



AEye Establishes New Benchmark for LiDAR Performance with 1000 Meter Range in Rain, Behind Windshield Glass

July 12, 2021

Breakthrough Adaptive LiDAR Performance Independently Validated by VSI Labs at American Center for Mobility

Ypsilanti, MI – July 12, 2021 – AEye, Inc., (“AEye”) the global leader in adaptive, high-performance LiDAR solutions, today announced its LiDAR sensor – already known for extreme long-range capabilities – has achieved yet another milestone: 1000 meter range in rain, behind windshield glass. The test was performed at the American Center for Mobility (ACM) test track in Ypsilanti, Michigan, with results verified by active safety and automated vehicle technologies researcher, VSI Labs, and witnessed by industry analysts and press representatives.

AEye LiDAR Out-Performs in Rain, Behind the Windshield

AEye’s sensor has already been [independently verified](#) to have twice the range as the nearest LiDAR competitor. The new test shows that – not only does AEye’s adaptive LiDAR achieve groundbreaking range capabilities, it does so in adverse weather conditions, and behind a first surface: in this case, a windshield.

The test was conducted using VSI’s research vehicle, which integrated AEye’s sensor into its AV stack to study the impact of adaptive LiDAR on the performance and safety of automated functionality. The team used a rain machine to simulate wet weather, and mounted the sensor behind a piece of windshield glass to gauge long-range sensor performance in heavy rain. You can see the video [here](#).

“The ultra-long-range capabilities of our adaptive LiDAR enables OEMs to release new revenue-generating applications like highway autopilot or hub-to-hub autonomous trucking,” said Jordan Greene, GM of ADAS and VP of Corporate Development at AEye. “Being able to deliver this performance in all weather conditions ensures these applications can be safely implemented in even the toughest driving environments.”

“Having already verified AEye’s extreme long-range detection, this was an important follow-up test to ensure that 1000 meter performance would stand up in less than ideal weather conditions, and when mounted behind the glass of a windshield,” said Phil Magney, founder and president at VSI Labs. “We were impressed with the sensor’s performance on both counts – which certainly bodes well for OEMs looking to implement reliable, high-performance LiDAR.”

AEye Detects Pedestrians, Through the Rain, in the Dark

In a [second test](#) of its LiDAR at the ACM track, the AEye sensor mounted on VSI’s test vehicle detected small objects in a tunnel, through rain and a second surface, at 120 meters. This test was conducted amid heavy rain, with the sensor peering into a dark tunnel. The AEye sensor detected five bricks and a black dog not visible to the human eye at 120 meters, as well as a pedestrian and child at 110 meters.

“I’ve never seen a demo like that one before – in a real-world scenario under poor weather, behind the windshield, while still being able to achieve the distance and detection. What we saw was really impressive,” said Sam Abuelsamid, principal research analyst at Guidehouse Insights.

In March, AEye [announced](#) VSI Labs verified AEye LiDAR’s breakthrough range, resolution and speed capabilities, as well as its ability to place the sensor behind [first surfaces](#), such as the windshield or grill, with minimal performance impact. The latter is critical to automotive OEMs, as it provides OEMs flexibility in implementing sensors within their designs, without compromising aesthetics or changing the aerodynamics of the vehicle.

This design-centric vehicle integration is made possible by AEye’s unique bistatic architecture, which separates the transmit and receive paths, providing optical isolation that – unlike traditional coaxial LiDAR systems – ensures any light reflected back doesn’t blind the sensor. The architecture also ensures optimal performance, even in the most adverse weather conditions. This performance is further enhanced by AEye’s use of 1550 nanometer lasers, whose longer wavelength better penetrates obscurants, providing superior detection in rain, snow, and smoke.

AEye’s intelligent LiDAR uses adaptive sensing to deliver this industry-leading performance, which addresses the most difficult challenges facing autonomous driving, while meeting automotive functional safety requirements. Unlike traditional sensing systems, which passively collect data, AEye’s adaptive LiDAR scans the entire scene, while intelligently focusing on what matters in order to enable safer, smarter, and faster decisions in complex scenarios. As a result, AEye’s LiDAR uniquely enables higher levels of autonomous functionality (SAE L2-L5) at the optimal performance, power, and price.

AEye is the first and only LiDAR provider to have its performance independently verified and published by reputable third-party testing organizations. In addition to performance testing by VSI Labs, the ruggedness and reliability of the sensors has been validated by global product test, inspection, and certification leader NTS, which put the sensors through extreme automotive shock and vibration tests. More information on the tests by VSI Labs and NTS are publicly available on [AEye’s website](#).

AEye will host a virtual investor day on Friday, July 16, and remains on track to complete its previously announced business combination agreement with CF Finance Acquisition Corp. III (Nasdaq: CFAC) (“CF III”), a special purpose acquisition company sponsored by Cantor Fitzgerald, in the third quarter of 2021. The business combination is expected to provide up to \$455 million in gross proceeds. The combined company is expected to be listed on the Nasdaq under the ticker symbol, “LIDR”. For more information, visit <https://aeyeinvestorday.com/>.

About AEye

[AEye](#) is the premier provider of high-performance, adaptive LiDAR systems for vehicle autonomy, advanced driver-assistance systems (ADAS), and robotic vision applications. AEye’s AI-enabled and software-definable iDAR™ (Intelligent Detection and Ranging) platform combines solid-state adaptive LiDAR, an optionally fused low-light HD camera, and integrated deterministic artificial intelligence to capture more intelligent information with less data, enabling faster, more accurate, and more reliable perception. The company is based in the San Francisco Bay Area and backed by world-

renowned financial investors including Kleiner Perkins and Taiwania Capital, as well as GM Ventures, Continental AG, Hella Ventures, LG Electronics, Subaru-SBI, Pegasus Ventures (Aisin), Intel Capital, SK Hynix and Airbus Ventures.

Media Contact:

AEye, Inc.

Jennifer Deitsch

jennifer@aeeye.ai

925-400-4366

Investors:

Financial Profiles, Inc.

Matt Keating

AEye@finprofiles.com

310-622-8230

John Brownell

AEye@finprofiles.com

310-622-8489