



kapsch >>>
challenging limits

Kapsch TrafficCom

Kapsch WIM. *Weigh-In-Motion.*

Road damage caused by overloaded vehicles is a serious threat to road infrastructure and poses a safety hazard to all motorists. This is why surveillance of heavy vehicles and enforcement of overweight is becoming increasingly important. Kapsch WIM enables road operators to systematically check vehicle weight and enforce weight limits.

Kapsch WIM allows vehicle weight to be checked at full speed without any disruption in traffic flow. Either on rural roads or highways, for single or multilanes. Kapsch WIM works as a standalone unit, and can easily be incorporated into Kapsch electronic toll collection and traffic surveillance systems.

Kapsch WIM supports additional applications, such as Automatic Number Plate Recognition (ANPR) cameras, Laser-scanner Vehicle Detection and Classification, surveillance cameras and Section Control and Speed Enforcement.

Kapsch WIM consists of controller unit, sensors and specially-designed software. The product uses high precision Kistler Lineas® WIM Sensors, which are installed into small pavement slots. The sensor signal is transformed and processed into wheel based weight information. Kapsch

Axle weight
Gross weight
Number of axles
Dual tires detection
Vehicle class
Speed



WIM reliably determines and checks axle weights, gross weight and trailer weight.

Additionally the vehicles are classified according to the customers vehicle classification scheme.

The installation of Kapsch WIM is performed by a team of Kapsch specialists with light machinery and special installation methods which avoid traffic closures and keep traffic flowing.

For ease in connection and integration to an existing solution, Kapsch WIM is available with standardized interfaces, including. serial interfaces RS232, RS422, RS485 (all up to 115,200 baud), Ethernet connectivity with IP/TCP server and client configuration.

Kapsch WIM sets a new standard for high performance Weight-in-Motion solutions, especially when integrated with an electronic toll collection system, for a cost-efficient overall solution.

Applications:

Direct enforcement.

Overloaded vehicles are enforced at Kapsch multi-lane free-flow environments and can be combined with electronic tolling stations. Images of the vehicle and the license plate are stored together with all weight parameters to create an enforcement incident.

Pre-selection for vehicle inspection.

Vehicles are preselected at WIM stations in front of vehicle inspection checkpoints. Suspicious vehicles are diverted to the vehicle inspection site for further examination.

Bridge & construction protection.

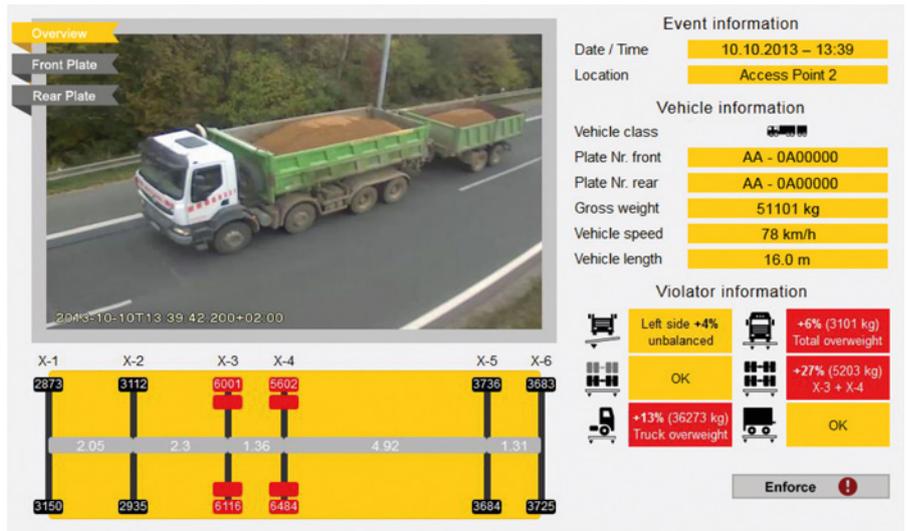
Overweight vehicles are prevented from crossing bridges with limited capacity. The system can create enforcement records and stop vehicles by traffic lights.

Statistics/traffic research.

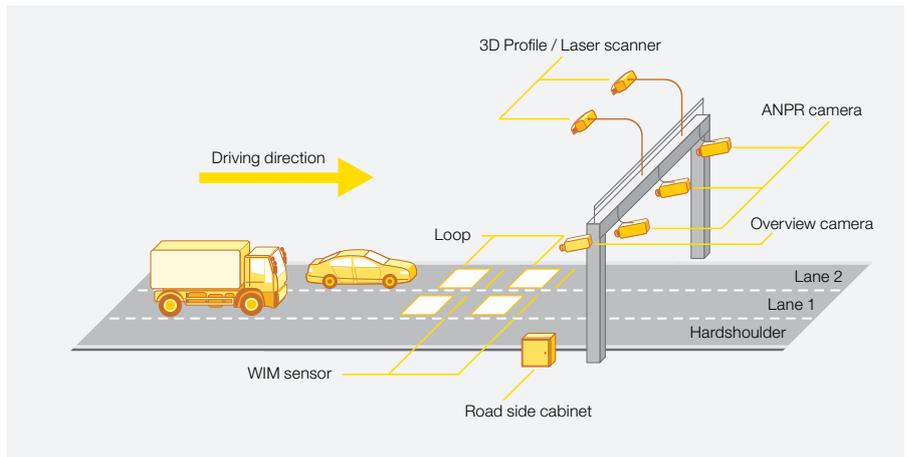
Kapsch WIM enables road operators and researchers to include vehicle weight data into traffic statistics. It is a valuable information source for pavement management i.e. pavement preservation.

Access control.

Vehicle weight is checked when entering (or leaving) factory premises, ports, military bases or other special interest zones.



Virtual Weigh-in-Motion: data can be monitored on web-based App.



Technical features:

Weight features

- > Gross weight
- > Trailer weight
- > Axle weight
- > Axle groups weight
- > Unbalanced weight

Vehicle features

- > Vehicle class
- > Vehicle speed
- > Trailer detection
- > Total Wheelbase

- > Number of axles
- > Dual tire detection
- > Vehicle 3D Profile measurement

Passage and system information

- > Unique vehicle number
- > Time and date (GPS or NTP synchronization)
- > Lane ID
- > Vehicle trigger message
- > Sensor status message
- > System status

Measurement accuracy

(in accordance with COST 323 class A(5))*

- > Gross weight (>3,5t) +/- 5%
- > Single axle +/- 8%
- > Group of axles +/- 7%
- > Vehicle speed (>30kmh) +/- 2%
- > Interaxle distance +/- 2%

Operating temperature range

- > from -40°C to +70°C

Operating speed

- > from 3km/h to 255 km/h

*WIM sites with excellent pavement conditions referring to COST 323 specification are required to ensure highest accuracy class A(5).