



NXP Unlocks the Full Potential of Vehicle Data with the S32G Automotive Network Processors

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- Enable modern service-oriented gateways for rapid Over-the-Air (OTA) deployment of new capabilities and advanced edge-to-cloud analytics
- Deliver 10x more processing and networking performance with ASIL D functional safety to support autonomous driving applications
- Accelerate shift to simplified domain and zonal-based vehicle architectures and provide customers with reference system solutions

LAS VEGAS, Jan. 06, 2020 (GLOBE NEWSWIRE) -- NXP Semiconductors N.V. (NASDAQ: NXPI), the world's largest supplier of automotive semiconductors, has announced its new S32G vehicle network processors. These processors mark a significant turning point in the way vehicle architectures are designed and implemented. As the latest offering from NXP's S32 family of processors, the S32G processors enable the automotive industry shift to high performance domain-based vehicle architectures and provide reduced software complexity and enhanced security and safety. Adopted by top global OEMs, the S32G processors' primary role will be in service-oriented gateways that will help transform OEMs from carmakers into vehicle data-driven service providers with expanded business opportunities.



The S32G processors enable modern service-oriented gateways for rapid Over-the-Air (OTA) deployment of new capabilities and advanced edge-to-cloud analytics

Forthcoming generations of connected vehicles will require a dramatic shift in performance and security to deliver data-driven opportunities. The S32G processors take automotive networking to a new level by securely managing data transmission around the vehicle and protecting safety critical applications from malicious intent. These processors are the world's first integration of traditional MCUs with high-performance application processors with ASIL D functional safety support, and network acceleration, providing a significantly greater level of functionality than previously offered in a single device.

The evolution to connected, autonomous, electrified vehicles will allow a host of data-based services to emerge. Usage-based insurance, vehicle health monitoring and fleet management services for commercial operators are a few of the opportunities under exploration by OEMs, enabled by NXP's robust, secure processing capabilities.

The S32G is not, however, solely a network processor. Its unique combination of capabilities enables it to support the latest ADAS applications, as well as providing safe and secure communication capabilities that significantly contribute to the total integration of the vehicle's network. Bernhard Augustin, Director ECU Development Autonomous Driving at Audi said, "We found the unique combination of networking, performance and safety features of the S32G processor to be ideal for use in our next-generation ADAS domain controller."

About the NXP S32 Family of Processors

The NXP S32 architecture addresses the challenges of future car development with a host of architectural innovations designed to allow carmakers to bring rich in-vehicle experiences and automated driving functions to market much faster than before.

The NXP S32 family of processors offer a unified architecture with high-performance MCUs and MPUs and application-specific acceleration and interfaces, supported by an identical software environment across application platforms. The software development environment allows developers to reuse costly research and development work and therefore respond quicker to changing vehicle architectures and intense time-to-market demands.

The platform is developed to deliver automotive quality, reliability, and ASIL D performance across multiple application spaces throughout vehicles.

S32G Processors' Key Attributes

- **Performance** – S32G processors provide ASIL D MCU and MPU performance with application-specific network hardware acceleration that offloads processors to provide valued services with deterministic network performance needed by OEMs for the complex real time environment of the modern vehicle.
- **Security** – The S32G, like all other S32 platform processors, embed high-performance hardware security acceleration, along with Public Key Infrastructure (PKI) support for trusted key management, enabled by its Hardware Security Engine (HSE). The firewalled HSE is the root of trust supporting secure boot, providing system security services, and protecting against side-channel attacks.
- **Safety** – The NXP S32G processors offer full ASIL D capabilities including lock-step Arm® Cortex®-M7 microcontroller cores, and an industry-first ability to lock-step clusters of Arm Cortex-A53 applications cores, allowing automotive safety to support new levels of performance with high-level operating systems and larger memory support.

S32G System Solution

NXP has announced its multi-gigabit safe and secure automotive Ethernet switch, the [SJA1110](#) which is optimized for integration with S32G processors. The new Ethernet switch is aligned to the latest TSN standards and offers integrated 100BASE-T1 PHYs, hardware-assisted security and safety capabilities and multi-gigabit interfaces. The combination of NXP's S32G processor, SJA1110 switch and VR5510 power management IC addresses the biggest challenges facing vehicle networking today including scalability, safety, security and high-speed traffic engineering.

S32G Availability and Enablement

The S32G274A is the first of four devices in the S32G family and is sampling today to lead customers. Enablement by NXP and a strong partner ecosystem include comprehensive board, software, tools and systems support to accelerate customer designs. To learn more, visit <https://www.nxp.com/S32G>.

About NXP Semiconductors

NXP Semiconductors N.V. enables secure connections for a smarter world, advancing solutions that make lives easier, better, and safer. As the world leader in secure connectivity solutions for embedded applications, NXP is driving innovation in the automotive, industrial & IoT, mobile, and communication infrastructure markets. Built on more than 60 years of combined experience and expertise, the company has approximately 30,000 employees in more than 30 countries and posted revenue of \$9.41 billion in 2018. Find out more at www.nxp.com

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