

5DOF Automatic Car Driving Simulator

A passenger-car training system for driving schools, vocational colleges and professional trainers, combining automatic controls with five-degree-of-freedom motion feedback.



Practise basic, repetitive and higher-risk tasks in a controlled virtual environment before training in a real vehicle.

Display system

34-inch curved display

Gear selection

Automatic transmission

Product form

Dynamic · 5DOF

Vehicle class

Car / passenger vehicle

Driving layout

RHD; LHD customisable

Production lead time

Approx. 2–3 weeks after payment

Photographs and software screens illustrate configurations; the final delivery scope is defined by the confirmed order.

Product overview

Reduce basic-training consumption

Move repeated starting, shifting and parking practice to the simulator to reduce fuel use and wear on tyres and drivetrain components.

Prepare learners before real driving

Let beginners learn steering, pedals and gear logic before moving to a real vehicle.

Complex roads and weather

Practise urban, motorway and mountain driving in rain, snow, fog and at night, supplementing conditions that are difficult to arrange consistently in real training.

Induction and refresher training

Support staged driving-school lessons, new-driver orientation and refresher training for working drivers.

Five-degree-of-freedom motion feedback

Heave, pitch, roll, surge and yaw provide five-degree-of-freedom feedback alongside the driving visuals.

Train indoors, independent of weather

Learn the controls and training procedures indoors, easing demand on training vehicles and outdoor facilities.

Support consistent instruction

Support consistent basic teaching for transport operators and colleges; vehicle types, scoring and reports depend on the delivered software.

Hazard and emergency training

Use simulated brake failures, fatigue and unexpected events to practise hazard recognition and appropriate responses.

Flexible training schedules

Reduce dependence on outdoor facilities, weather and vehicle schedules to keep basic lessons running regularly.

Standard hardware and options

Right-hand-drive cockpit and adjustable seat	Standard equipment × 1
Steering system	Standard equipment × 1
Pedal assembly (brake and accelerator used for automatic training)	Standard equipment × 1
Automatic gear selector	Standard equipment × 1
34-inch curved visual display	Standard equipment × 1
Simulation computer	Standard equipment × 1
Driving simulation software	Standard equipment × 1
Upper 3DOF platform	Standard equipment × 1 set
Lower two-axis platform	Standard equipment × 1 set

Optional configurations

Left-hand drive, instruments, instructor workstation and VR can be configured by project. Standard equipment includes an upper 3DOF platform and lower two-axis platform, combining five degrees of freedom.

Software features

Software is configured with the hardware, covering basic controls, manoeuvres, road driving, hazards, scoring and driving aids, with language and course adaptation available by market.

LHD / RHD

Matched left- / right-hand-drive hardware and software

The cockpit can be configured for left- or right-hand drive. The software viewpoint, instruments and control logic follow the selected layout to match physical and virtual driving positions.

- Left- or right-hand-drive cockpit
- Viewpoint matched to the hardware
- Coordinated instruments and control logic

Basic control training

Steering, gears, accelerator, brake, parking brake and lights practice.

Manoeuvring exercises

Automatic-compatible exercises include reverse and parallel parking, curves, right-angle turns, hill starts, narrow gates, manholes, uneven roads and single- or double-sided bridge exercises.

Road and weather environments

Town, city, motorway, mountain and gravel roads; night, rain, snow, fog and day/night changes, with corresponding weather effects.

Hazard and emergency training

Scenarios include alcohol and drug impairment, fatigue, speeding, brake failure, unexpected events, noise distraction, traffic direction and yielding to ambulances.

Scoring and training results

Detect red-light violations, lane crossings, collisions, speeding, unfastened belts, unreleased parking brakes and harsh acceleration or braking; record exercises, distance, fuel use, scores and errors.

Result storage and printing

Results can be saved locally and printed. Local file formats depend on the delivered software version.

Driver assistance

Single- or triple-screen support, dual mirrors on one screen, live pedal and gear indicators, mini-map and point-to-point navigation and route checks.

Languages and system extensions

One interface language is preinstalled: English, Arabic, Spanish, Romanian or Ukrainian, selected when ordering. The 5DOF platform is standard; VR and an instructor workstation are optional.

This page shows only a selection of software features and interfaces. Features may be added or modified in future software versions. The delivered software version and feature set are subject to the order confirmation.

Screens show shared driving software. Gear and pedal indicators and exercises for automatic transmission depend on the delivered version.

OPTIONAL SYSTEM

Instructor workstation interface

Monitor terminal status, assign tasks to one or several simulators and review learner results and errors. Functions and terminal capacity are confirmed by project.

Vehicle types, languages, display arrangements and extensions are confirmed with the order. Custom features, timescales and fees depend on project requirements.

Technical specifications

Standard specifications Default delivery scope for this model	
Vehicle class	Car / passenger-vehicle driver training
Product form	Static ✓ Dynamic Static:fixed base without motion feedback.Dynamic:A motion platform provides attitude and motion feedback; this model uses 5DOF.
Display system	34-inch curved display
Standard colour	Black + white as photographed; other colours can be customised and confirmed with the order
Overall dimensions	Drawing envelope reference: length 1651.2 × width 1300 mm; top of display 1466.4 mm Tolerance: ±10 mm. Base length 1600 mm. Height is measured to the top of the display.
Net equipment weight	Approx. 285 kg
Packing dimensions / gross weight	Wooden crate: 1800 × 1400 × 1520 mm (L × W × H); gross weight approx. 450 kg; one crate
Power supply and maximum consumption	Standard input: AC 220 V (±10%), 50 Hz; maximum consumption 4.5 kW including upper 3DOF and lower two-axis platforms AC 110 V is available by project; voltage, frequency and final configuration are confirmed in the order specification.
Computer configuration	Intel Core i5-6500; Gigabyte H110M-S2PH; GTX 1660 6 GB; 8 GB RAM; 128 GB SSD Reference configuration. Brands or models may change with availability; replacements will provide equivalent or better performance, subject to the final order specification.

Pre-installed software language	One software interface language is preinstalled: English, Arabic, Spanish, Romanian or Ukrainian. Select the language at order confirmation.
Steering force feedback	DC motor force feedback as standard; servo motor force feedback optional
Steering wheel rotation	From centre: 540° left and 540° right (1.5 turns each); total rotation 1080°
Gear control	Automatic transmission Automatic transmission is standard; manual transmission can be requested. Confirm the gear configuration with sales when ordering.
Physical controls	Car steering wheel, pedal assembly, automatic selector, parking brake, ignition and combination switches Automatic training uses the brake and accelerator. Confirm the physical pedal assembly with the order.
Operating environment	0–35 °C; 20%–80% RH, non-condensing
5DOF motion specifications Upper 3DOF + lower two axes	
Payload	100 kg
Heave travel / speed	Upper heave: ±50 mm / 250 mm/s
Pitch angle / speed	Upper pitch: ±5° / 10°/s
Roll angle / speed	Upper roll: ±5° / 10°/s
Motion drive	Upper servo-driven electric actuators provide heave, pitch and roll. Lower electric actuators provide longitudinal travel and yaw.
Longitudinal travel / speed	Lower longitudinal travel: ±70 mm / 250 mm/s
Yaw angle / speed	Lower yaw: ±7° / 10°/s
Optional extensions Not included as standard; confirmed by project	

Servo motor steering force feedbackOptional	Optional servo motor steering force feedback; the standard configuration uses a DC motor
VR headsetOptional	VR headset and display solutions available by project; models, software compatibility and scope are confirmed for the application
Instructor workstationOptional	Instructor workstation available by project; hardware, management functions and terminal capacity are confirmed for each order
Software customisationOptional	Software customisation available; features, lead time and cost are agreed for each project

Delivery and support

Production lead time

Usually about 2–3 weeks after payment, subject to the confirmed order and configuration.

Export packing

One export wooden crate per unit; see the specifications for packed dimensions and gross weight.

Factory testing

Software, hardware and overall operation are checked before dispatch.

Installation and training

A user manual is supplied. Remote installation guidance and operator training can be provided when required.

Warranty and upgrades

One-year hardware warranty. Standard new software features may be upgraded free of charge; confirm applicable conditions with sales.

Remote diagnostics

Remote troubleshooting assistance is available; overseas on-site service is not currently provided.

Project enquiries

MotusSim · Foshan Yisili New Technology Co., Ltd.

remotedrive@163.com

WhatsApp: +86 188 2311 8301

motussim.com

Document revision: 2026-10-09 · 87cc91f34c

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