NXP Announces a Complete Suite of Radar Sensor Solutions that Can Surround Vehicles in a 360-degree Safety Cocoon

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- New sensing solutions cover all radar segments from NCAP corner to 4D imaging radar
- Scalable portfolio approach for optimum design and software re-use, reduced R&D effort aims to deliver faster time to market
- Market leading radar IP based on volume-proven advanced process technologies

EINDHOVEN, The Netherlands, Dec. 07, 2020 (GLOBE NEWSWIRE) -- NXP Semiconductors, the leader in automotive radar, has announced a complete suite of new radar sensor chipset solutions that can surround vehicles in a 360-degree safety cocoon and enable the identification and classification capabilities of imaging radar. The solutions, comprised of new NXP radar processors and 77GHz transceivers, offer carmakers flexible and scalable configurations that address NCAP requirements for corner and front radar applications while offering 4D imaging radar's first commercially viable path to volume production. 4D imaging radar expands radar's capabilities from measuring range and speed to include direction, angle of arrival, and elevation measurement. Together, these solutions are part of the effort to reduce the 1.3 million yearly road deaths and represent radar's evolution as a central part of driver assistance systems.

Radar is a core advanced driving assistance (ADAS) technology for both traditional carmakers focused on automated driving levels 1-3 and for mobility as service innovators developing robotaxi and safe delivery applications for levels 4 and 5 automation. NXP's new suite of radar sensing solutions meet both scenarios and provide a dedicated and optimized approach with critical scalability and design re-use to help carmakers address the needs of their diverse brand and model portfolios. This flexibility enables performance tailoring for the appropriate use case, reduces R&D effort and can speed up time to market.

NXP is enabling the ongoing evolution of radar with 2 new solutions.

New NXP Imaging Radar Solution
Imaging radar is a groundbreaking technology that significantly enhances radar's performance. It delivers multi-modal capabilities and extends today's available L2+ features, like highway pilot and lane change assistance, by offering super-resolution images for precise environmental mapping and scene understanding. This enhanced "understanding" is an important part of enabling full autonomy in urban settings where vehicles and vulnerable road users create driving complexity.

The combination of NXP's new purpose-built S32R45 radar processor and the TEF82xx transceivers delivers the fine angular resolution, processing power and range required to not only distinguish between small objects in the distance, but also to accurately separate and classify vehicles and vulnerable road users like cyclists or pedestrians in crowded environments. This imaging capability aims to deliver better driving decisions.

NXP Scalable Corner and Front Radar Solution

Targeting cost-effective and small footprint NCAP corner radar requirements for high volume vehicle production, the NXP solution also provides scalability for long-range front radar and advanced multi-mode use cases like simultaneous blind-spot detection, lane change assistance and elevation sensing. These advanced applications require extended range and significantly enhanced angular resolution for detecting and clearly separating multiple objects simultaneously and provide the ability to surround the car in a 360-degree safety cocoon. NXP's new S32R294 radar processors combined with the NXP TEF82xx transceivers provide a scalable solution that helps carmakers address both NCAP and advanced corner radar as well as long-range front radar sensor requirements in an effective way, while allowing tailoring for individual use cases.

"Radar has evolved from just detecting other cars' velocity and distance to providing imaging radar's high-resolution object and feature detection for precisely mapping the car's surroundings," said Torsten Lehmann, EVP and GM, Radio Frequency Processing, NXP. "Our new radar sensor solutions can help customers cover NCAP requirements to make driving safe, and also address the frontier of ADAS sensing on the path towards fully autonomous vehicles."

As the first company to broadly deliver 77GHz RFCMOS radar technology in high volume mass production and as the developer of the groundbreaking S32 automotive processing platform, NXP stands alone in helping its customers optimize their total cost of ownership with maximum scalability and re-use across different radar systems, thereby optimizing their own R&D efficiency.

New NXP Radar Sensor Solutions are built on market-leading and volume-proven 16nm FinFET and 40nm RFCMOS technology. To learn more about NXP's new RFCMOS 77GHz radar transceivers, the new S32R45 high-performance radar processors for imaging radar and the S32R294 radar processor for corner and front radar applications visit www.nxp.com/radar. NXP's Radar Solutions are now sampling with customers and will be available in mass production during 2021.

CES 2021
Get a sneak peak at NXP's CES 2021 as CTO Lars Reger unveils the latest automotive, industrial and IoT, mobile and communication infrastructure breakthroughs.

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 29,000 employees in more than 30 countries and posted revenue of $8.88 billion in 2019. 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/9a07a64e-73d5-444a-ae12-7752fcaf2781

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