

i-Drive FDS

Full-Scale Driving Simulator



The i-Drive FDS provides fully-immersive, virtual driving environment that is suitable for a wide range of R&D applications including advanced driver assistance system development, intelligent transportation system research, traffic safety research, human factor study and road design.

The i-Drive FDS has been adopted by automotive companies, universities and research institutions in the areas of automotive technology, traffic safety and construction technology. The i-Drive FDS has shown to be very effective for their R&D activities.

INNOSIMULATION is an innovative and dynamic company, built on extensive staff expertise in the areas of design, development, validation and application of various simulation systems and vehicle electronic control systems. With close cooperation with university and industry partners, we strive to provide our customers with the most advanced technical solutions.



i-Drive FDS

FEATURES & SPECIFICATIONS



High-fidelity driving simulators for a wide range of applications



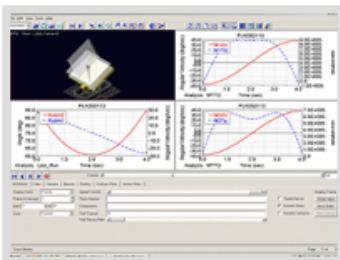
⇒ Real-time Vehicle Simulation System

- Multi-body full vehicle dynamic models for various type of vehicles
- Modular design and easily changeable vehicle parameters
- Hardware-in-the-loop simulation capability
- Efficient & reliable simulation algorithm



⇒ Image Generation and Display System

- Advanced graphics engine and scene management software
- Multi channel image generation and display with inter-channel synchronization
- Spherical / Cylindrical / Flat screens
- DLP / LCD / CRT projectors
- Efficient real-time database (urban street, highway, virtual test track, etc.)
- Geometrically correct roadways and traffic controls
- Multiple level-of-detail objects



⇒ Motion System

- 2-6 degrees-of-freedom electric motion platform
- Adaptive washout algorithm and motion tuning
- Motion simulation capabilities: gross vehicle motion, road surface irregularities, off-road surface, tactile response for multiple tire types

⇒ Sound Generation System

- Realistic 3D sound generation to support spatialized audio presentation
- 5.1 channel, stereo amplifier, equalizer, multiple speakers and sub-woofer
- Sound simulation capabilities: engine noise, multiple tire squeal noise, velocity dependent wind noise, ambient vehicles, Doppler effects, environmental noise



⇒ Cabin and Control Force Loading System

- Full instrumentation (cluster, control knobs, active force feedback)
- Embedded on-board controller
- High frequency, high resolution DAQ boards to support HILS applications
- Highly realistic steering feedback



⇒ System Operation and Monitoring System

- SCANer II™ based central system operation & monitoring
- Fail-safe and self-diagnostics, procedural operation
- Operator / scenario controlled traffic generation
- Real-time post-processing, simulation results recording and playback
- Various communication modules (RS-232C, RS-422, UDP, TCP/IP, CAN)
- Intelligent scenario control (traffic signal, autonomous interactive ambient traffic, extensive and interactive scripted vehicle activity, traffic density, aggressiveness)
- Monitoring equipment (CCD cameras, quad, LCD monitors, video tape recorder, communication equipment, console desk and operating room)

INNOSIMULATION

INNOSIMULATION, Inc. 1F, 564-11, Gajwa-dong, Seo-gu, Incheon, 404-250, Korea | tel +82 32 575 9500 fax +82 32 575 9510 | info@innosim.com