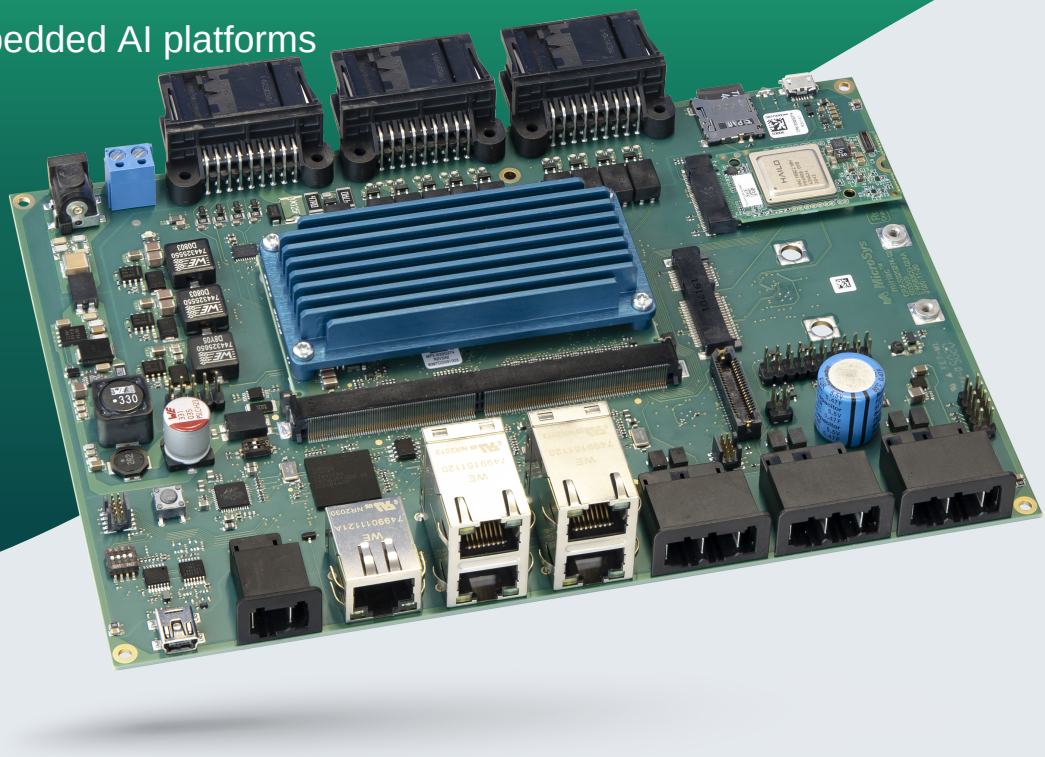
MicroSys
Creating Embedded Systems

Artificial Intelligence Development Platforms

miriac® AIP-S32G274A

High-performance embedded AI platforms



Highlights

- Up to 2 parallel Hailo-8™ AI processors for massive processing performance up to 52 TOPS
- Full Hailo-8™ performance combined with maximum power efficiency (FPS / W ratio) compared to other solutions from competition
- Up to 382 YOLOv5m / 2458 Resnet_v1_50 / 2080 Ssd_mobilenet_v1 object detection frames (416 x 416) per second
- 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

NXP Gold Partner

Product Description

This AI platform enables industrial smart gateways with AI features for smart manufacturing, smart grids, industrial automation and more.

Features

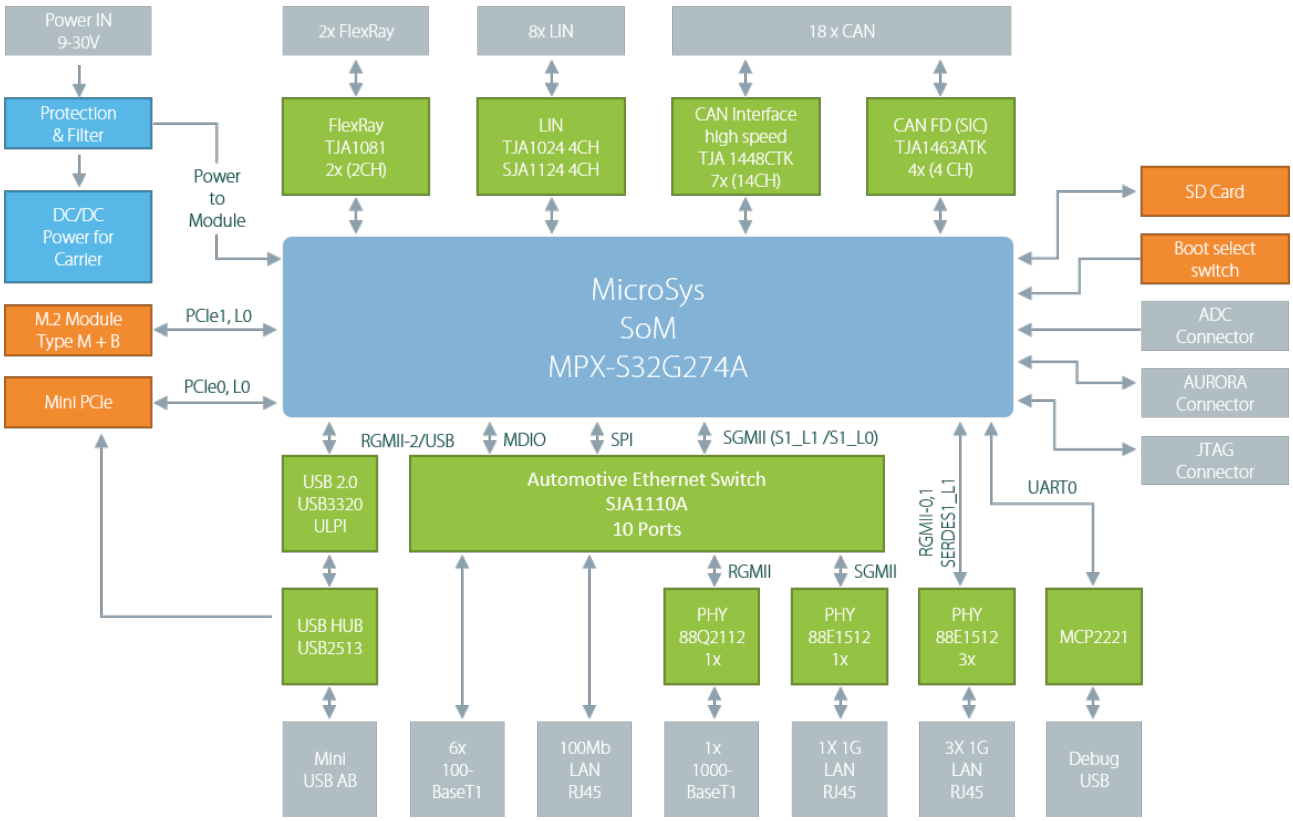
CPU	
Architecture:	Arm® Cortex®-A53
Processor:	NXP® S32G274A CPU: 4 Arm® Cortex®-A53 64-bit cores, 3 Arm® Cortex®-M7 dual-cores
DRAM:	4 GB 32-bit soldered LPDDR4 RAM at 1600MT/s
Optional Power Supply Voltage:	Single DC power input (+6 V to +36 V)
Extensions:	1x Hailo-8™ M.2 AI Acceleration Module (NGFF M.2 2242/2260/2280 Key M Card)
Memory	
Flash:	64 MB QSPI Flash
Flash Card:	Yes
Boot Flash:	Boot select: XSPI, eMMC or external SD card
eMMC:	16 GB
Graphic	
HDMI Interface:	1x
Camera Input:	2x MIPI-CSI camera interface connector, 2x 5 V/12 V supply
Ethernet	
1GbE:	1x
1000BASE-T1:	1x
100 Mb:	1x
100BASE-T1:	6x
TSN / IEEE 1588:	Yes
High Speed IO	
USB 2.0:	1x
miniUSB:	1x
Operating Condition	
Power Supply Voltage:	Single +12 V DC power input (+9 V to +15 V)
RTC:	Yes
RTC-Buffer:	Supercap
Temperature:	0 °C to 70 °C
Mechanical	
Dimensions:	200 mm x 140 mm
Software / Additional	

Software Support:	- Linux - VxWorks (on request) - Others (on request)
Additional:	Development Kit for immediate start up; includes power supply, Linux pre-installed

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

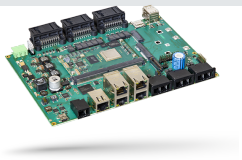
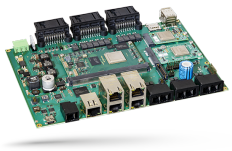


miriac® AIP-S32G274A

Order Info

Name	Code	Description	Status
AIP-S32G274A Development Kit basic for miriac® MPX-S32G274A + 1x Hailo-8™	859013	4 Arm® Cortex®-A53, 1.0 GHz, 4 GB LPDDR4 w ECC, 64 MB NOR Flash, 16 GB eMMC, 0 °C to 70 °C, SEC, 1x Hailo-8™	active

Related Products

Name	Description	Image
miriac® SBC-S32G274A	NXP® S32G274A processor based SBCs for vehicle network computing	
miriac® MPX-S32G274A	Vehicle gateway platform with massive native CAN support	
miriac® MPX-S32G399A	MicroSys' 2nd Gen of System-on-Modules for vehicle networks based on the NXP® S32G399A processor	
miriac® AIP-S32G399A	High-performance embedded AI platforms	
miriac® SBC-S32G399A	NXP® S32G399A processor based SBCs for vehicle network computing	

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