NXP and Momenta Collaborate on Automotive-Grade Driver Monitoring Systems

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Driver monitoring plays a key role in next-gen new car assessment program (NCAP) requirements and safe assisted driving

EINDHOVEN, Netherlands, June 05, 2019 (GLOBE NEWSWIRE) -- NXP Semiconductors N.V. (NASDAQ: NXPI), the world's largest supplier of automotive semiconductors, and Momenta, a pioneer in software solutions for autonomous driving, today announced a collaboration on automotive-grade Driver Monitoring Solutions (DMS). These solutions form the basis of the systems that monitor driver attentiveness, and play important roles in increasing safety on the road and helping carmakers address upcoming NCAP requirements. The joint effort between NXP and Momenta aims to enable car makers to deploy DMS applications into mass automotive production.

Driver Monitoring Systems are one of the interrelated parts of advanced driving assistance systems (ADAS) and are essential for Level 3 and higher driving systems. The systems use deep learning algorithms to visually monitor and detect a driver's lack of attention to the road and can offer pre-collison warnings. Euro NCAP has made DMS a primary safety function slated for NCAP incorporation by 2020 and some forecasts predict a market of more than one billion dollars by 2026.[1]

The first solution from the NXP and Momenta collaboration will combine the high performance, power-efficient architecture of NXP's Open Vision Platform (S32V2) with Momenta's deep learning software and expertise. The solution aims to optimize, compress and accelerate deep neural networks so that they can run efficiently on an automotive-grade DMS embedded platform.

"The integrated automotive-grade hardware accelerators in the NXP S32V2 are ideal for deep neural network processing because they can reduce CPU usage and save computing resources. This can offer more performance for other vision processing tasks within the vehicle and reduce costs for our customers," said Kamal Khouri, vice president and general manager of Advanced Driver Assistance Solutions at NXP. "The combination of Momenta's deep learning software and our S32V2 platform is a compelling solution for DMS applications aimed at increasing road safety for society."

"DMS is essential to autonomous driving systems. NXP has decades of expertise in the functional safety systems required to tackle autonomous driving. Utilizing the hardware architecture of NXP S32V2 platform and the NXP AI enablement, our deep-learning software algorithms can be deployed quickly and run efficiently on a low-power-consumption and automotive grade chip. We look forward to working with NXP to provide the next generation of solutions enabling autonomous driving," said Momenta CEO Xudong Cao.

Resources:
NXP Driver Monitoring
NXP & Momenta Driver Monitoring System Video
NXP S32V234: Vision Processor Product Page

Notes
[1] Based on Strategy Analytics 2019 forecasts

About NXP Semiconductors
NXP Semiconductors N.V. (NASDAQ: NXPI) enables secure connections and infrastructure 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 secure connected vehicle, end-to-end security & privacy, and smart connected solutions 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.

About Momenta
Established in 2016, Momenta is building the "brains" for autonomous vehicles. Its deep-learning based software in perception, HD semantic mapping, and data-driven path planning enables the realization of full autonomy. Momenta offers multi-level autonomous driving solutions as well as big data services. Find out more at www.momenta.ai.

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