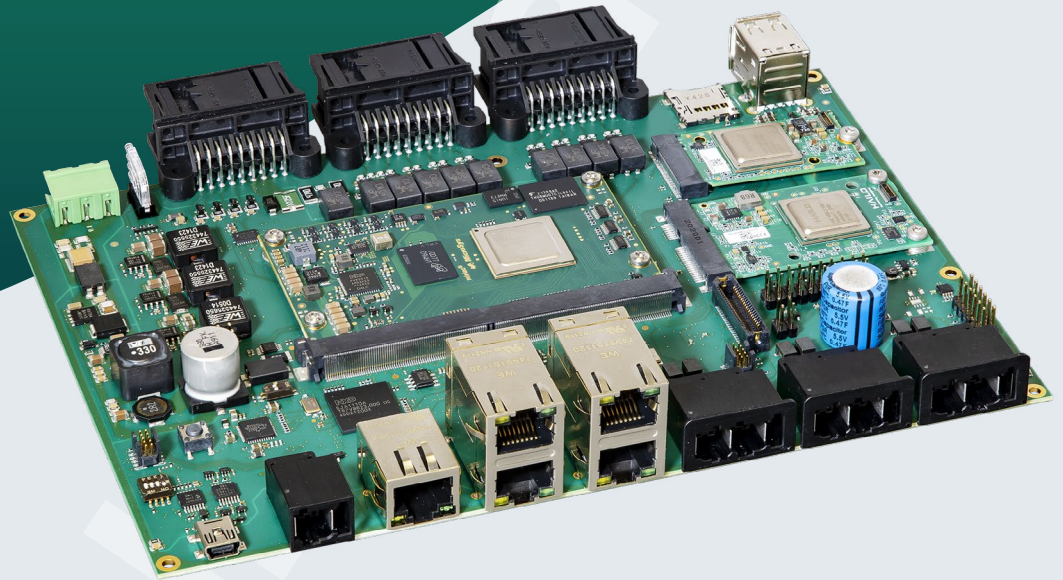


Off the Shelf

miriac[®] AIP-S32G399A

High-performance embedded AI platforms



System & Device at a glance

arm

yocto
PROJECT



NXP

HAILO
Empowering Intelligence

- 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
- 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

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



Specifications

CPU

Architecture	Arm® Cortex®-A53
Processor	NXP® S32G399A CPU: 8 Arm® Cortex®-A53 64-bit cores, 4 Arm® Cortex®-M7 dual-cores
DRAM	4 GB 32-bit soldered LPDDR4 RAM at 1600MT/s
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	Up to 32 GB

Graphic

1GbE	1x
1000BASE-T1	1x
100 Mb	1x
100BASE-T1	6x
TSN / IEEE 1588	Yes

Ethernet

RGMII	3x
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High Speed IO

USB 2.0	1x
miniUSB	1x

IO

CAN FD	18x
FlexRay	2x
LIN	4x
analog inputs (ADCs)	12x
GPIOs	Yes
JTAG Debug Interface	Yes
Aurora Interface	Yes
miniPCIe	1x
m.2	1x (type M)

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



Specifications

Mechanical

Dimensions 200 mm x 140 mm

Software / Additional

Software Support

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

Additional

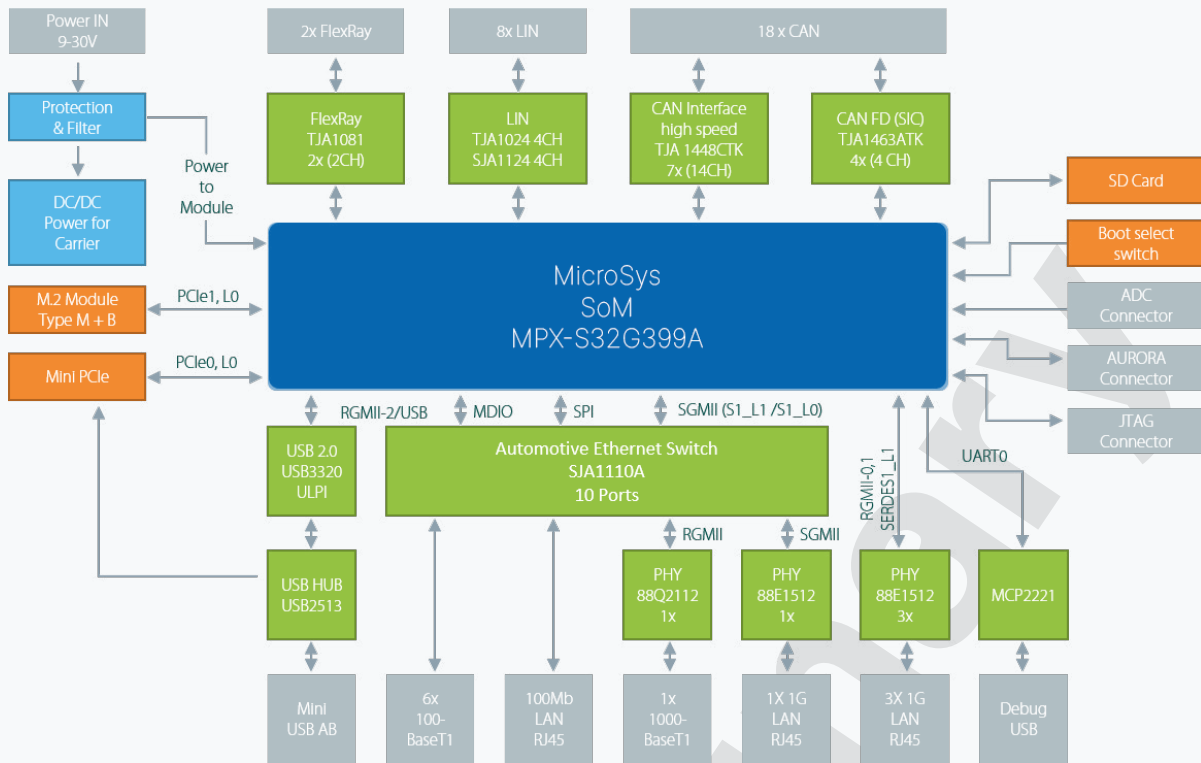
- Development Kit for immediate start up; includes power supply, Linux pre-installed

General note:

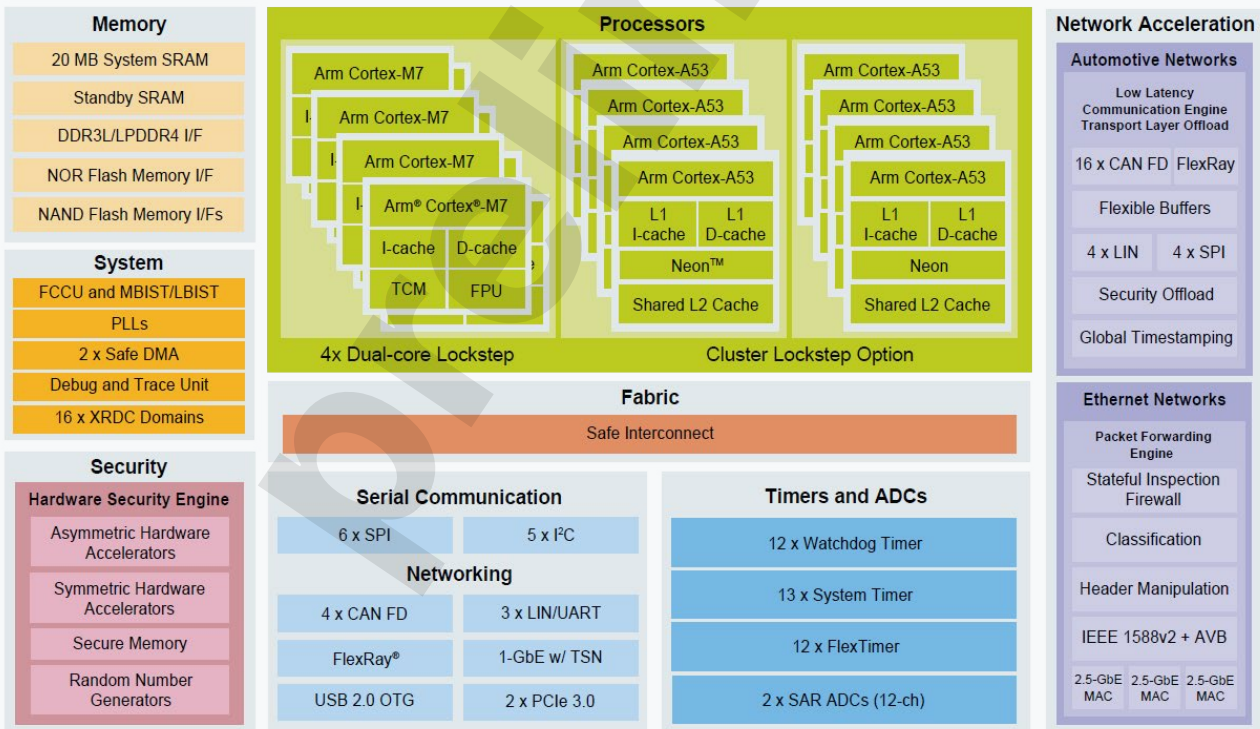
Our standard product versions offer what we consider to be the optimum configuration in terms of performance, price, usage and TDP. The product features lists specify the maximum range of functions per interface. However, not all interfaces or functions are always available in parallel. Flexible SERDES 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.

preliminary

Block diagram



S32G399A BLOCK DIAGRAM





Order Information

Name	Code	Description	Status
AIP-S32G399A Development Kit basic for miriac® MPX-S32G399A + 1x Hailo-8™	TBD	8 Arm® Cortex®-A53, 1.0 GHz, 4 GB LPDDR4 w ECC, 64 MB NOR Flash, up to 32 GB eMMC, 0 °C to 70 °C, SEC, 1x Hailo-8™	coming 2023



Related Products

Name	Code	Description	Status
miriac® MPX-S32G274A	858103	Vehicle gateway platform with massive native CAN support	active
miriac® SBC-S32G274A	859011	NXP® S32G399A processor based SBCs for vehicle network computing	active
miriac® AIP-S32G274A	859013	High-performance embedded AI platforms	active
miriac® MPX-S32G399A	TBD	The 2nd Gen System-on-Module based on the NXP® S32G399A vehicle network processor	coming 2023
miriac® SBC-S32G399A	TBD	NXP® S32G399A processor based SBCs for vehicle network computing	coming 2023

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