



NXP Teams with Green Hills Software on its Platform for Safe Autonomous Driving

February 26, 2019

Partnership adds certified OS for safety-critical, production-focused autonomous driving

NÜRNBERG, Germany, Feb. 26, 2019 (GLOBE NEWSWIRE) -- (**Embedded World 2019**) —NXP Semiconductors N.V. (NASDAQ: NXPI), a technology and market leader in next-generation automotive technologies and Green Hills Software, a worldwide leader in embedded safety and security, have announced a strategic partnership focused on production-grade ADAS and autonomous driving applications. The partnership, and the addition of Green Hills' INTEGRITY® real-time operating system (RTOS), expands the growing ecosystem surrounding NXP's S32 portfolio for ADAS and central compute systems. Together, the companies aim to deliver high-volume, production-grade electronic control units (ECUs) that foster the development and testing of life-critical autonomous applications.

Many of the consumer-grade autonomous platforms used in today's self-driving pilots and experimental offerings do not offer the safety and security required for high-volume automotive production. NXP and Green Hills have provided leading carmakers and tier 1 suppliers with the safe technology required to produce millions of cars over the years. This joint experience is being leveraged to tackle the next levels of autonomous development for SAE Levels 2, 3 and beyond.

NXP offers its S32 family for safe and reliable autonomous driving, which includes NXP's scalable portfolio of functional safety products for ADAS. The S32 family is designed to address the performance, safety and near-term commercial needs of Levels 2 and 3 driving, while providing an eye to longer-term release in Level 4 and 5 autonomous vehicles.

Green Hills brings its INTEGRITY RTOS technology as the centerpiece of its software platform for safe autonomous driving. For over twenty years, the INTEGRITY architecture has been chosen when fail-safe assurance is mandated for mission and life-critical systems in markets spanning aircraft flight controls to surgical robotics, making it the most highly-certified RTOS in the embedded industry. Independent accredited organizations have certified INTEGRITY or INTEGRITY-178 at the highest safety and security levels for embedded applications including automotive (ISO 26262 ASIL D), aircraft avionics (DO-178 Level A), high robustness security (Common Criteria EAL 6+), industrial (IEC 61508 SIL 3) and railway (EN 50128 SIL 4). Green Hills also provides its MULTI IDE tools suite and C/C++ run time libraries that are pre-qualified to ASIL D and SIL 4 to support customers' critical application development.

The first demonstration of the NXP and Green Hills collaboration shows how life-critical path planning and vehicle control software can run in safe and secure INTEGRITY RTOS partitions on the NXP BlueBox embedded autonomous driving platform. The demonstration is an example of the initial technology challenges and solutions involved in developing safe, secure, production-grade ECUs.

"The focus of the autonomous driving ecosystem has shifted from performance at any cost to safety for mass production roll out. We are pleased to partner with Green Hills Software and welcome its INTEGRITY safety operating system with our roadmap for autonomous driving," said Kamal Khouri, vice president & general manager, Advanced Driver Assistance, NXP. "Both companies offer their proven automotive DNA for this collaboration, to provide customers a trusted and realizable platform made for the rigors of autonomous vehicle industrialization."

"The NXP S32 portfolio is impressive for its performance, safety and scalability," said Dan Mender, vice president, Business Development, Green Hills Software. "We are pleased to partner with NXP to apply our safety and security leadership with technology already proven in automotive, avionics and military systems. The INTEGRITY RTOS with Multivisor secure virtualization and MULTI IDE provide the essential software foundation to protect and secure mission and life-critical autonomous functions."

Embedded World Demonstration

The BlueBox Autonomous Racer will be demonstrated at embedded world 2019 by NXP in Hall 4A, Booth 220 and by Green Hills in Hall 4, Booth 325.

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 over 30,000 employees in more than 30 countries and posted revenue of \$9.26 billion in 2017. Find out more at www.nxp.com

NXP and the NXP logo are trademarks of NXP B.V. All other product or service names are the property of their respective owners. All rights reserved.
© 2018 NXP B.V

Green Hills, the Green Hills logo, INTEGRITY, Multivisor and MULTI are trademarks or registered trademarks of Green Hills Software, in the U.S. and/or internationally. All other trademarks are the property of their respective owners.

For more information, please contact:

NXP

Europe / U.S.

Jason Deal

Tel: +44 7715228414
Email: jason.deal@nxp.com

Greater China / Asia

Ming Yue
Tel: +86 21-2205 2690
Email: ming.yue@nxp.com

Japan

Kiyomi Masuda (増田 清美)
Tel: +81-70-3627-6472
Email: kiyomi.masuda@nxp.com

Green Hills Software

U.S.

Barbel French
Tel: +001- 805-965-6044
Email: bfrench@ghs.com

Europe

Christopher Smith
Tel: +44 2380 649660
Email: chriss@ghs.com



NXP USA, Inc.