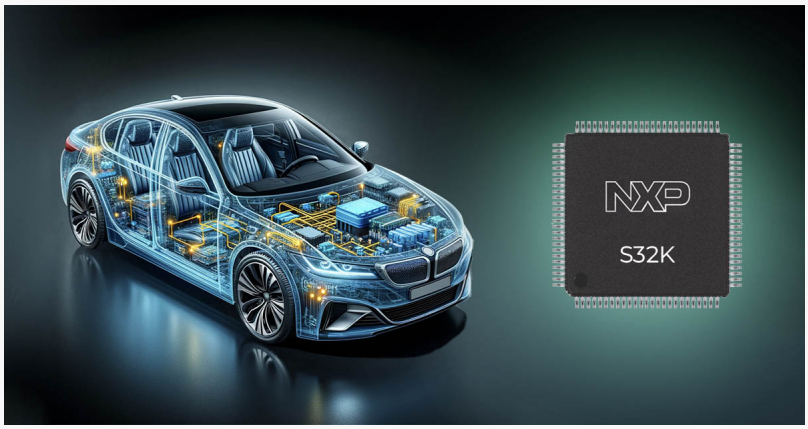
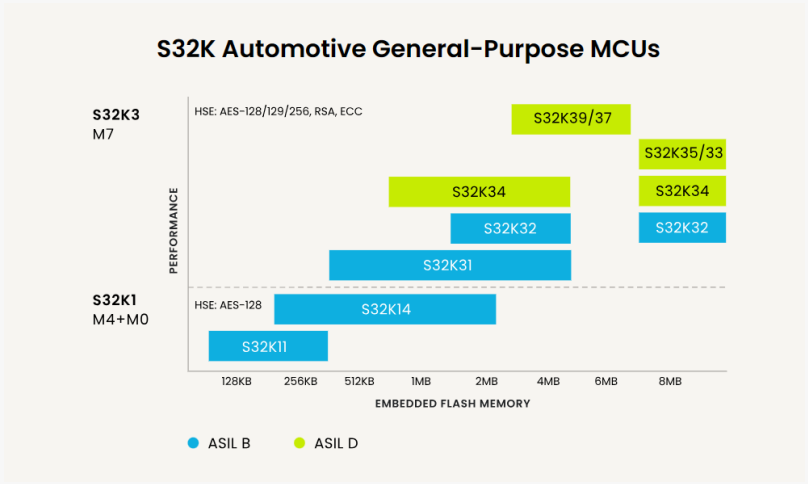
Promwad Joins NXP’s S32K Ecosystem for Advanced Embedded Automotive Engineering

Promwad, a Germany-based design house, have become one of four approved companies to provide engineering services with the S32K MCU family by NXP Semiconductors



NXP’s S32K Ecosystem



S32K product family overview by NXP Semiconductorss

ESSEN, NORTH RHINE-WESTPHALIA, GERMANY, September 12, 2024 /EINPresswire.com/ -- Promwad, an official partner of NXP Semiconductors, joined the S32K ecosystem, which brings together approved service providers who develop custom solutions for embedded automotive systems based on this general-purpose MCU family. Promwad is one of four companies worldwide to be officially recognised as an engineering services partner by NXP.

As a leading semiconductor vendor, NXP Semiconductors offers extensive expertise in powertrain and vehicle dynamics, body and comfort electronics, driver replacement and advanced driver assistance systems (ADAS), infotainment and V2X connectivity. The S32K series can be applied in all these areas, providing safety and autonomy through reliable, fault-tolerant systems.

Designed for AUTOSAR and non-AUTOSAR applications, S32K provides functional safety and security compliance to ASIL B/D levels. These general-purpose microcontrollers are specifically designed for edge nodes in distributed vehicle architectures. They solve complex problems, including silicon and software incompatibility, over-the-air upgrade complexities, and scalability issues.

The S32K MCUs also ensure greater network bandwidth and efficient development processes for a future-proof, upgradeable, scalable automotive platform.

Major automotive electronics applications for the S32K series include but are not limited to HVAC, body controllers, and infotainment systems.

Intelligent Speed Assistance (ISA) Device

“We are excited to join the S32K ecosystem and integrate these advanced technologies into our design processes. This partnership with NXP Semiconductors will allow us to create smarter, safer and more efficient solutions for tomorrow,” said Aliaksei Safonau, Head of Automotive Unit at Promwad

Promwad’s inclusion in the S32K Partner Ecosystem opens access to NXP Semiconductors’ broadest portfolio of integrated mixed-signal solutions, application-specific software, and a comprehensive radar, vision, and CPU solutions portfolio.

As a result, the company clients will have access to enhanced development of edge node body electronics, engine management systems, chassis/safety mechanisms and ADAS technologies to meet the automotive industry’s stringent requirements.

Commissioned by automotive companies worldwide, Promwad has been designing mass-produced devices based on NXP components and technologies for more than 15 years. In 2021, Promwad became a registered NXP Partner Program member. Over this time, the company engineers have completed dozens of R&D projects, some of which are presented in their online portfolio on promwad.com.

Promwad's recent designs with S32K MCU for enhanced vehicle safety, performance and comfort include the following projects:

Case Study #1: Intelligent Speed Assistance (ISA) Device

Commissioned by a Latvian-Georgian startup, Promwad designed an intelligent speed assistance device (relay) suitable for every vehicle equipped with an electronic throttle. The device helps reduce the vehicle’s speed by controlling the engine’s power, resulting in increased safety on the road.

With Promwad's engineering support and detailed design documentation, the client successfully

certified its product in the EU and launched mass production.

This device was designed to support manual and automatic switch-off with an emergency button. Within this project, the company engineers developed firmware for the S32K118 MCU to control the device and a PC application, which allows setting the device parameters and updating firmware over a COM port.

Case Study #2: Damper Motor Control Board

In cooperation with a Tier 1 automotive company, Promwad developed a damper motor control board based on an S32K MCU. It controls the air access in a bus or truck cabin, receiving commands via the CAN protocol.

The actuator MCU based on NXP s32K116 to control brushless motor. The company engineers integrated the CAN J1939 stack with USD functionality to improve diagnostics and reduce the number of wires. In addition, they ensured functional safety compliance.

The S32K family by NXP Semiconductors can be a go-to choice for automotive system engineering for its accessibility, cost-effectiveness, and robust support. These MCUs are widely available and come at a competitive price, ensuring they fit well within budget constraints.

Promwad's extensive experience with S32K has enabled it to leverage its capabilities fully, delivering reliable and high-performance embedded automotive systems.

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