SimPRIME+ and SimPRIME

SCANeR™studio **Installed and pre-configured**

SimPRIME+ and SimPRIME simulators provide immersive simulation with the help of a 6 DoF realtime motion system, real car interior (seat, steering wheel, gear lever…), SCANeR™studio simulation software running on four high-end PCs and three large and ultra high-resolution displays. Simply the best in class in their category.

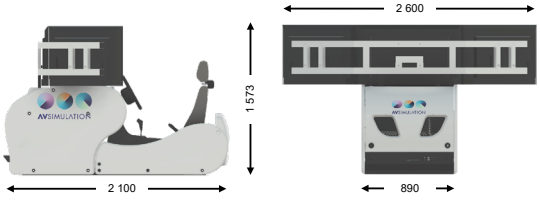
Human Factors and ADAS

SimPRIME+ and SimPRIME are smart choices for all kinds of human factors research. This includes, among others, assesment of human driver performance, analysis of the interactions between drivers, Human Machine Interfaces (HMI) and ADAS. Other studies relate to the characterization of driver's behaviour, driver awareness, drugs and alcohol effects, ergonomics, traffic safety, infrastructure and transportation efficiency studies…

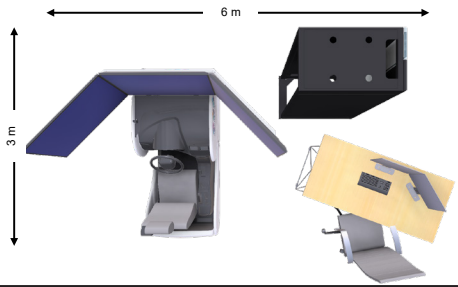
SiL, MiL, HiL

SimPRIME+ and SimPRIME are natural candidates for software in the loop (SiL), model in the loop (MiL) and hardware in the loop (HiL) testing. SimPRIME provides the driver with high quality controls and feedbacks, and can be connected to test benches. Other examples include cases where SimPRIME+ or SimPRIME drives an engine bench or enables a driver to validate the behaviour of ECUs and/or HMI prototypes at very early stages.
SCANeR studio is the simulation software that powers SimPRIME+ and SimPRIME. It is open, modular and conforms to the industrial protocols and standards (ROS, FMI, OpenScenario, Simulink…). You can easily connect SimPRIME+ and SimPRIME to all kinds of hardware or include your own code in C++, LabVIEW or Python.

Overall dimensions



Recommended floor area



Description

When choosing SimPRIME+ or SimPRIME you do not need any additional software or hardware. Based on actual car components, it is a turn-key simulation solution where all the hardware and software is already installed and configured. Each component has been selected by AVSimulation engineers to provide the best possible quality. Last but not least, SimPRIME+ and SimPRIME are designed, assembled and tested in France. They are CE certified and available in left and right-hand drive steering configurations.

In addition, SimPRIME+ and SimPRIME come with a monitoring console with two LCD monitors. The monitoring console is the best tool to ensure the driver is 100% immersed in the simulation, it eases the work of the researcher for the preparation and management of the experiments.

SCANeR™studio
Fully compliant, installed and pre-configured.
Engineered, assembled and tested in France by AVSimulation.

Motion

SimPRIME+ comes with a 6 DoF realtime motion system for a enhanced realism in the driving experience. The benefits of the motion system are key in the engineering evaluation of powertrains where the kinesthesic reaction of the vehicle model needs to be immediately felt by the driver. The motion system comes on removeable wheels and does not require any anchoring to the floor. The motion system is controlled by the MOTION module of SCANeR studio.

Technical Datasheet

Chassis	Based on actual vehicles parts, realistic driver position (B segment vehicle). Available for right-hand and left-hand driving.
Visual system	3 x 43'' UHD LED monitors (3840 x 2160 pixels, 60Hz). FoV: 150° horizontal / 28° vertical
Instrument cluster	Real instrument panel connected to SCANeR™studio
Steering wheel	Real Hyundai wheel with AVS force feedback system (25.8 N.m peak torque). Software end stops, angle adjustable in SCANeR studio
Controls	Real steering levers (lights, indicators, wipers) + start/stop engine button + parking brake (binary) + hazard warning
Seat	With seat belt (controlled by the software). Adjustments: fore and aft position, backrest angle
Pedals	Clutch, brake and throttle, with passive force feedback (clutch pedal only with on manual gearbox).
Gearbox	5+1 manual OR automatic (PRND+-) gearbox
Sound system	5.1 system
Computer system	Professional workstations with Nvidia graphic boards. (SCANeR™studio certified configuration)
Power supply	220/230 V AC, two 16A sockets required
Vibration system	One vibration pod in the cockpit (10 to 150hz)
Weight (depends on the options)	approx. 250kg for SimPRIME