



The Car Driving Simulator is a fully operational car simulator

AS 1200 Car Driving Simulator

AutoSim delivers car, truck and research simulators and is a participant in major European simulator research programs

General Description

The Car Driving Simulator is a fully functional, pre-configured simulator that contains all necessary HW and SW modules, Visual System, Visual Database, a three-axis motion system and a fully functional cab with instrumentation to provide a 'real-life' driving environment.

In the Simulator, special attention has been given to traffic generation and incorporates autonomous objects such as cars, pedestrians, bikes etc. To achieve "real-life" traffic behaviour, all objects in the simulator react to traffic and traffic situation as would be expected in real-life traffic situations. To achieve this behaviour, all objects are designed using artificial intelligence.

The simulator comes with a set of standard driving scenarios. In addition, an advanced and easy to use scenario-building tool is also included, allowing the instructor to tailor-make individual driving situations for different simulator applications. The Operator Station employs a user interface system that allows the operator to monitor the driver's behaviour and how he is dealing with potentially hazardous driving situations.

To allow for a wide variety of customer adaptations, the simulator is designed to be "open" by using a modular approach and the use of all available industry standards.

System Specifications

Driver Station	<p>The Driver Station comprises a full size Renault Megane Scenic, Toyota Yaris, or Saturn car modified for simulation purpose. All instruments, signals and lights are fully functional. The host computer monitors the use of steering wheel, gearshift, clutch, accelerator and hand brake, resulting in normal response in vehicle behaviour.</p> <p>Option: Other types of car.</p>
Visual System	<p>3 channels, 180° wide (2.3 x 1.75 m) screen with front projection. 1 channel central rear view Projectors: 1024 x 768 2 LCD displays in side mirrors</p>
Visual Database	<p>Database for the AutoSim Car Simulator covers a land area of 25 x 20 km, containing more than 200 km of different type roads such as city, town, industrial areas, farm land and mountain areas.</p>
Image Quality	<p>High resolution, min. 30 - 60 Hz, antialiased, based on PC platform.</p>
Driving Performance	<p>The advanced AutoSim Car Dynamic Model provides a realistic response to different road surfaces like snow, rain, asphalt, etc. Low latency, tightly synchronized coordination of manoeuvring and related changes in visual system, sound and motion cues provides a realistic driving environment.</p>
Advanced Road	<p>Autonomous vehicles accelerating, braking, steering, taking over, following the Traffic road network while respecting the traffic lights, traffic signs and road marking. A large number of vehicles (bikes, pedestrians) can run simultaneously in a scene without seriously affecting the visual frame rate.</p> <p>An advanced tool for scenario creation is also included.</p>
Sound system	<p>The sound is provided by a four-channel high fidelity sound system with loudspeakers inside the cabin. The system provides sound from the driver's vehicle as well as from other vehicles, and lets the driver experience directional and Doppler effects.</p>
Motion System	<p>The motion system comprises a car body vibrator system that is powerful enough to give an illusion of road contact, and a three-axes motion system based on electrical actuators, that can nearly reproduce natural accelerations and low frequency motions</p>



AutoSim AS, Strandveien 106 9006 TROMSØ – NORWAY
Phone: +47 77 66 41 40 Fax: +47 77 66 41 41
E-mail: info@autosim.no Web: <http://www.autosim.biz>