

QUAKELOGIC

CLASS A CDL TRUCK DRIVING SIMULATOR



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PROFESSIONAL CLASS A CDL DRIVER TRAINING

The QuakeLogic Class A CDL Truck Driving Simulator is a professional training and assessment platform for commercial driver education, skills development, and instructor-led CDL programs. It simulates a full-size North American Class A tractor coupled to a standard 53-foot semi-trailer, with realistic controls, manual transmission, and air-brake training. A dedicated driver station, triple-screen panoramic display, high-performance simulation computer, and independent instructor station form one complete, on-premise training platform.

- Provides a controlled environment for foundational through emergency-driving skills before on-road training in commercial driver education programs.
- Independent instructor station with real-time monitoring, scoring, and playback lets one instructor supervise, assess, and document student performance objectively.
- Permanent core software license with no mandatory annual renewal fee. Software updates and remote technical support are provided during the one-year warranty/support period.
- Fully on-premise operation requires no Internet, cloud service, or third-party account, keeping student data local and training available at all times.

STANDARD FEATURES »

- 900° Force-Feedback Steering
- Three-Pedal Configuration
- Manual Multi-Speed Transmission
- Functional Air-Brake System
- Triple 55-inch 4K Displays
- 180° Field of View
- Simulated Mirror Displays
- Multi-Channel Audio
- Instructor Operator Station
- Real-Time Student Monitoring
- Automatic Performance Scoring
- Session Playback
- PDF & Excel Reporting
- Custom Scenario Editor
- Student Management System
- Role-Based User Accounts
- Local Data Storage
- Offline Operation
- Permanent Software License
- Software Updates During
- One-Year Warranty/Support

Key Features

- Simulates a North American Class A tractor with a standard 53-foot semi-trailer, delivering realistic commercial vehicle dynamics for authentic driver training.
- 900° force-feedback steering reproduces realistic steering resistance and vehicle response, building the wheel-handling skills required for commercial tractor-trailer operation.
- Three-pedal configuration with manual multi-speed transmission supports clutch coordination, upshifting, downshifting, and engine-speed management for manual-transmission Class A CDL training.
- Functional air-brake system trains air-pressure monitoring, leak and brake-failure simulation, and correct commercial braking procedures without vehicle or roadway risk.
- Triple 55-inch 4K displays deliver a 180° horizontal field of view with low-latency response for accurate maneuvering and roadway situational awareness.
- Dedicated simulated left and right rearview mirror displays support backing, docking, and lane-management training that mirror real commercial driving decisions.
- Independent dual-monitor instructor station enables real-time student monitoring, live weather and traffic modification, automatic scoring, and annotated session review.
- Integrated scenario editor lets instructors build and modify training environments with no additional license, per-scenario creation fee, or recurring editing charge.
- Local data storage with role-based accounts keeps student and simulator data on-premise, with manual external backup and configurable retention under administrator control.

PRODUCT FEATURES

Steering System

900° steering-wheel rotation · Force-feedback with realistic resistance · Vehicle-response steering feedback

Pedals & Transmission

Three pedals: clutch, brake, accelerator · Manual multi-speed transmission shifter · Clutch coordination and gear-selection training

Air-Brake Controls

Air-pressure monitoring and gauges · Air-leak and brake-failure simulation · Air-brake warning indications

Visual Display

3 × 55-inch 4K LED displays · 180° horizontal field of view, 60 Hz · Separate left and right mirror displays

Audio Simulation

Multi-channel engine and tire-road sound · Air-brake exhaust and collision events · Surrounding traffic and roadway environment

Simulation Workstation

NVIDIA RTX 4070 GPU, 32 GB RAM · 1 TB SSD, Windows 11 Pro 64-bit · Local storage, offline operation

Instructor Station

Independent dual-monitor instructor computer · Real-time student and vehicle monitoring · Scenario control, scoring, playback, reporting

Data & Reporting

Logs steering, pedal, gear, speed, lane data · Automatic event detection and scoring · PDF and Excel report export

For more information about the features, specifications, and available configurations of the QUAKELOGIC CDL Truck Driving Simulator, please contact QuakeLogic.

CONFIGURATION

COMPONENT	CONFIGURATION
Driving Cabin	Modular steel-frame Class A tractor layout with commercial driver seat and safety belt
Steering	900° rotation, force-feedback
Pedals	Three-pedal: clutch, accelerator, brake
Transmission	Manual multi-speed shifter
Air-Brake System	Functional air-brake controls with pressure monitoring, warning indications, air-leak and brake-failure simulation
Visual System	3 × 55-inch 4K LED, 180° FOV, 60 Hz, plus dual mirror displays
Simulation Computer	NVIDIA RTX 4070, 32 GB RAM, 1 TB SSD, Windows 11 Pro 64-bit
Instructor Station	Independent computer, dual-monitor, instructor-management software
Vehicle Model	North American Class A tractor with 53-foot semi-trailer

OPTIONAL FEATURES & ACCESSORIES

3-DOF MOTION PLATFORM

Adds motion feedback corresponding to acceleration, braking, and road-surface movement for heightened driving realism.

EXPANDED SCENARIO PACKAGES

Additional optional training environments and scenarios beyond the included core CDL training package.

TECHNICAL SPECIFICATIONS

SPECIFICATION	DESCRIPTION
Vehicle Simulation	North American Class A tractor + 53-ft trailer
Steering Rotation	900°, force-feedback
Pedal Configuration	Three-pedal (clutch, brake, accelerator)
Transmission	Manual multi-speed shifter
Displays	3 × 55-inch 4K LED
Horizontal Field of View	180°
Refresh Rate	60 Hz, low-latency
Mirror Displays	Separate left and right rearview
Audio	Integrated multi-channel simulation
GPU	NVIDIA RTX 4070
System Memory	32 GB RAM
Storage	1 TB SSD
Operating System	Windows 11 Professional 64-bit
Instructor Station	Independent computer, dual-monitor
Data Storage	Local / on-premise, offline capable
User Roles	Administrator, instructor, student

SPECIFICATION	DESCRIPTION
Report Formats	PDF and Excel
Networking	Not required for standalone operation
Overall Dimensions	To be specified per final configuration
Total System Weight	To be specified per final configuration
Minimum Doorway Width	To be specified per final system configuration
Minimum Doorway Height	To be specified per final system configuration
Maximum System Power	Approx. 1.8 kW
Operating Temperature	50°F to 95°F (10°C to 35°C)
Ventilation	Standard indoor natural
Recommended Ambient Lighting	200–500 lux
Installation Environment	Standard accessible indoor space
Software License	Permanent core software license
Software Updates	Applicable updates, patches, bug fixes, and security updates during the one-year warranty/support period; offline update capability.
Remote Technical Support	Included during the one-year warranty period.
Hardware Warranty	1 year (standard)

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About QuakeLogic:

QuakeLogic Inc. is a California-based engineering and technology company providing innovative, reliable, high-quality solutions to customers worldwide.

Our Commitment

We are committed to quality, innovation, and customer satisfaction — building lasting partnerships through reliable solutions and dependable support.



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