AEye and ANSYS Accelerate Autonomous Driving Safety

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ANSYS enables virtual prototyping of AEye solutions to speed design, testing and validation of automotive perception technologies in challenging real-world scenarios

PITTSBURGH, Jan. 6, 2020 /PRNewswire/ -- The next generation of autonomous vehicles will mimic how human eyes focus on and evaluate road conditions by leveraging AEye and ANSYS (NASDAQ: ANSS) technologies. AEye is incorporating ANSYS' industry-leading simulation solutions into the design of its Intelligent Detection and Ranging (iDAR™) platform — enabling customers to reduce physical prototyping and improve the safety and reliability of autonomous systems.

Safeguarding autonomous driving requires next-generation sensors to quickly and correctly interpret certain hazardous road scenarios that cannot be reliably detected by conventional perception platforms. To validate the sensors' effectiveness, exhaustive road testing must be successfully completed —demanding significant development time and expenses. With ANSYS, AEye empowers automotive manufacturers to potentially simulate driving situations across millions of miles in just days, minimizing physical prototyping.

AEye is implementing ANSYS® SPEOS® and ANSYS® VRXPERIENCE®, a state-of-the-art driving simulation tool with physics-based sensor models, into the design of AEye's iDAR — empowering customers to quickly test and certify iDAR designs within a realistic virtual driving environment. AEye's automotive-grade iDAR combines deterministic and AI-driven perception to deliver detection and classification at high speed and far range not possible for conventional LiDAR or camera sensors. Through the integration, automotive customers deploying autonomous vehicle and advanced driver assistance systems (ADAS) will be able to virtually prototype AEye's software-definable, agile LiDAR to simulate exactly how they want to sense their environment.

"Addressing use cases systematically will eventually allow AEye and its OEM and Tier 1 customers to drive more intelligence from the edge and achieve higher autonomous capabilities, a concept we refer to as autonomy on-demand," said Luis Dussan, co-founder and CEO at AEye. "By collaborating with ANSYS, we are helping to accelerate customer and partner innovation – bringing safer, more reliable autonomous features to the market."

"iDAR will substantially advance autonomous vehicles and advanced driver assistance systems' reliability, enabling improved autonomous perception and, in turn, safer roads," said Eric Bantegnie, vice president and general manager, Systems Business Unit at ANSYS. "ANSYS helps automotive manufacturers test scenarios that are nearly impossible to physically test, fully validating iDAR's performance. As OEMs and Tier 1 manufactures adopt iDAR, our simulation solutions will reduce development time and optimize implementation."

AEye and ANSYS will showcase their ability to detect driving scenarios using SPEOS and VRXPERIENCE at CES on Jan. 7-10 in Las Vegas at ANSYS Booth 3310 and AEye Booth 7538 in the Las Vegas Convention Center, North Hall.

About ANSYS, Inc.

If you've ever seen a rocket launch, flown on an airplane, driven a car, used a computer, touched a mobile device, crossed a bridge or put on wearable technology, chances are you've used a product where ANSYS software played a critical role in its creation. ANSYS is the global leader in engineering simulation. Through our strategy of Pervasive Engineering Simulation, we help the world's most innovative companies deliver radically better products to their customers. By offering the best and broadest portfolio of engineering simulation software, we help them solve the most complex design challenges and create products limited only by imagination. Founded in 1970, ANSYS is headquartered south of Pittsburgh, Pennsylvania, U.S.A. Visit www.ansys.com for more information.

About AEye

AEye is an artificial perception pioneer and creator of iDAR™, a perception system that acts as the eyes and visual cortex of autonomous vehicles. Since its demonstration of its solid-state LiDAR scanner in 2013, AEye has pioneered breakthroughs in intelligent sensing. The company is based in the San Francisco Bay Area, and backed by world-renowned investors including Kleiner Perkins Caufield & Byers, Taiwania Capital, Hella Ventures, LG Electronics, Subaru-SBI, Aisin, Intel Capital, Airbus Ventures, and others. For more information, please visit www.aeye.ai

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Contact Media	Mary Kate Joyce
	724.820.4368
	marykate.joyce@ansys.com
Investors	Annette N. Arribas, IRC
	724.820.3700
	annette.arribas@ansys.com

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