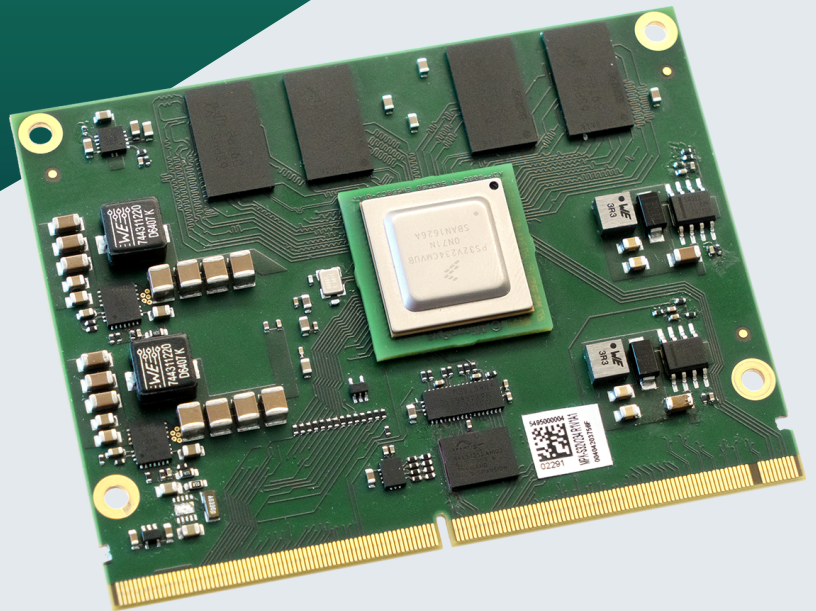


Arm® Architecture

miriac® MPX-S32V234

Vision and safety processor for compute intensive image processing applications



System-On-Modules at a glance

- Up to dual 1 GB 32-bit ECC DDR3L RAM
- Image Cognition: 2x APEX2-CL Dual 32-bit array with 2x 32 compute units
- Serial MIPI-CSI: 2x 4 lanes, up to 1.5 Gbps
- Video encoder/decoder: H.264, 8/10/12-bit, JPEG, 8/12-bit, up to 4 streams





Product Description

The NXP® S32V230 family is designed to support computation-intensive applications for image processing. The S32V234, as part of the S32V230 family, is a high-performance automotive processor designed to support safe computation-intensive applications in the area of vision and sensor fusion.



Specifications

CPU

Architecture	Arm® Cortex®-A53
Processor	NXP® S32V234 CPU: <ul style="list-style-type: none">■ Quad Arm® Cortex®-A53 cores at up to 1.3 GHz core frequency■ 1x Cortex® M4 Core for real time processing
DRAM	Up to dual 1 GB 32-bit ECC DDR3L RAM

Memory

Flash Card	USHDC: 2x 8-bit
Boot Flash	eMMC or external SD card

Graphic

Graphics Controller	Yes
LCD Interface	24-bit
HDMI Interface	Yes
Camera Input	Yes

Ethernet

1GbE	1x
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High Speed IO

SerDes lanes	8
PCIe	PCIE Gen2 x1 (RC/EP)

IO

UART	2x
CAN FD	2x
I ² C	3x
GPIOs	Yes
JTAG Debug Interface	Yes

Security / Safety

Security	Security & Encryption: CSE-FL & AES-128
Safety	FCCU and FCCU output supervision unit

Operating Condition

Power Supply Voltage	Single +12 V DC power input (+/-25%)
Typical Power Consumption	4,8 W
RTC	PCF85263
Temperature	0 °C to 70 °C
opt. Temperature	-40 °C to 70 °C



Specifications

Mechanical

Dimensions	62 mm x 82 mm
Connector Type	MXM3.0

Software / Additional

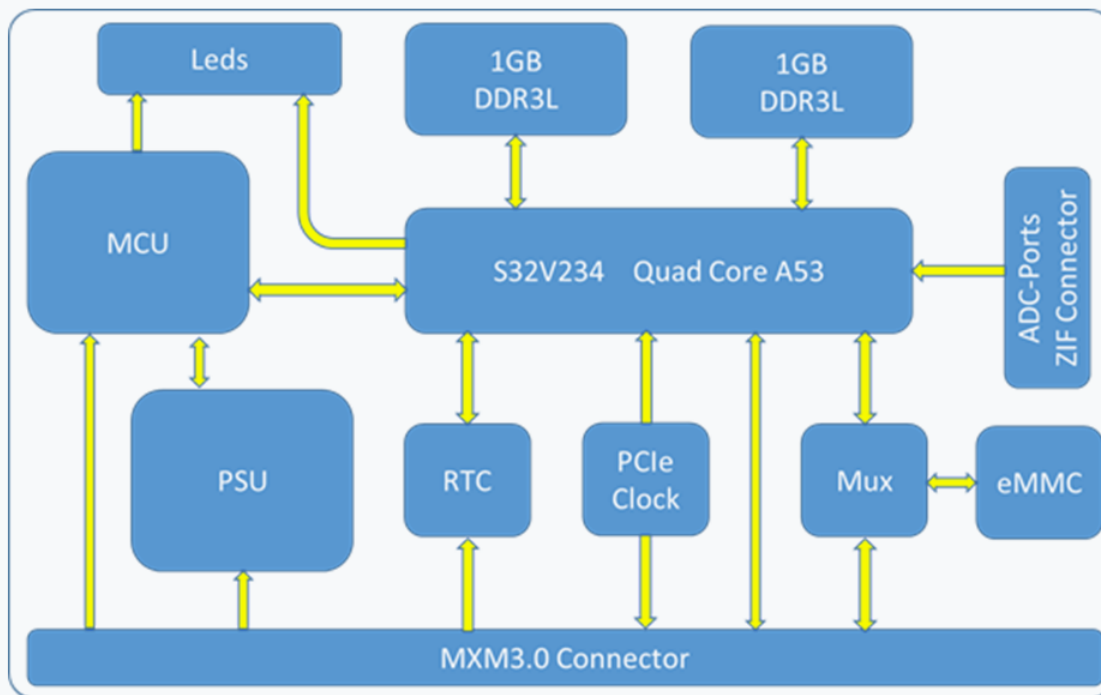
Software Support	<ul style="list-style-type: none">■ Linux■ VxWorks (on request)■ Others (on request)
Additional	<ul style="list-style-type: none">■ Image Cognition: 2x APEX2-CL Dual 32-bit array with 2x 32 compute units■ Video encoder/decoder: H.264, 8/10/12-bit / H.264, 8/10/12-bit, JPEG, 8/12-bit, up to 4 streams■ RCON/serial Boot switch■ GPU Power disconnect option■ Dev Kit available for immediate start, includes power supply, cables. Linux on SD card

General note:

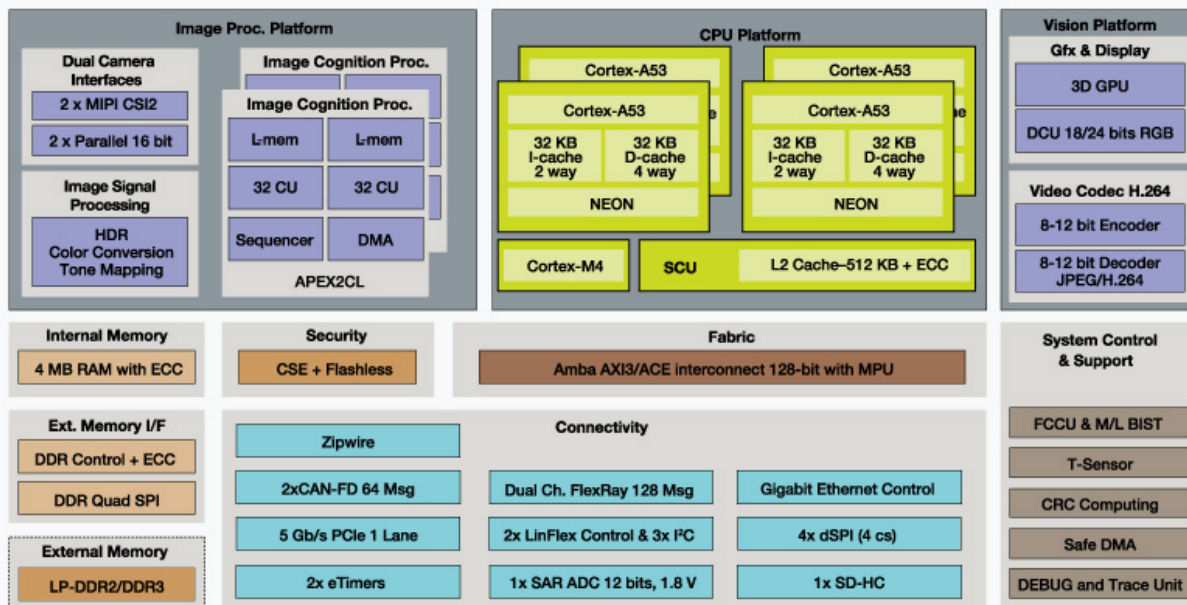
Our standard product versions offer what we consider to be the optimum configuration in terms of performance, price, usage and TDP. The product features lists specify the maximum range of functions per interface. However, not all interfaces or functions are always available in parallel. Flexible SERDES 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 miriac® MPX-S32V234 System on Module





Order Information

Name	Code	Description	Status
miriac® MPX-S32V234	854901	with NXP® S32V234@1 GHz CPU, up to 2x 1 GB DDR3L RAM	active



Related Products

Name	Code	Description	Status
miriac® SBC-S32V234	854901	The miriac® SBC-S32V234 Single Board Computer based on the NXP® S32V234 Arm® Vehicle Network Processors family for compute intensive image processing applications	active



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