NXP Announces the BlueBox 3.0 Development Platform for Safe Automotive High-Performance Computing

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- Embedded NXP Layerscape processor delivers 2x increase in processing **performance** over previous platform to meet new vehicle architecture demands
- S32G processors support ASIL D level functional **safety** to enable advanced safety architectures
- 8x increase in I/O and PCIe ports expands the platform's connectivity and **scalability,** adding acceleration extensions with Kalray's MPPA® processor-based PCIe cards to support safe Automotive High-Performance Compute applications

EINDHOVEN, The Netherlands, Jan. 11, 2021 (GLOBE NEWSWIRE) -- NXP Semiconductors has announced BlueBox 3.0, a new and expanded version of NXP's flagship safe Automotive High-Performance Compute (AHPC) development platform. Designed for software application development and validation ahead of silicon device availability, BlueBox 3.0 now offers a flexible way to address user-defined vehicles, safety Level 2+ (L2+) automated driving, and the evolving vehicle architectures that will revolutionize connected vehicles. By combining in a centralized compute module, safe integrated high-performance NXP processors, expanded I/O connectivity and extensions with Kalray's MPPA processor-based PCIe cards enabling heterogeneous acceleration; BlueBox 3.0 offers designers a solution that can accelerate system development cycles and speed time to market.

Carmakers have shifted their focus from the challenges of fully autonomous vehicles to the immediate practical opportunity to harness compute power for differentiated vehicles. User-defined vehicles allow consumers to add new functionality for today's smart connected devices.The NXP BlueBox 3.0 delivers the rich development foundation to help designers address differentiation, safe L2+ volume production, and the associated vehicle networking architectures.

"The evolution of vehicle architectures towards domain and zonal architectures is being driven by the need to address more complex requirements around user defined vehicles," said Arnaud Van Den Bossche, Director, Global Product Marketing for eCockpit and ADAS, NXP Automotive Processing. "Zonal architectures will deliver a server-style approach to automotive high-performance compute. NXP BlueBox 3.0 delivers the design foundation to innovate with these new vehicle networking architectures, helping to enable faster deployments."

By leveraging NXP's 16-core Layerscape [LX2160A processor](#), BlueBox 3.0 doubles the processing performance from the previous BlueBox generation. This increased performance, coupled with the expanded I/O interfaces, significantly enhances the intelligence and connectivity targeted for new vehicle architectures. The processing can accommodate radar, vision, and LiDAR signal paths for advanced sensor fusion applications and provides expansion options for AI and ML acceleration with the Kalray Coolidge™ MPPA® (Massively Parallel Processor Array) processors that can be targeted for perception, prediction, pathfinding capabilities and emerging connected services.

NXP's BlueBox 3.0 platform integrates the [NXP S32G processor](#) to provide secure vehicle networking and reliable safety processing and checking for system-level ASIL D conformance. NXP has leveraged its safety heritage to pioneer a safe automotive high-performance compute initiative that harnesses the joint efforts of a close-knit partner ecosystem for system designers. BlueBox is the central processing and connectivity hub at the heart of this initiative.

Through their close collaboration NXP and Kalray are delivering a BlueBox 3.0 Software Development Environment (SDE) that integrates the Kalray MPPA® processors. This collaboration enables a common hardware and software platform for safe, reliable and scalable AHPC solutions. In addition to Kalray, BlueBox 3.0 is also backed by a strong eco-system of partners that will accelerate engineers' ability to ramp up quickly. NXP BlueBox 3.0 partners include: dSPACE, Embotech, Edge Case Research (ECR), eProsima, Green Hills Software (GHS), Intempora, Micron Technology, MicroSys, Real-Time Innovations (RTI), and Teraki, to enable engineers to ramp up quickly .

About BlueBox 3.0 Developer Advantages

- Flexible and scalable platform allows designers to expand the performance and scope of their designs.
- Leverages ample onboard I/O connectivity so designers can easily add or change radar, vision, and LiDAR sensor functionality.
- Takes advantage of the integration and support provided within the BlueBox 3.0 SDE and the NXP eIQ Auto Machine Learning toolkit for acceleration solutions such as the Kalray Coolidge™ MPPA® to meet evolving performance requirements.
- Smooth, consistent development path from BlueBox 2.0, with scalable processing capacity and software compatibility enables the creation and evolution of system designs for a multitude of user-defined applications and vehicles.

Learn all about our [Ecosystem Partners](#).

[NXP CES Live 2021](#)

Availability

BlueBox 3.0 is available for approved customers. All new orders will be reviewed prior to fulfillment.

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/00c99b7f-3c27-4acf-bb5c-a157890505af

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