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AMD Adaptive Computing Technology Powers Sony Semiconductor Solutions LiDAR Automotive Reference Design

– AMD Zynq UltraScale+ MPSoC and Artix-7 FPGA-powered LiDAR will enhance next-generation autonomous vehicle safety for exceptional object detection and real-time analysis –

SANTA CLARA, Calif., March 19, 2024 (GLOBE NEWSWIRE) -- Today, AMD (NASDAQ: AMD) announced that its cutting-edge adaptive computing technology was selected by Sony Semiconductor Solutions (SSS) for its newest automotive LiDAR reference design. SSS, a global leader in image sensor technology, and AMD joined forces to deliver a powerful and efficient LiDAR solution for use in autonomous vehicles. Using adaptive computing technology from AMD significantly extends the SSS LiDAR system capabilities, offering extraordinary accuracy, fast data processing, and high reliability for next-generation autonomous driving solutions.

In the rapidly evolving landscape of autonomous driving, the demand for precise and reliable sensor technology has never been greater. LiDAR (Light Detection and Ranging) technology plays a pivotal role in enabling depth perception and environmental mapping for various industries. LiDAR delivers image classification, segmentation, and object detection data that is essential for 3D vision perception enhanced by AI, which cannot be provided by cameras alone, especially in low-light or inclement weather. The dedicated LiDAR reference design addresses the complexities of autonomous vehicle development with a standardized platform to enhance safety in navigating diverse driving scenarios.

"LiDAR technology with its AI-enhanced perception capabilities is advancing at an incredible pace, enabling deployments for an ever-growing number of applications," said Yousef Khalilollahi, corporate vice president & general manager, AMD Adaptive Computing Group. "Our collaboration with Sony Semiconductor Solutions integrating AMD adaptive computing technology into its LiDAR reference design exemplifies our dedication to pushing the boundaries of technology and driving innovation in critical industries."

"This technical collaboration with AMD represents a significant leap forward in our commitment to delivering cutting-edge solutions for LiDAR applications," said Takayoshi Ozone, general manager, Automotive Development Department at Sony Semiconductor Solutions Corporation. "By incorporating AMD adaptive computing technology into our LiDAR reference design, we are poised to set new standards in performance, reliability, and adaptability."

The SSS LiDAR reference design with IMX459 sensor, powered by AMD Zynq™ UltraScale+™ MPSoC adaptive SoCs and Artix™-7 FPGAs, enables automakers and automotive equipment suppliers with a comprehensive perception platform to navigate complex driving scenarios and identify potential hazards with exceptional precision. The

reference design harnesses AMD expertise in developing scalable and adaptable computing solutions to optimize the processing capabilities of SSS' SPAD ToF Depth sensors. This synergy results in high accuracy, fast data processing, and excellent reliability, addressing the evolving demands of the automotive industry. The combined efforts of SSS and AMD are poised to accelerate the adoption of LiDAR technology across various industries, unlocking new possibilities for autonomous systems.

Supporting Resources

- Learn more about Sony Semiconductor Solutions
- Read the ABI Research white paper: A Scalable Approach to Autonomous Driving
- Follow AMD on LinkedIn
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AMD in Automotive

As the pace of innovation continues to accelerate in the automotive industry, the need for high-performance compute, compute acceleration and graphics technologies is increasing. AMD is a leader at this inflection point, with a broad line of high-performance CPUs, GPUs, FPGAs and adaptive SoCs. From powering in-vehicle infotainment systems to advanced driver-assistance systems, autonomous driving and networking applications where functional safety is of paramount importance, AMD provides carmakers with a one-stop shop for silicon and software solutions. For more information, visit AMD's Automotive website.

About AMD
For more than 50 years AMD has driven innovation in high-performance computing, graphics and visualization technologies. Billions of people, leading Fortune 500 businesses and cutting-edge scientific research institutions around the world rely on AMD technology daily to improve how they live, work and play. AMD employees are focused on building leadership high-performance and adaptive products that push the boundaries of what is possible. For more information about how AMD is enabling today and inspiring tomorrow, visit the AMD (NASDAQ: AMD) website, blog, LinkedIn and Twitter pages.

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