NXP Introduces Advanced Automotive Radar One-Chip Family for Next-Gen ADAS and Autonomous Driving Systems

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- Industry-first 28nm RFCMOS radar one-chip for safety-critical ADAS applications, including automated emergency braking and blind-spot detection
- The one-chip solution is comprised of a highly integrated RF front-end and a multi-core radar processor
- DENSO Corporation will leverage NXP's latest radar technology to drive next-generation ADAS platform development

LAS VEGAS, Jan. 05, 2023 (GLOBE NEWSWIRE) -- NXP Semiconductors (NASDAQ: NXPI), the market share leader in automotive radar according to Yole Intelligence, today announced a new industry-first 28nm RFCMOS radar one-chip IC family for next generation ADAS and autonomous driving systems. The new SAF85xx one-chip family combines NXP's high performance radar sensing and processing technologies into a single device, offering tier ones and OEMs new flexibility in addressing short, medium and long range radar applications to serve ever more challenging NCAP safety requirements. The introduction of the one-chip radar family has added to NXP's leading radar portfolio, built on more than 15 years of technology leadership and designed to surround drivers in a cocoon of safety to reduce accidents. DENSO Corporation, which works at the forefront of radar technology, has embraced NXP's latest innovation as its lead customer.

"This advanced radar sensing technology plays an essential part in accelerating the development of next-generation ADAS," said Mr. Hiroshi Kondo, Head of Safety Systems Business Unit at DENSO Corporation. "We know DENSO will extend its leadership position in ADAS by leveraging NXP's compact high-performance SAF85xx radar SoC."

NXP's new family of automotive radar SoCs is comprised of high-performance radar transceivers integrated with multi-core radar processors which are built on NXP's S32R radar compute platform. The SAF85xx offers twice the RF performance and accelerates radar signal processing by up to 40%, compared to NXP's previous generation. The one-chip family enables 4D sensing for corner and front radar, serving critical safety ADAS applications, such as automated emergency braking, adaptive cruise control, blind-spot monitoring, cross-traffic alert and automated parking. OEMs will benefit from the increased flexibility it offers in meeting the expanding NCAP safety requirements and the proliferation of radar sensors, which some analyst estimates project will range to up to five or more per car.

When combined with power management and connectivity solutions from NXP, the system solution flexibly addresses a wide variety of today's and tomorrow's OEM needs. Developers can take advantage of the S32R family's seamless performance scalability as well as its software and hardware design reuse benefits.

"Our new radar one-chip family enables the reliable long range detection of objects and separation of small objects next to larger ones, like a fast-moving motorcycle next to cars and trucks on a busy multi-lane highway," said Torsten Lehmann, Executive Vice President, NXP Semiconductors. "Its small form factor allows our customers to build radar sensor modules that are up to 30 percent smaller, enabling global suppliers of ADAS systems, like DENSO, to expand the potential of radar safety through this powerful new technology."

NXP's 3 rd Generation RFCMOS Radar Platform

- Built on the proven RFCMOS expertise of NXP, which was the first to ramp to high volume series production for automotive radar and has already shipped tens of millions of units
- Highly integrated 77 GHz radar smart transceiver SoC contains four high-performance transmitters, four receivers, a multi-core radar processor with hardware accelerator, Gigabit Ethernet communication interface and memory
- Targets the Automotive Safety Integrity Level B (ASIL B) requirements, according to the ISO 26262 functional safety standard and the automotive cybersecurity standard ISO/SAE 21434 to meet the requirements of the automotive industry for safety and security

Availability
The SAF85xx one-chip family is sampling now for alpha customers. For more information, please visit: www.nxp.com/saf85xx

NXP's Radar Portfolio
Already sampling to lead customers and targeting next-generation OEM platforms, NXP's new SAF85xx radar family builds on top of NXP's complete suite of radar sensor solutions that can surround vehicles in a 360-degree safety cocoon. The scalable suite of sensing solutions is tailored to cover car OEMs' ever-diversifying use cases and architectures, from corner radar to high-resolution 4D imaging radar. The S32R platform offers a common architecture for software reuse and speedy development along with a highly performant hardware security engine, OTA update support and compliance with the newest cybersecurity standards.

NXP at CES 2023
Witness how semiconductors help enable safe and secure software defined mobility with groundbreaking new applications and services. NXP will showcase our scalable radar portfolio at the LVCC, Booth CP-18.

About NXP Semiconductors
NXP Semiconductors N.V. (NASDAQ: NXPI) enables a smarter, safer and more sustainable world through innovation. As a world leader in secure connectivity solutions for embedded applications, NXP is pushing boundaries 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 31,000 employees in more than 30 countries and posted revenue of $11.06 billion in 2021. Find out more at www.nxp.com.

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A photo accompanying this announcement is available at https://www.globenewswire.com/NewsRoom/AttachmentNg/689ad1f2-85d8-4bd4-ad2b-be733809f90a

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Source: NXP USA, Inc.