QUAKELOGIC

DATASHEET

INTEGRATED HEO & CDL TRAINING SIMULATOR

QL-8in1 Simulator

One operator station for heavy equipment and CDL training, with automatic control switching, automated scoring and a dedicated instructor station.



SIMULATION
8 Modules
7 HEO + 1 CDL package

CONFIGURATIONS
9 Vehicles
Equipment and trucks

DISPLAY
3 × 27 in
Curved panoramic, 1080p

SOFTWARE
Permanent License
No recurring subscription

CUSTOMER SATISFACTION 100% GUARANTEED

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QL-8in1 Simulator

EIGHT-IN-ONE HEAVY EQUIPMENT & CDL TRAINING SIMULATOR







ONE STATION. A FULL TRAINING FLEET.

The QL-8in1 Simulator is an integrated mobile platform for Heavy Equipment Operator (HEO) and Commercial Driver's License (CDL) instruction. One operator station combines seven heavy construction equipment modules and a CDL package, covering nine vehicle and equipment configurations, with realistic controls, triple-screen panoramic visuals, automated scoring and a dedicated instructor station.

- Seven HEO simulation modules and one CDL package, supporting tractor-trailer and straight-truck configurations, run from a single operator seat.
- Controls switch automatically with the selected module, so excavator operators and truck drivers train on the same station without reconfiguration.
- Automated performance scoring, event tracking and exportable reports give instructors consistent assessment and documented trainee progress.
- Modular steel frame with quick-connect components relocates between facilities and needs no professional recalibration after transport.

STANDARD FEATURES »

- Dual Hydraulic Pilot Joysticks
- Force-Feedback CDL Steering
- Three-Pedal CDL Set
- Manual Gear Selector
- Triple 27 in Display
- Stereo Audio System
- Suspension Seat, 3-Point Belt
- Instructor Station
- Industrial Simulation Computer
- Modular Steel Frame
- Heavy-Duty Swivel Casters
- Adjustable Leveling Feet
- Protective Handrails
- Permanent 8-in-1 License
- Local Data Management

KEY FEATURES

- Single integrated platform runs eight simulation software modules and nine vehicle and equipment configurations, consolidating a training fleet into one station.
- Seven heavy equipment modules cover excavator, wheel loader, dozer, grader, backhoe, skid steer and articulated dump truck operation and safety scenarios.
- Integrated CDL package supports tractor-trailer and straight-truck training with inspection, maneuvering, traffic, weather and emergency-response simulations.
- Dual hydraulic pilot joysticks and full CDL steering, pedal and transmission controls switch automatically to match the selected module.
- Triple-screen curved panoramic display reproduces sightlines, blind spots, instrument panels and operating warnings for immersive training.
- Automatic assessment detects violations including speeding, collisions, rollover risk and skipped inspections, then generates scored reports.
- Session recording with slow-motion replay lets instructors review trainee actions and identify incorrect operating decisions.
- Dedicated instructor station monitors multiple student screens in real time, with remote pause, emergency reset and scenario management.
- Local student-data management with configurable privacy supports FERPA-related requirements; records export to PDF, CSV and Excel.

PRODUCT FEATURES

Heavy Equipment Controls
Dual industrial hydraulic pilot joysticks with trigger buttons · Travel and auxiliary pedals, Hall-effect sensors · Function panel: ignition, lighting, horn, wipers

CDL Controls
Commercial steering wheel with force feedback · Clutch, service brake and accelerator pedals · Manual gear selector, handbrake, trailer air brakes

Visual Display
Three synchronized 27 in low-blue-light monitors · 1920 × 1080 per monitor, 60 Hz minimum · Curved panoramic front/left/right coverage

Audio System
High-fidelity stereo with equipment-specific sounds · Independent engine, ambient, alert and master volume · Mute function

Simulation Software
One-click module selection, English UI · Automated scoring and violation detection · Recording, replay and slow-motion review

Student Data Management
Local storage by default; optional cloud can be disabled · Account login; hierarchical instructor/student access · Individual data separation and operation log retention

Mobile Platform
Welded carbon-steel modular frame · Four swivel casters, two lockable · Four adjustable leveling feet

For more information about the features, specifications, and available configurations of the QL-8in1 Simulator, please contact QuakeLogic.

SYSTEM CONFIGURATION

COMPONENT	CONFIGURATION
Simulation Computer	Integrated industrial desktop, licensed Windows OS
Graphics	Real-time triple-screen 3D rendering
Storage	High-capacity solid-state drive (SSD)
Networking	Gigabit Ethernet
Control Communication	High-speed Ethernet I/O
Software	Integrated 8-in-1 simulation suite, permanent license
Display	Three synchronized low-blue-light monitors
Operator Seat	Industrial suspension seat, three-point belt
Frame	Welded carbon-steel modular platform
Instructor Station	Separate monitoring and control station

TRAINING MODULES & CONFIGURATIONS

MODULE	TRAINING SCOPE
Excavator	HEO operation and safety scenarios
Wheel Loader	HEO operation and safety scenarios
Dozer	HEO operation and safety scenarios
Grader	HEO operation and safety scenarios
Backhoe	HEO operation and safety scenarios
Skid Steer	HEO operation and safety scenarios
Articulated Dump Truck	HEO operation and safety scenarios
CDL – Tractor-Trailer	Inspection, maneuvering, traffic, weather, emergency
CDL – Straight Truck	Inspection, maneuvering, traffic, weather, emergency

INCLUDED SERVICES

DELIVERY & INSTALLATION

Supplied, installed and commissioned on site by QuakeLogic Inc.

INSTRUCTOR TRAINING

Operation and instructor-station training for designated staff at commissioning.

WARRANTY

Written warranty issued by QuakeLogic Inc. Term and coverage are stated in the QuakeLogic quotation.

DOCUMENTATION

Operation and maintenance documentation in English.

TECHNICAL SPECIFICATIONS

SPECIFICATION	DESCRIPTION
Simulation Modules	8 software modules, 9 configurations
HEO Modules	7 (excavator, wheel loader, dozer, grader, backhoe, skid steer, ADT)
CDL Configurations	Tractor-trailer and straight truck
Display Configuration	Three synchronized monitors
Screen Size	27 in (686 mm) minimum each
Resolution	1920 × 1080 per monitor
Refresh Rate	60 Hz minimum
Display Arrangement	Curved panoramic configuration
Display Technology	Low-blue-light monitors
HEO Controls	Dual hydraulic pilot joysticks, travel/auxiliary pedals
CDL Controls	Force-feedback steering, clutch/brake/accelerator, manual gearbox
Sensing	High-resolution non-contact Hall-effect sensors
Control Acquisition	High-speed Ethernet I/O
Operating System	Licensed Windows
Storage	High-capacity SSD
Networking	Gigabit Ethernet
Interfaces	USB, Ethernet, display outputs

SPECIFICATION	DESCRIPTION
Operating Length	94.5 in (2,400 mm) approx.
Operating Width	63.0 in (1,600 mm) approx.
Operating Height	82.7 in (2,100 mm) approx.
Transport Length	92.5 in (2,350 mm) approx.
Transport Width	61.0 in (1,550 mm) approx.
Transport Height	51.2 in (1,300 mm) approx.
Total System Weight	1,874 lb (850 kg) approx.
Rated Power Consumption	3.5 kW
Peak Power Consumption	4.2 kW
Frame Material	Welded carbon steel, powder-coated
Mobility	Four swivel casters (two lockable)
Stabilization	Four adjustable leveling feet
Motion System	None (static simulation platform)
Core Software License	Permanent, no recurring subscription
Data Storage	Local by default, optional cloud (can be disabled)
Report Export	PDF, CSV, Excel-compatible
User Interface Language	English

Images are representative. Specifications describe the standard QL-8in1 Simulator configuration.



CORPORATE HEADQUARTERS

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VIEW PRODUCT

COMPANY CERTIFICATIONS

ISO 9001:2015	ISO 14001:2015	ISO 45001:2018	ISO/IEC 27001:2022
Quality Management	Environmental Management	Occupational Health & Safety	Information Security
Cert. No. AQUS-10006	**Cert. No. AQUS-20002**	**Cert. No. AQUS-30002**	**Cert. No. ICB.90238.ISO.56838**

QuakeLogic Inc. is a California-based engineering and technology company, certified at company level to the standards above. The QL-8in1 Simulator is supplied, installed and commissioned by QuakeLogic Inc.

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