

RoadCheck

Overview

Safe automated driving (AD) relies on defining an exhaustive list of all scenarios and possibilities a self-driving car could encounter. Additionally, automakers need to understand when, where and under what conditions a vehicle can safely activate AD functions. This is called the operational design domain (ODD).

TomTom RoadCheck helps automakers do just that: manage the scenarios and conditions in which vehicles can safely activate automated driving functions. RoadCheck is the first tool of its kind in the industry, using highly detailed TomTom HD Map data and OEM fleet data to help manage the ODD of an automated vehicle.

Improved ODD management ultimately means fewer car accidents and increased safety for all drivers. RoadCheck enables the 'informed safety' by providing a tool for OEMs to convey the capabilities and limitations of the technology to their drivers.

End-user benefits

- Combine HD map data with specific fleet data from automakers to give engineers from carmakers greater insights and more possibilities to improve their driving automation functions
- Use one technological infrastructure to differentiate the ODD across car models and achieve economies of scale
- Lower onboard hardware requirements and reduced data consumption, thanks to the pre-integrated cloud-based approach of RoadCheck
- Take a more agile approach that enables the gradual buildup of allowed AD coverage, reducing in-vehicle hardware requirements and data usage



Features

Benefits

Safer automated driving

By managing the ODD, OEMs can confidently determine that the driving automation system is only active on roads that are safe.

Unique insight

Combine HD map data and sensor data from the OEM fleet to determine where AD has safely performed dynamic driving tasks

Scalable platform

RoadCheck settings can be easily re-used and extended over large volumes and vehicle fleets

Tailor to any vehicle or brand

Allows for adaptations to meet brand specifications or vehicle-specific ODD within carmaker programs

Example use cases

There are many examples in which RoadCheck should be used to ensure safe AD, such as:

- Restrict the usage and activation of AD based on road characteristics, such as near tunnels and sharp curves
- Restrict the usage and activation of AD on roads where sensors are known to underperform
- Restrict specific roads as prohibited for AD, based on local legislation - and vice versa

How RoadCheck works

RoadCheck is a powerful, yet easy-to-use tool. OEM users can create ODD rules and restrictions into the intuitive online editor. The cloud-based RoadCheck service delivers the data directly to the vehicle, for example, through our pre-integrated AutoStream service. Such speed and flexibility open up the road to a new age of AD.

