

# S32G VEHICLE NETWORK PROCESSING EVALUATION BOARD (EVB)

The S32G VNP EVB is an evaluation board for software development, rapid prototyping and demonstrations targeted for vehicle network processing applications such as service-oriented gateways and domain controllers.

## OVERVIEW

The S32G is a vehicle network processor delivering high levels of real-time and applications processing, supporting CAN/LIN/FlexRay networking and Gigabit Ethernet interfaces with hardware acceleration and with an embedded Hardware security Engine (HSE) and ASIL D functional safety capabilities. The S32G Vehicle Network Processor Evaluation Board (S32G-VNP-EVB) is ideal for software development, rapid prototyping and demonstrations.

## EVALUATION BOARD—SYSTEM SOLUTION

The S32 VNP EVB integrates multiple NXP components, including the S32G processor that supports traditional automotive gateways (CAN, LIN and FlexRay), Gigabit Ethernet, PCIe® Gen 3.0, USB 2.0 (ULPI), an automotive Ethernet switch and PHYs, and power management ICs (PMICs).

The EVB is modular with common connectors to support future processor upgrades to extend its usage and streamline roadmap migration. It also includes connectors to expand support for other boards such as Arduino® boards and the SJA1110 Ethernet switch EVB.

## FEATURES:

- Includes S32 platform board (I/Os) and S32G processor module with power and cables
- S32G processor socket and expansion connectors to support upgrades and expandability
- JTAG debug and Aurora trace capabilities



- Hardware features:
  - 64 MB serial NOR flash
  - 32 GB eMMC NAND flash + SD card slot
  - 4 GB LPDDR4
  - 2 x 100BASE-T1 Ethernet
  - 4 x 1000BASE-T Ethernet
  - 18 x CAN/CAN FD
  - 4 x LIN
  - 2 x FlexRay
  - 1 x USB 2.0 port
  - 12 x ADC
  - 1 x PCIe (Gen 3.0) x 2
  - 1 x PCIe x 1 (Finger Edge Interface)
  - 2 x SGMII (1.25G/3.125G)
- Functional safety support:
  - ASIL D S32G274A vehicle network processor
  - ASIL D VR5510 power management IC

## NXP COMPONENTS

- S32G274A Vehicle Network Processor
- SJA1105QEL 5-port Auto Ethernet Switch
- VR5510 Power Management IC
- TJA1048T Dual HS CAN Transceiver
- TJA1044GT/3 High-speed CAN Transceiver
- TJF1051T/3 High-speed CAN Transceiver
- TJA1024HG Quad LIN 2.2 A Transceiver
- TJA1081 FlexRay Node Transceiver
- TJA1102 100BASE-T1 Ethernet Transceiver
- NTSX2102G Dual-supply Translating Transceiver
- MK26FN2M Kinetis® MCU, 2 M Flash, 256 KB SRAM

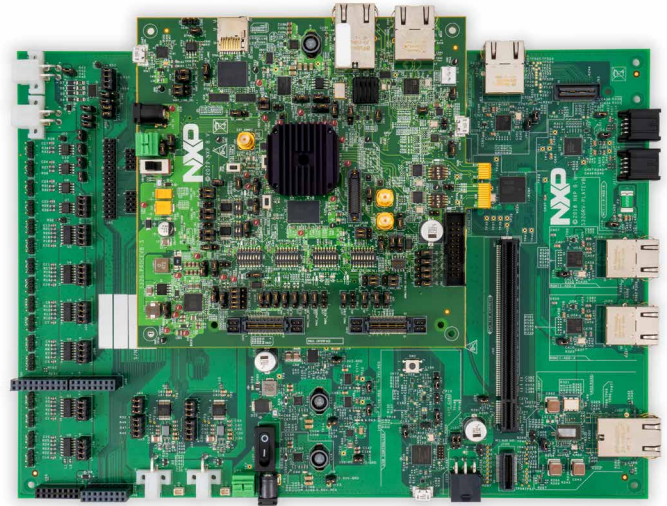
## ENABLEMENT TOOLS

- S32 Design Studio, Yocto, EB tresos
- Operating Systems: Linux®, FreeRTOS™
- Drivers: AUTOSAR® MCAL/Real-Time Drivers
- Compilers: Green Hills, gcc
- Debuggers: Lauterbach, iSYSTEM, S32G Debug Probe

## CERTIFICATIONS

FCC, CE

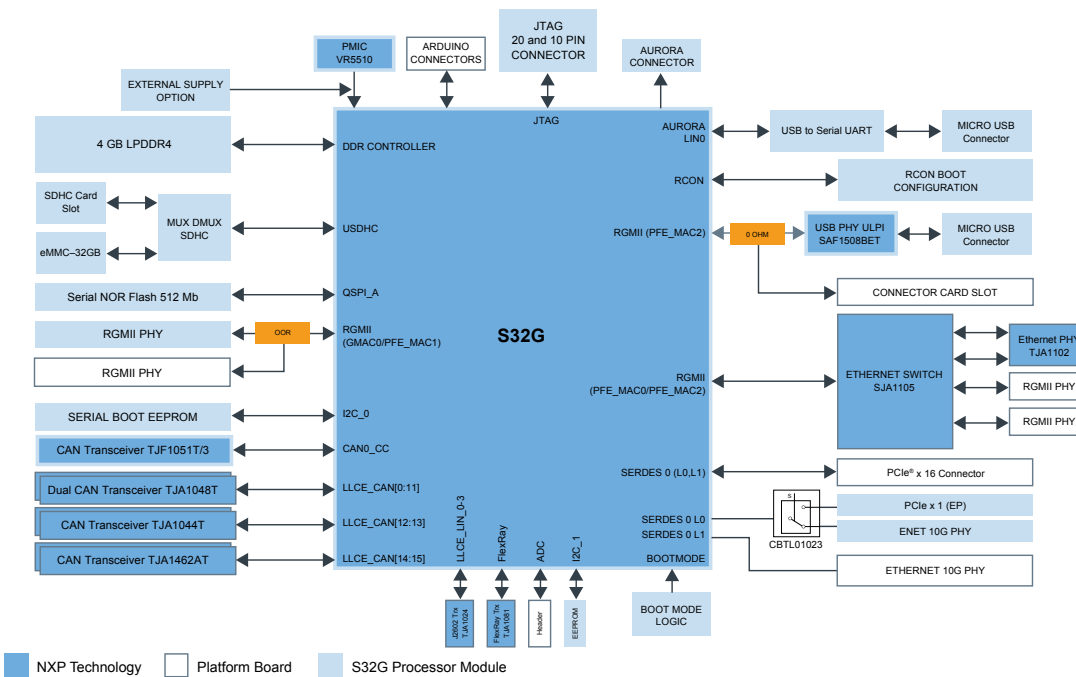
## S32G VNP EVALUATION BOARD (EVB)



## ORDERING INFORMATION:

S32G-VNP-EVB

## S32G VNP EVALUATION BOARD BLOCK DIAGRAM



[www.nxp.com/S32G-VNP-EVB](http://www.nxp.com/S32G-VNP-EVB)

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