MotorcycleMaker

Holistic development of two-wheelers

Meet the challenges of today's vehicle development with virtual test driving. Our simulation solution MotorcycleMaker is specifically geared towards the requirements of developing and testing motorized two-wheelers such as motorcycles, e-bikes or scooters. MotorcycleMaker enables you to accurately model real-world test scenarios in the virtual world.

Our software supports you in making your development processes more agile. In accordance with the automotive systems engineering approach, virtual test driving with MotorcycleMaker enables the seamless development, calibration, test and validation of entire systems in the whole vehicle in realistic scenarios.
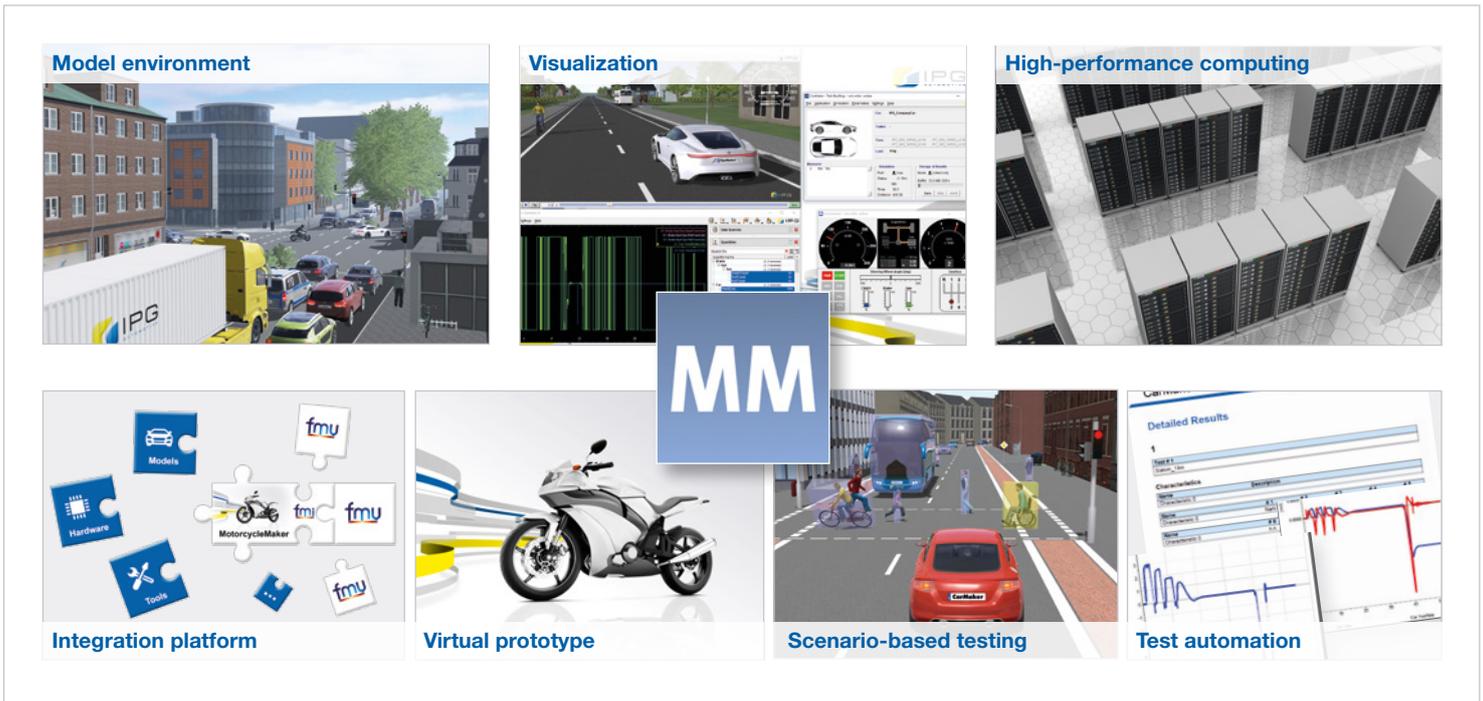
Implement test scenarios for the application areas of ADAS and automated driving, powertrain and vehicle dynamics with our open integration and test platform. A variety of supported standards and interfaces also ensures the smooth integration into your existing tool landscapes.

MotorcycleMaker 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, MotorcycleMaker 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 MotorcycleMaker 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.

SOLUTIONS FOR VIRTUAL TEST DRIVING

IPG AUTOMOTIVE

> MotorcycleMaker

Model environment

Visualization

High-performance computing

MM

Integration platform

Virtual prototype

Scenario-based testing

Test automation

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 MotorcycleMaker 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 MotorcycleMaker on our website at
www.ipg-automotive.com/motorcyclemaker

Global Solution Provider for Virtual Test Driving ++ Innovative Simulation Solutions ++ Software and Hardware Products ++ ADAS & Automated Driving ++ Powertrain ++ Vehicle Dynamics ++ Automotive Systems Engineering ++