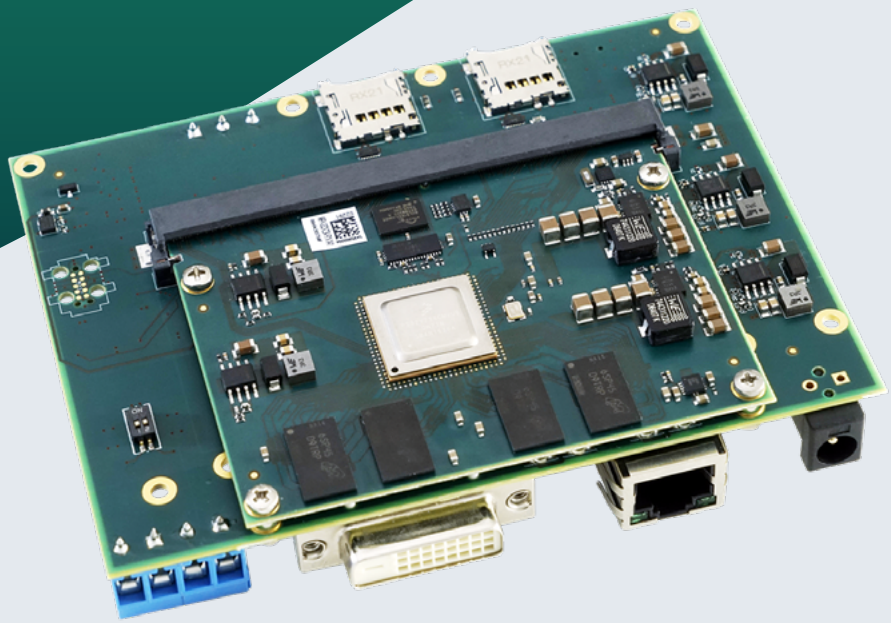
MicroSys
Creating Embedded Systems

Arm® Architecture

miriac® SBC-S32V234

based on the NXP® S32V234 Arm® Automotive Processors family for compute intensive image processing applications



Single Board Computer at a glance

- MIPI CSI, the most widely used camera interface in the mobile industry
- up to dual 1 GB 32-bit ECC DDR3L RAM
- HDMI Display interface
- Safety: FCCU and FCCU output supervision unit
- Video encoder/decoder: H.264, 8/10/12-bit / H.264, 8/10/12-bit, JPEG, 8/12-bit, up to 4 streams

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Product Description

The miriac® SBC-S32V234 single board computer is a perfect embedded platform for environment recognition and detection. The system is an excellent means for rapid prototyping purposes or might be applied even for production use.

Specifications

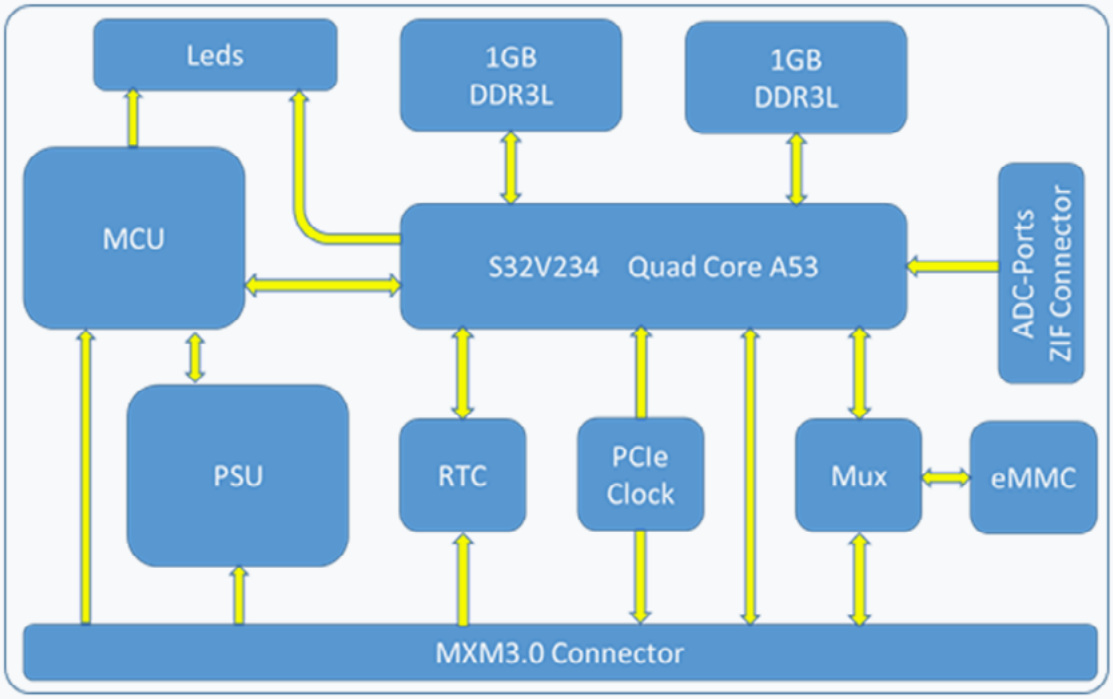
CPU	
Architecture	Arm® Cortex®-A53
Processor	NXP® S32V234 CPU: Quad Arm® Cortex®-A53 cores at up to 1.3 GHz core frequency 1x Cortex®-M4 Core for real time processing
DRAM	Up to dual 1 GB 32-bit ECC DDR3L RAM
Memory	
Flash Card	Yes
Boot Flash	eMMC or external SD card. dual boot mode dipswitch
eMMC	16 GB
Graphic	
HDMI Interface	1x
Camera Input	2x MIPI-CSI camera interface connector, 2x 5 V/12 V supply
Ethernet	
1GbE	1x
High Speed IO	
µUSB	1x
IO	
CAN FD	2x
LIN	1x
analog inputs (ADCs)	8x
JTAG Debug Interface	Yes
Extension Card Modules	
miniPCIe	1x
Operating Condition	
Power Supply Voltage	Single +12 V DC power input (+9 to +15 V)
RTC	Yes
RTC-Buffer	Supercap
Temperature	0 °C to 70 °C

Specifications

Mechanical	
Dimensions	126 mm x 93 mm
Software / Additional	
Software Support	■ Linux ■ VxWorks (on request) ■ Others (on request)
Additional	■ Four user LEDs ■ Four system state LEDs ■ Reset switch ■ Polarity & overvoltage protection ■ On/Off power switch ■ 2x 5 V/12 V fan connectors

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 SoM	854901	with NXP® S32V234@1 GHz CPU, up to 2x 1 GB DDR3L RAM	active
miriac® SBC-S32V234A Development System	855710	includes order# 854901 (MPX-S32V234 SoM with NXP® S32V234@1 GHz CPU, up to 2× 1 GB DDR3L RAM) Carrier Board, Linux BSP, accessories	active

Related Products

Name	Code	Description	Status
miriac® MPX-S32V234	854901	Vision and safety processor for compute intensive image processing applications	active

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