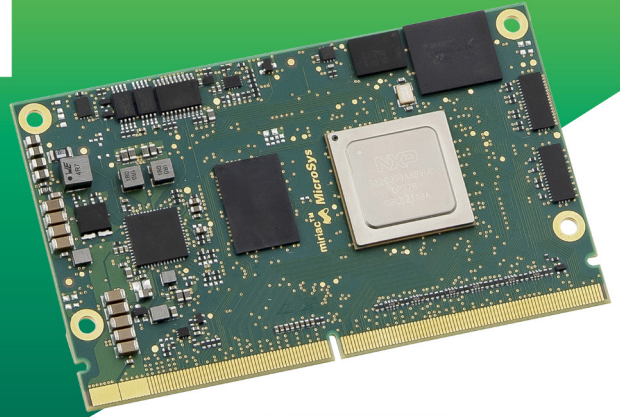


miriac® MPX-S32G399A

THE
ELECTRONICS
INDUSTRY
AWARDS
2023

Compared to our NXP® S32G2 processor based 1st Gen modules, our NXP® S32G399A processor based MPX-S32G399A System-on-Modules offer up to 2.5x times more applications processing performance, extended memory and higher networking bandwidth and address performance-demanding secure, connected mobility and controller application.

- 8 Arm® Cortex®-A53 cores and 4 Arm® Cortex®-M7 cores including lockstep support
- Comprehensive connectivity including 18x CAN FD + dedicated protocol engine, furthermore FlexRay, LIN, SPI, Ethernet with TSN, PCI Express®, USB and I²C
- Hardware Security Engine for secure boot and accelerated security services

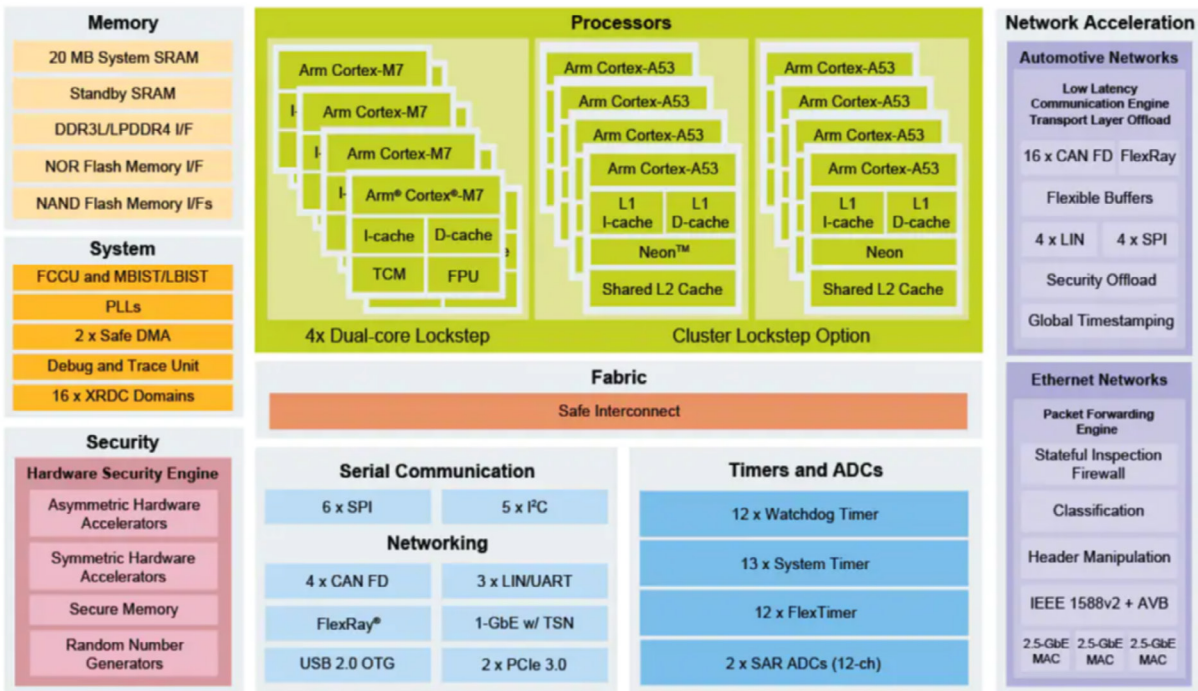
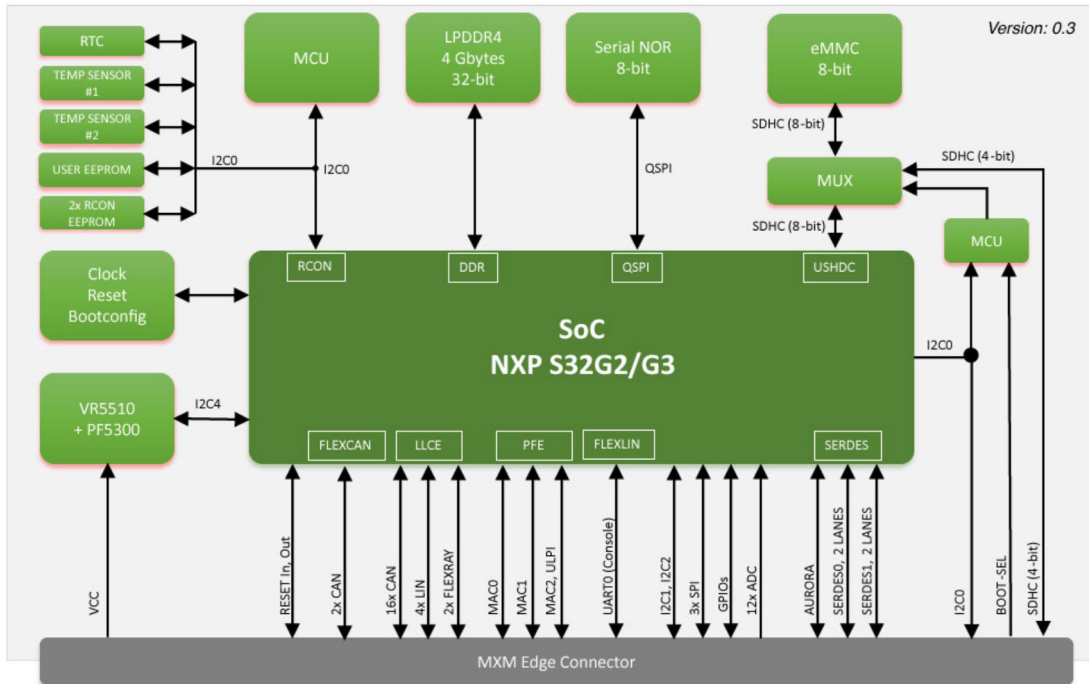


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MicroSys' 2nd Gen of System-on-Modules for vehicle networks based on the NXP® S32G399A processor

Since the MPX-S32G399A System-on-Modules offer multiple native CAN interfaces, as well as FlexRay, LIN and Ethernet support, target markets include real-time connected vehicles, mobile machinery and automotive test and measurement equipment. Further application areas include data loggers, edge gateways and fail-safe programmable logic controllers (PLCs).





CPU

Architecture	Arm® Cortex®-A53
Processor	NXP® S32G399A CPU: 8 Arm® Cortex®-A53 64-bit cores, 4 Arm® Cortex®-M7 dual-core lockstep pairs
DRAM	4 GB 32-bit soldered LPDDR4 RAM at 3200 MT/s

Memory

Flash	64 MB QSPI Flash
Flash Card	Interface for external SD-card multiplexed with eMMC
Boot Flash	Boot select: XSPI, eMMC or external SD card
eMMC	Up to 32 GB

Ethernet

RGMI	3x
SGMI	3x 2.5 Gbps

High Speed IO

SerDes lanes	4x
ULPI-USB	1x
PCIe	Yes

IO

FlexSPI	4x
UART	2x
CAN FD	18x
FlexRay	2x
LIN	4x
I2C	4x
Analog Inputs (ADCs)	12x
GPIOs	Yes
JTAG Debug Interface	Yes
Aurora Interface	Yes

Security / Safety

Security Hardware Security Engine (HSE) for secure boot and accelerated security services

Safety

- Advanced hardware and software for safety applications
- Optional: Certification Kit
- Optional: AEC-Q100 Grade 3 (or I): -40°C to 85°C

Operating Condition

Power Supply Voltage Single DC power input (+9 V to +36 V)

Optional Power Supply Voltage Single DC power input (+6 V to +36 V)

Power Management Yes

RTC RV-3028-C7

Temperature 0 °C to 70 °C

Optional Extended Temperature -40 °C to +85 °C

Mechanical

Dimensions 82 mm x 50 mm

Connector Type MXM3.0

Software / Additional

Software Support

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

Additional

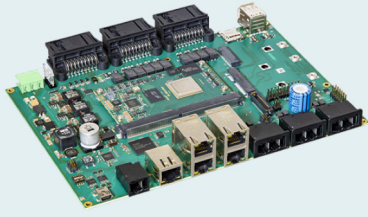
- All I/O pins available on 314-pin edge connector
- Low Latency Communication Engine (LLCE) for vehicle networks acceleration
- Packet Forwarding Engine (PFE) for Ethernet networks acceleration
- Dev Kit available for immediate start, includes power supply, cables. Linux on SD card

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.

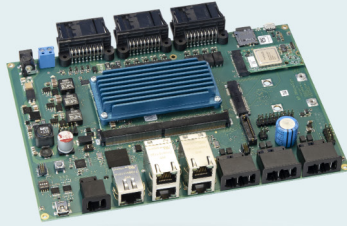
Order Info

Name	Code	Description	Status
miriac® MPX-S32G399A	861703	8 Arm® Cortex®-A53, 1.3 GHz, 4 GB LPDDR4 w ECC, 64 MB NOR Flash, 16 GB eMMC, 0 °C to 70 °C, w SEC	active
Development Kit basic for miriac® MPX-S32G399A	8629	<ul style="list-style-type: none">• miriac® MPX-S32G399A• CRX-S32G• incl. BSP and accessories	active

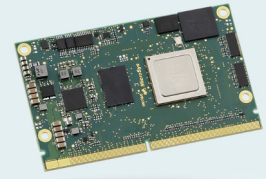
Take a look at related products



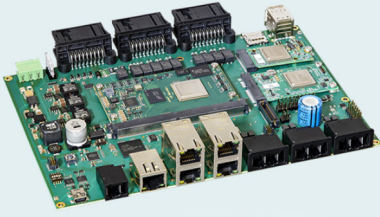
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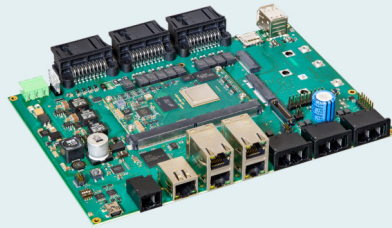
miriac® AIP-S32G274A



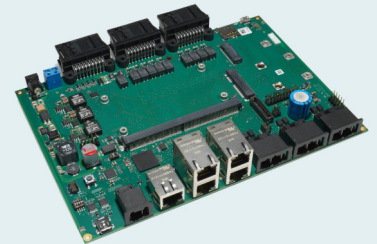
miriac® MPX-S32G274A



miriac® AIP-S32G399A



miriac® SBC-S32G399A



CRX-S32G