

# Software-in-the-Loop Testing

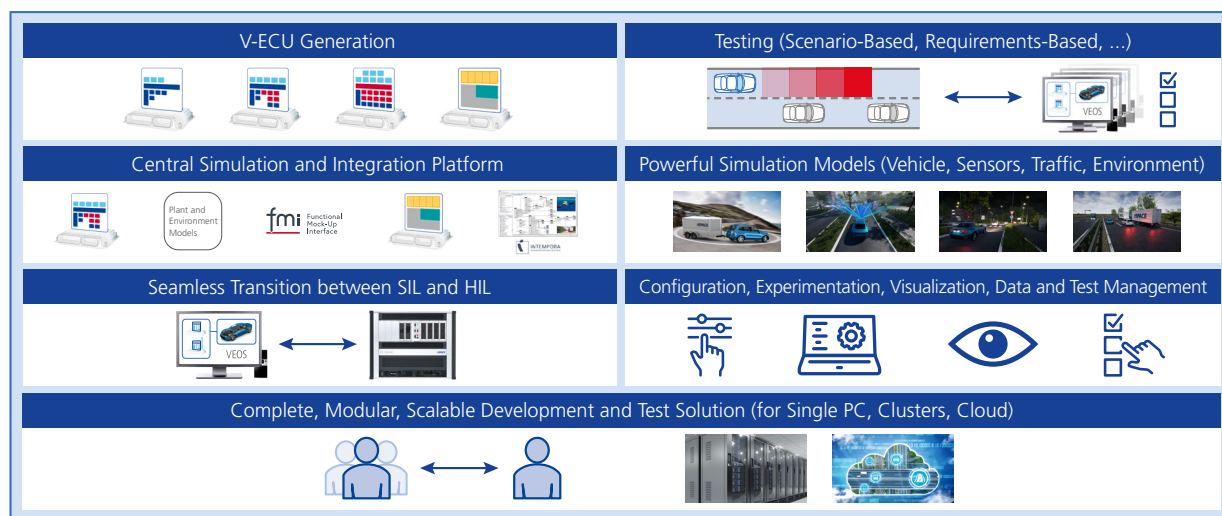
dSPACE Solution for PC- and Cloud-based Simulation

# Software-in-the-Loop Testing

## dSPACE Solution for PC- and Cloud-based Simulation

Software-in-the loop (SIL) testing with the powerful dSPACE solution for PC- and cloud-based simulation lets you simulate and test software functions or complete V-ECU networks – in real-time or even faster, and highly parallel. From classic automotive applications, such as powertrain or brake systems, to e-drive applications and functions for autonomous driving, whether you are working on virtual ECUs or on AD algorithms – with the dSPACE solution for software-in-the loop (SIL) testing, you can

significantly accelerate your software development process by testing and validating virtually. dSPACE offers you a complete, modular, scalable development and test solution. You can conveniently simulate a device-under-test on a PC, connect it to physics-based models, run scalable tests in the cloud, and then easily reuse test scripts on hardware-in-the-loop (HIL) systems. Rely on the innovative and powerful dSPACE solutions. dSPACE – Your partner in simulation and validation.



### Highlights

- Integrated end-to-end development and test environment for SIL testing across multiple development stages, from early ECU software tests and frontloading of preparation tasks to the comprehensive validation of entire systems
- Flexible virtual ECUs (V-ECUs) at all levels: algorithm models, multisensor applications, V-ECUs with or without basic software (BSW), generated BSW or third-party BSW
- One software simulator (VEOS) as a central simulation and integration platform for plant/environment models, multisensor applications, and V-ECUs (AUTOSAR and non-AUTOSAR), including virtual bus simulation
- Seamless transition between SIL and HIL, e.g., for reusing your SIL/HIL tests mutually
- Scalable solution for SIL-based data replay and testing (scenario-based, requirements-based, functional safety tests, SOTIF tests, etc.) on a single PC, in a PC cluster, or in the cloud
- Powerful simulation models for sensors (camera, lidar, radar), traffic, vehicles, and environment
- Convenient software tools for configuration, experimentation, visualization, data and test management, and test automation – powerful and at the same time easy to use
- The result: more efficiency, productivity, and reliability for your innovations!

### Contact Information

Our technical sales staff will assist you in choosing your dSPACE system. They will also provide you with quotations and more detailed information about the dSPACE solution

for PC- and cloud-based simulation and other dSPACE products. Please contact your local office: [www.dspace.com/go/locations](http://www.dspace.com/go/locations)