



CarMaker

Virtual development and testing of passenger cars and light-duty vehicles

Virtually test the vehicle of the future today with our simulation solution CarMaker. We have developed CarMaker specifically for the development and testing of passenger cars and light-duty vehicles. The simulation solution allows you to transfer real test scenarios including the entire environment into the virtual world with a high level of detail.

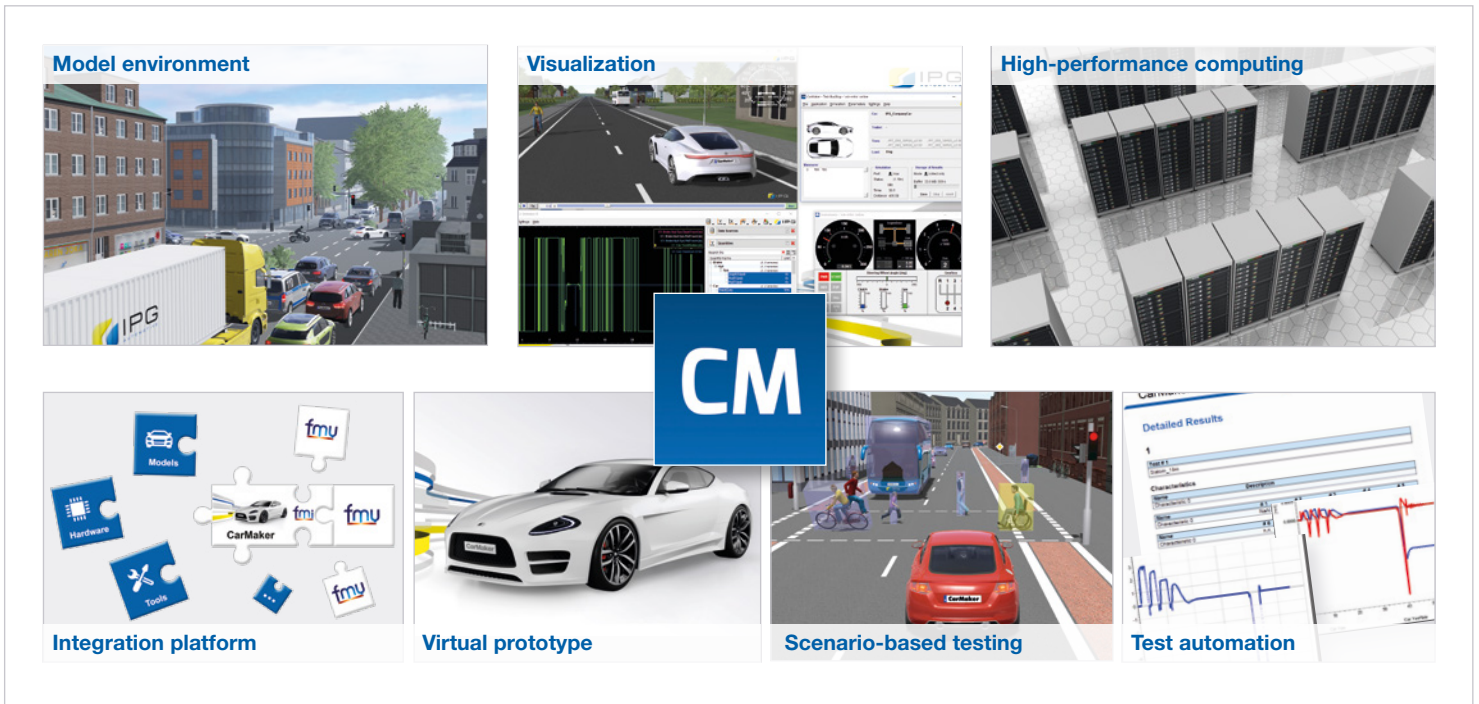
Our software supports you in making your development processes more agile. In accordance with the automotive systems engineering approach, virtual test driving with CarMaker enables the seamless development, calibration, test and validation of entire systems in the whole vehicle within realistic scenarios.

Implement test scenarios for the application areas of ADAS and automated driving, powertrain and vehicle dynamics with our open integration and test platform. A variety of supported standards and interfaces also ensures the smooth integration into your existing tool landscapes.

CarMaker offers you a high-performance, real-time capable vehicle model including all subcomponents, enabling you to quickly and easily build your virtual prototypes already during early stages of the development process (MIL, SIL).

The combination of the virtual prototype with an adaptive driver model, a comprehensive traffic model and a detailed road model makes automated and reproducible tests possible early on. A well-structured user interface guarantees easy parameterization. In addition, CarMaker is ideally suited for hardware-in-the-loop (HIL) tests on component and large integration test benches as well as for use in real vehicles (VIL). All this ensures that you can use CarMaker according to your individual test requirements in every stage of the development process.

Our virtual test driving package comes complete with the right tools for visualization, test automation and data analysis. At any time during the simulation, the 3-D visualization tool IPGMovie, the data analysis tool IPGControl and the virtual dashboard Instruments deliver detailed and reliable information on all essential parameters, data and models of your test scenario. This way you are always on top of your virtual test runs! The automation tool Test Manager guarantees a smooth, stable and automated test process for seamless use in the areas MIL, SIL, HIL and VIL, and enables the parallel execution of test catalogs on high-performance computing clusters.



Your benefits at a glance

- Comprehensive tests in the fields of ADAS and automated driving, powertrain and vehicle dynamics
- Increased efficiency thanks to the seamless use of CarMaker throughout the entire development process – from MIL and SIL up to HIL and VIL – and the reusability of scenarios and test cases
- High system maturity with simultaneous savings in cost and time due to the early setup of virtual prototypes
- Generation of detailed and realistic test scenarios in a short time using powerful models that are easy to parameterize
- Maximum flexibility due to the maneuver and event-based test approach
- Extensive sensor model portfolio for all widely used sensor technologies (radar, lidar, ultrasound and camera) for the validation of automated and autonomous driving functions
- Fast results thanks to the capability of testing in multiple real time
- Shorter test cycles due to the parallel execution of extensive test catalogs on high-performance computing (HPC) clusters
- Rapid analysis due to efficient visualization
- Various supported standards and interfaces for a streamlined integration into your established development environment

> Find more information on the features of our simulation solution CarMaker on our website at www.ipg-automotive.com/carmaker



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Find us on:

