mobileye™
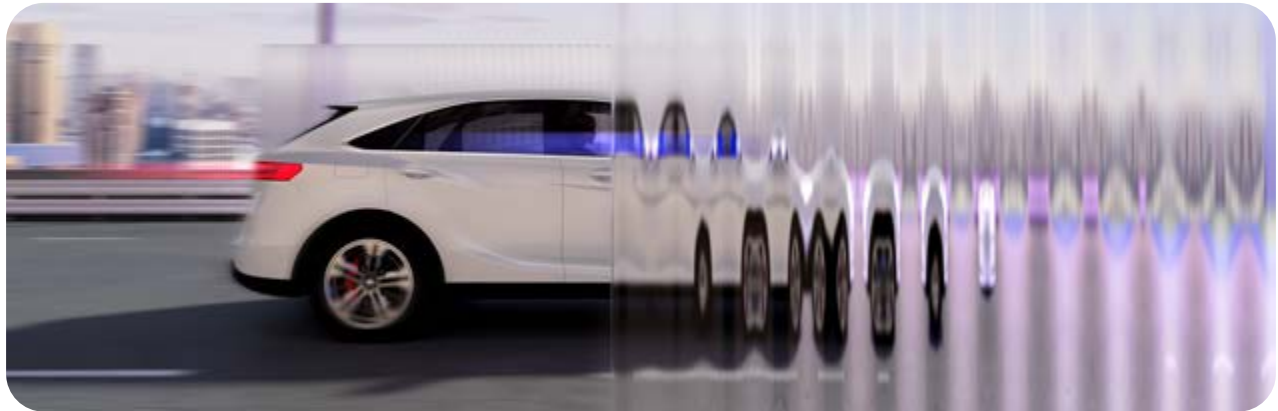
Mobileye SuperVision™ at a Glance

As the demand for ever-more advanced driving assistance systems around the world continues to grow, a clear need has developed for a safety-focused technology that can blend intelligent aspects of autonomous vehicles while ensuring that drivers remain in control. While a few such systems have launched to date, all have been limited by several constraints, such as cost, capability, offline mapping data, and sensor complexity.

Today, Mobileye SuperVision™ stands as one of the most advanced driver-assistance systems worldwide, providing "hands off but eyes on" driving in certain operational design domains and where legal.* It's designed to safely handle standard driving functions on regular road types, while still always requiring the driver's full attention and eyes on the road. Based on the core technologies of Mobileye's autonomous vehicles – computer vision, Road Experience Management™ (REM™) mapping, and Responsibility Sensitive Safety™ (RSS™) driving policy – Mobileye SuperVision builds a bridge between existing ADAS functions and fully autonomous vehicles of the future.

*Subject to applicable local regulations, operational design domain and system specifications, which may be changed from time to time.

What can Mobileye SuperVision do?

Mobileye SuperVision draws on all of Mobileye's experience in driver-assist systems across 125 million vehicles globally. Within its operational domain, its basic features include:

POINT-TO-POINT AUTOMATED NAVIGATION ON HIGHWAY, URBAN, RURAL AND ARTERIAL ROADS.	HIGHWAY & TRAFFIC JAM ASSIST	AUTOMATIC LANE CHANGING	PARKING VISUALIZATION & PARK-ASSIST APPLICATIONS

It builds from the core driver assist technologies, including:

LANE CENTERING CONTROL	ADAPTIVE CRUISE CONTROL	FRONT & REAR COLLISIONAVOIDANCE	BLIND SPOT DETECTION

These features have been further developed through Mobileye's extensive experience in AI and computer vision to offer more intelligent automated services for everyday driving challenges. Mobileye SuperVision can:

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SENSE TRAFFIC OR SLOW DOWN AHEAD OF A LEADING VEHICLE AND ADJUST ACCORDINGLY	TAKE EXTRA CAUTION FOR VEHICLES, PEDESTRIANS AND OBJECTS ON THE SHOULDER	MERGE ON AND OFF HIGHWAY RAMPS AT SAFE AND REASONABLE SPEEDS IN TRAFFIC	AUTOMATICALLY OVERTAKE SLOWER VEHICLES WHERE CONDITIONS ALLOW

And with mapping data from millions of vehicles globally, Mobileye SuperVision has a robust geographical coverage; it can draw on detailed map data for many major roads in Europe and North America.

As the end-to-end technology creator, from the EyeQ ™ chips to the driving software and mapping data, Mobileye also provides over-the-air updates to Mobileye SuperVision that upgrade its capabilities even after it hits the road.

How does Mobileye SuperVision work?

The Mobileye SuperVision end-to-end system is enabled by:
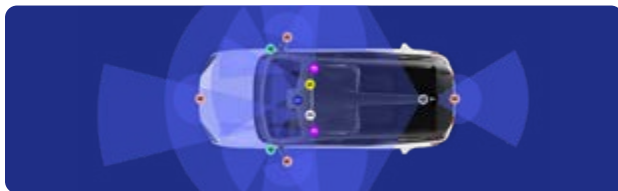
Full surround (360-degree) high-definition computer vision perception with 11 cameras of up to 8-megapixel resolution each.

Road Experience Management™ (REM)-based AV maps that provides detailed information not just on road details, but also for features such as intelligent speed assist and lane-centering.
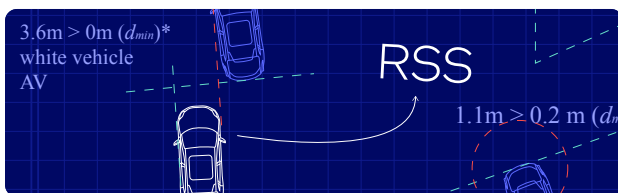
Responsibility-Sensitive-Safety™ (RSS) safety model & driving policy, a transparent approach to driving that's part of the latest SAE standard for real-world AV deployment.

Mobileye EyeQ system-on-a-chip, a highly efficient set of software and hardware that provides advanced AI-driven computation for ADAS and designed with the low-power demands required by current and future electric vehicles.

As this technology was developed as part of Mobileye's self-driving solution, it serves as a bridge to full autonomy, with the ability to grow in capability through additional sensors such as imaging radar and lidar.

Today, more than 70,000 customers have the current Mobileye SuperVision technology from a single OEM, with regular over-the-air updates already delivered. Because Mobileye developed its AV technology to scale for automakers globally, Mobileye SuperVision can easily be brought to market in Asia, Europe, and North America, enabling multiple OEMs to launch Mobileye SuperVision-enhanced vehicles in the years ahead.