![mobileye™ logo]

Level 4 Autonomy Now Testing in Detroit with Mobileye Drive™

September 6, 2022

Our fully autonomous vehicle reaches American roads for the first time with True Redundancy™ sensing subsystems: one based on cameras and another on radar and lidar.

Over the past few years, Mobileye has run one of the most ambitious testing programs in the world for autonomous vehicles. To date, our development AVs have operated in about 20 cities across ten countries on three continents around the globe. Now, this program is entering its next phase as our fully autonomous vehicle equipped with Mobileye Drive™ has begun testing in Detroit – the first time our future Level 4 self-driving solution has hit U.S. roads.

Integrated into the all-electric NIO ES8 sport-utility vehicle, Mobileye Drive combines the power of our unique approach to autonomous mobility with our experience in delivering driver-assistance systems in nearly 120 million vehicles. The system benefits from unique Mobileye innovations, including True Redundancy™ sensing, Road Experience Management™ (REM™) crowdsourced mapping, and Responsibility-Sensitive Safety (RSS) driving policy.

Where our prior test cars used either cameras alone or a combination of lidars and radars alone, the commercial version of Mobileye Drive employs both – a 360-degree suite of advanced sensing technology containing 11 cameras, 6 radars, 3 long-range lidars and 6 short-range lidars – all powered by our industry-leading EyeQ® chips. Under our True Redundancy approach, the camera subsystem operates independently of the radar/lidar subsystem, providing more robust sensing of road conditions and other traffic, while also providing safety-critical redundancy as each subsystem complements its fellow subsystem.

Testing Globally, Driving Locally

Rather than deploying autonomous mobility in limited geographic areas, we believe that self-driving technology will need to be widely usable across many different types of roads and situations. This means that our technology should be adaptable not just to different locations, but to different climates and driving cultures as well.

Anyone who's ever driven in a foreign country knows you need not just a map, but also an understanding of the local "rules of the road." The REM-powered Mobileye Roadbook™ helps us gather data on the general behavior of traffic in different places, and RSS adapts the Mobileye Drive system to local behavior in those places. By testing Mobileye Drive in Detroit, we'll expose Mobileye Drive to the everyday challenges of American driving, and some unique local roadway characteristics (like "Michigan lefts") to further verify its capabilities.

"Our Detroit testing of Mobileye Drive is helping us ensure that the system can bring forward the global commercialization of autonomous driving technology and deliver on its promise to vastly improve road safety," said Johann "JJ" Jungwirth, Senior Vice President of Autonomous Vehicles at Mobileye. "We take the challenge of proving the capabilities of our technology seriously. By testing in the birthplace of the American automotive industry, we expect to make major progress toward our goals."

Safety for Everyone

The NIO ES8 equipped with Mobileye Drive serves as a test platform in the development of our turnkey self-driving solutions for both commercial and future consumer AVs. Fleets of this vehicle will also form the basis of the robotaxi services we're preparing to roll out in the coming months with our partners in Germany and Israel.

Mobileye has worked closely with the U.S. National Highway Traffic Safety Administration to ensure safe operation of these vehicles on U.S. roads. A highly trained safety driver is behind the wheel of the Mobileye vehicles while testing in Detroit. Our current test plan does not include giving rides to members of the public, or testing without safety drivers.

In the months ahead, we'll have more milestones to announce around the progress of Mobileye Drive.