

Truck Weigh-In-Motion Systems



Robust, Reliable and Proven Technology Solutions for high-speed and low-speed weighing, overload detection, toll roads, mines, sea ports, and bridge protection

- Maximize Operational Productivity and Cost Savings
- Accuracy of $\pm 1\%$ to $\pm 2\%$
- Weighing data reports can be interfaced via PCs, Ethernet or Internet
- Design, manufacturing, installation and after-sales support over 86 locations across the country

Essae

Protecting YOUR Profits



Overweight vehicles can be prevented from crossing limited capacity bridges using TWIM.



TWIM offers productivity improvement for applications where landfill operators own the fleet of vehicles and legal for trade is not required.

Irrefutable Solution for Trucking Terminals

Trucks with axle load higher than legal limits cause a disproportionately higher percentage of damage to the infrastructure and adverse impact on traffic safety. Essae Truck Weigh-in-motion System (TWIM) is a robust, reliable, maintenance-free weighing mechanism designed for use on highway entries with non-stop heavy traffic. Weighing accuracy and performance are approved for trade use and for law enforcement purposes.

When speed is critical and vehicle weighing is an integral part of the operation, Essae TWIM system provides significant cost savings over full-platform and axle scales. The vehicle loads (wheel, axle, GWW, load ratios) are automatically analysed, compared to legal limits and results are displayed on operator's PC monitor, the driver gets the corresponding printout and the data are also recorded for further reporting or can be sent via LAN or Internet to the server. This minimizes operator's mistakes, offers inbuilt data protection and allows vehicle throughput up to 180 vehicles per hour.

Essae Automatic TWIM weighing system

Its rigid construction significantly improves scale reliability in heavy-duty operation and helps to achieve precise positioning into the road during installation thus reducing the installation costs. The weighbridge is connected to traffic lights and signal horn to control vehicle movement. Video camera for vehicle detection and vehicle image capturing can be delivered as optional equipment.

Key Benefits

- Instant check for road legal weight
- Fully unattended weighing operation
- Weighs hundreds of vehicles daily
- Daily reporting measures vehicle productivity
- Automatic recording of weight and images of vehicles
- Gross weight, axle weights, numbers of axles can be recorded
- Data records can be stored for future use or can be sent via LAN or Internet to the server.



The superior accuracy of Essae TWIM systems allows for tighter weight tolerances thereby maximizing toll revenue.

TWIM for seaports

Essae TWIM system provides the ability to weigh thousands of containers prior to loading onto ships without the delays caused by trucks stopping at static scales.



TWIM Adding efficiency at seaport

TWIM for Toll Plaza, Toll Roads and Bridges

The vehicle weight, not the number of axles, determines wear and tear of roads. Toll authorities now use weight-based tolling, which relies on weigh-in-motion technology to determine the proper toll classification while keeping the traffic moving.

TWIM for Border Crossings

To protect highway infrastructure and maintain safety, it is essential to ensure that vehicles entering the country are of legal weight. Essae TWIM system allows for screening of overweight vehicles efficiently at high volume border crossings.



Lightening Protector

- Protects load cells against surges caused by lightning
- Repeated auto re-setting operation without maintenance
- Reliable protection through high surge absorption capacity
- Weather-proof enclosure
- No effect on system accuracy

Software

The Proprietary software ensures fully automatic weighing. Advanced functions like the Vehicle configuration and classification, law compliance checking, fines computing, or LEF calculations are implemented without any additional costs for the user.



Cloud based interface and software.

- Web based architecture with visualization on real time.
- Communication options – GSM/ GPRS, RS232, TCP/IP Wi fi
- Runs on standard web browser
- Flexible protocols.



Robust structure of the weighbridge with four 25 ton capacity double ended shear beam load cells



Features

- Very high speed - up to 52,000 samples per second
- 24 bit A/D with ± 8 million counts for tension and compression applications
- Powerful 32 bit/135 MIPS DSP for high speed onboard processing.
- OEM applications can be embedded on the board
- 8 digit LED display
- On board temperature sensor
- Multiple boards may be connected via USB or RRS485

Specifications of TWIM

Capacity	: 120 tons
Accuracy of weighing	: $\pm 1\%$ to $\pm 2\%$ of the gross weight
Platform size	: 845 mm \times 3275 mm (Outer Dimension)
Type of In-Motion Scale	: Load cell based permanent In-motion scale
Type of Installation	: Pit Type
Speed of weighing	: 0 KMPH to 15 KMPH
Type of Recording	: Automatic, Un-manned Recording
Direction of weighing	: One Direction
Cables	: 4 core stainless Steel armoured cable
Operating Temp. & Humidity	: -5°C to $+60^{\circ}\text{C}$ and 95 % RH
Power Supply	: AC single Phase 230V, 50 HZ
Type of Reports	: Date, Time, Location, Weight & Speed of the vehicle
Material of the Platform	: Mild Steel IS 2062 painted with epoxy & enamel paints.
Life of the Machine	: 8 to 15 yrs.
Optional	: Can also be connected to Camera for recording to weight along with photograph of the vehicle.
Hardware Specifications	: PC Requirements for LPE camera & Software – Windows XP SP3 Operating System, Intel Core2Duo processor with 2.8GHz or faster, minimum 2GB RAM, with Ethernet.

Other Products



Rail Weigh-in-motion



Rapid Loadout System



Portable Weigh Pads

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Disclaimer : Due to continuous R&D the specifications are subject to improvement without prior notice.