Mechanical Simulation Corporation develops the most accurate and computationally efficient methods for simulating the dynamic performance of cars, trucks, motorcycles, and specialty vehicles.

After more than thirty years of research, development, and proving ground validation by worldwide vehicle manufacturers, our suite of car, truck, and motorcycle simulation products are universally the preferred tools for vehicle dynamics, vehicle control development, and test engineering.

In an environment of limited resources and compressed design and testing cycles, Mechanical Simulation has designed a streamlined user interface and system architecture that optimizes productivity while providing the tools for engineers to seamlessly integrate their own design technologies – shortening time to market and significantly reducing the need for physical testing.

**MODULAR AND OPEN ARCHITECTURE**

While many of our customers are vehicle dynamics experts, a growing number of engineers from other disciplines use TruckSim’s architecture as a platform to integrate and test their own adaptive vehicle sub-systems.

TruckSim is designed to seamlessly communicate with your software (SIL) and hardware (HIL) technologies. This lets you and your staff focus on algorithm design – not on writing custom testing code that only roughly approximates real-world scenarios and provides limited test conditions.

**Modular Vehicle Definition:** each vehicle sub-system is defined with discrete properties and performance tables. This modular, parameter based architecture lets you modify the behavior of any system and lets you run simulations any time during the design cycle – other simulation tools can only be used after the entire vehicle is designed.

**Integrate your own technologies using standard design tools:** Mechanical Simulation provides seamless interfaces to standard design tools such as Simulink, LabVIEW, and ASCET. Advanced users can develop stand alone technologies using Visual Studio.

**VS Commands:** this powerful scripting language provides tools to automatically control test runs, extend our vehicle model, control complex driving maneuvers, and model auxiliary sensors.

**INTEGRATE YOUR OWN TECHNOLOGY**

- ABS Braking
- Electronic Stability Control
- Off Tracking Analysis
- Active Suspension
- Autonomous Vehicles
- Airbag Deployment
- Rollover Studies
- Anti-sway Control
- Lane Departure
- Fleet Conformity
- Tire Performance
- Alternate Powertrains
- Driver Alert Technologies
- Driving Simulators
- and more...
TruckSim—Heavy Duty Features

Truck and trailer manufacturers face an ever changing business and regulatory climate requiring companies to dedicate valuable resources to testing and compliance issues. With large numbers of build-to-order configurations, it is impossible to physically test every configuration.

To help you manage this task, TruckSim accurately simulates trucks equipped with a wide variety of axle, suspension, tire, brake, steering, payload, and trailer configurations. From initial product conception to control algorithm development and all the way to product launch—TruckSim provides sophisticated tools that have proven to compress and optimize your design, development, and testing procedures. Additionally, if you are working on non-traditional vehicle configurations, Mechanical Simulation can build custom vehicle solvers.

A discussion of TruckSim is not complete without highlighting the software’s ease-of-use and workflow optimization features. Unlike complex tools requiring steep learning curves and expensive consulting services, TruckSim is designed for engineers who use multiple software packages and must be able to produce results within minutes. To solve these issues, the software features a streamlined user interface, an extensive on-line help system, and a complete set of example vehicles, 3D roads, and test procedures that demonstrate all TruckSim features.