



TriEye Unravels a Super-vision Sensor to Solve the Low Visibility Challenge in ADAS and Autonomous Driving

Visit us at AWJ 2019, Israel Pavilion East Hall 6, E 55-28

Tel Aviv, December 4, 2018 -- TriEye, an Israeli semiconductor startup, has developed a sensor that allows flawless vision under adverse weather and low-light conditions, thus solving a fundamental and common issue impeding the effectiveness of ADAS and autonomous vehicles. Based on almost a decade of advanced nano-photonics research, the company developed a method to implement Short Wave Infrared (SWIR) imaging on a CMOS-based chip.

TriEye enables SWIR sensing for mass-market applications which is expected to have a huge impact on the safety and reliability of ADAS and autonomous vehicle solutions.

Market research indicates that this technology will be an integral part of every ADAS system in the next few years.

Background

Low visibility conditions present a real challenge to the automotive industry readying to launch advanced driver assistance features and autonomous driving.

Even when combining radar, LIDAR, and a standard camera, it is impossible to precisely detect and identify objects in adverse conditions e.g. a cyclist at night. This is currently a major impediment for the actual deployment and operation of ADAS and autonomous vehicles. The automotive industry is well aware of this issue and it is actively searching for the right sensing suite that will solve this challenge.

The defense and aerospace industries have already solved this challenge. SWIR cameras add super-vision that can "see" perfectly in low visibility conditions. However, up until now, these cameras have been too expensive for mass-market applications.

Technology Breakthrough and 1,000-Fold Cost Reduction

TriEye engineered a technological breakthrough to match SWIR supervision capabilities with the mass-market needs in the automotive industry.

The new SWIR sensor is produced using a CMOS process, building on a decade of nanophotonic research at the Hebrew University in Jerusalem.

TriEye today is in an advanced development stage, working closely with a leading CMOS foundry. Using a conventional CMOS process that reduces sensor costs X1,000 and makes SWIR cameras available for mass-market applications.

Avi Bakal, TriEye's CEO: "TriEye's SWIR solution offers superior sight under all weather and lighting conditions at any time during the year.

These high-end vision capabilities were previously only available in the defense and aerospace industries. Our solution vastly improves the overall safety for Advanced Driver Assistance Systems (ADAS) and brings fully autonomous self-driving cars a big step closer towards widespread adoption."

Ziv Livne, TriEye's VP Business Development: "We are getting extremely positive feedback from the market.

Low visibility is a major issue for the automotive industry as OEMs develop a reliable system that saves lives when currently they seem dependent on the weather forecast. We offer a solution to this issue."

What will happen at AWJ

TriEye will demonstrate its breakthrough technology by showcasing a live comparison between a standard camera and a prototype of its novel CMOS-based SWIR camera.

Visitors will witness firsthand how a SWIR camera functions in low-visibility scenarios - common cases where a regular camera fails the test.

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About TriEye

TriEye was founded in 2016 by Avi Bakal (CEO), Omer Kapach VP R&D and Prof. Uriel Levy, CTO. TriEye raised \$3M from Grove Ventures and its managing partner, Dov Moran, inventor of the USB flash drive and founder of M-Systems, is TriEye active chairman. TriEye's mission is to solve the low visibility challenge by supplying cost-effective and high-resolution SWIR cameras.

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