
News

Our partnership with AEye: On the road to intelligent LiDAR

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The pathway for how autonomous systems and advanced driver assistance systems (ADAS) will overcome some important technological challenges on the way to commercial deployment is becoming clearer. One of these challenges concerns sensors and the specifications these “eyes” need to meet to help vehicle manufacturers deliver safe and commercial solutions. In order for ADAS and autonomous systems to handle the computational workload and optimize decision-making, they will need powerful components to provide information in real-time and be intelligent enough to pass on only the data which is relevant. In addition, they need to meet stringent requirements so that they can be deployed in on- and off-road applications, at a reasonable cost.

When Luis Dussan and his co-founders Ransom Wuller, Jordan Greene, and Berry Behnken founded AEye in 2013, they approached this challenge through the eyes of their decades-long experience in helping develop targeting systems for fighter jets. Following his career at NASA, Lockheed Martin, and Northrop Grumman, AEye’s scientific lead Luis knew that the principles and high standards of such targeting systems will also need to apply to autonomous cars: never miss anything, understand that not all objects are equal, and do everything in real-time. As a consequence, AEye embarked on the delivery of a next-generation, AI-backed perception platform that thinks like a robot, but perceives like a human.

Vektor Partners have recently joined the AEye team on this journey. Since our first meeting in early 2019, we have appreciated their can-do culture, and shared their strategic views on how to address the needs of the industry in this rapidly evolving new marketplace. Since then, Luis and his team have impressed us with products that actually deliver what many vehicle manufacturers and other mobility providers are looking for: industrial-grade ruggedness, the ability to sense in adverse weather conditions, the capability to operate at a significant range (1,000+ meters), and meeting the many more stringent performance hurdles of vehicle manufacturers. The team’s deep understanding of the underlying hardware, the early pursuit of a software-definable and highly integrateable solution, and a deep-rooted ethos to meet the toughest requirements have been key to building a platform that has ultimately provided the basis for AEye’s unique iDAR™ platform, culminating in the newly unveiled breakthrough 4Sight™ sensor family.

Perception systems will remain a key focus area for the development of next-level ADAS and autonomous systems, with numerous young and established firms competing in the LiDAR space. AEye’s agile iDAR™ software platform, which includes a comprehensive SDK making it fully extensible and customizable, has helped create a technology leadership position underpinned by patent protection and a focus on solid-state technology from the outset. With the AEye 4Sight™, its latest product generation sets new benchmarks by delivering superior specifications and reliability at a fraction of the price of most current LiDAR systems. It also allows for the seamless combination of LiDAR data with vision information from 2D cameras in real-time, helping vehicle manufacturers create driving systems with superior contextual information. Contact the team at 4Sight@aye.ai to schedule a demo.

About Vektor Partners

At Vektor Partners we invest in the mobility revolution. The world of transportation is undergoing dramatic changes – we partner with company founders that lead these changes. From Berlin and Palo Alto we are positioned to invest in the opportunities emerging in an industry that is seeing significant disruption.

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 the 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.

Contact

info@vektorpartners.com
www.vektorpartners.com
www.aeye.ai