

Since 1979, Electronique Contrôle Mesure is at the service of highway operators of the world.

Our 35 years' experience on the field of the Intelligent Transport Systems (ITS) allow us to propose to our customers quality products, efficient, innovative and reliable.

The quality and the attention devoted to our products, since the creation of our company, is priority of our exigency. It allows to our systems to be installed in several country in the world like, the United States, the Uruguay, the Japan, the South-Korea, the France, the Portugal, etc.



*Traffic solutions for the
world's roads*



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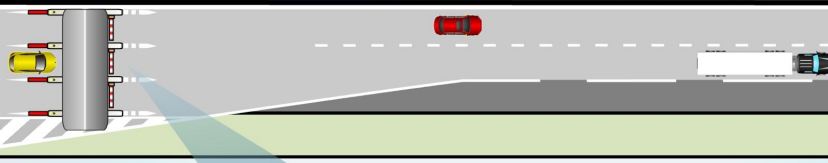


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Toll classification system



Toll Classification System

Our classification systems are adaptable on demand. The resistive sensors RES from ECM ensure a perfect detection of the axles so, a classification with a high accuracy.



High speed WIM system and offense vehicle screening

High speed WIM system

The "HERA" high-speed weighing station provides effective and accurate solution for detecting weight of moving vehicles.



Offense vehicle screening system

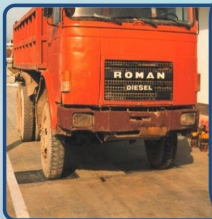
This system operates in complement of our high speed WIM station. It provides a snapshot (picture) of the vehicles in offence of weight, speed, length, etc.



Low speed weigh-in-motion system

Low-speed WIM system

The low-speed weighing allows delivering with a high accuracy the total weight, axle or wheel weight of vehicles. The ECM weighing scale is composed of two weighing platforms.



Supervision room

All the preceding weighing systems can be managed from a supervision room. ECM proposes a set of software to control or manage each of them.



MINOS: Toll classification system

The Minos system allows classifying with more of 99% of accuracy the vehicles which circulates on the automatic and manual toll lanes. The system regroups the following ECM equipment :

- The resistive sensors RES1 or RES2,
- The toll sensors classification electronic Capella IP,
- The sensor interface modules Capella-RD, Capella-LD,
- The Vesta system.

PIREN: low speed and static weighing system

The PIREN system allows weighing with accuracy the heavy vehicles. The weigh can be performed vehicle stationary or moving. The PIREN scale is certified OIML and ensures an accuracy of :

- $\pm 2\%$ of the gross total weight, below 8km/h,
- $\pm 0,3\%$ of the gross total weight, in static.

The 2 induction loops installed before and after the scale allows detect/control the passage of the vehicle.



SENSORS: Resistive and Piezoelectric

The resistive sensors RES1 and RES2 ensure a perfect detection of the axles on the toll lanes. The stainless steel treadles are adapted to the shape of the sensors and allows an optimal maintains of these in the toll lane.

The ceramic piezoelectric sensors "Piezolor" ensure a detection of the weight of the vehicles in motion. These sensors installed in the road lane detect the vehicles passing at more than 20km/h.

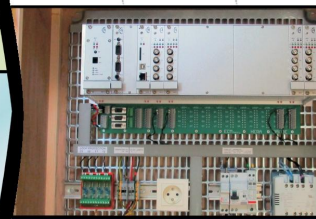


HERA: high speed WIM station

The HERA road traffic station is the new generation of high speed Weigh-In-Motion system. It is directly outcome from the Hestia station and more of 25 years of experience acquired by ECM in the field of road traffic. Its main characteristics are :

- An accuracy of $\pm 10\%$ on the gross total weight of vehicles,
- The possibility to install 4 piezoelectric sensors by lane,
- A data recording on a removable SD card (8 GB up to 32 GB) conferring a high storage autonomy to the station.

With its low power consumption, the station can be powered by a 12V battery or a solar panel. Hera is proposed in fixed or portable versions.



VESTA: Vehicles snapshot

The Vesta system allows taking a snapshot of a vehicle when this one is detected on lane. The Vesta system can be installed :

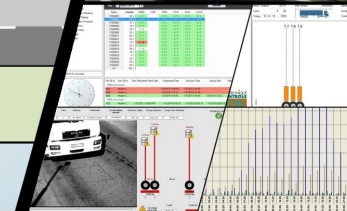
- In complement of the Hera station, for a snapshot of the vehicle in offence,
- On a toll lane, for a snapshot of every vehicle crossing the toll barrier.



The software: Configuration station, etc

ECM designs all the software adapted to its different products, the main software are :

- EICoM : allows configuring the Hera station and collecting the data (files or real time) manually.
- TALOS : allows gathering automatically all the statistical or individual files of the stations.
- TALOS II : allows displaying and exploiting the collected data by the Hera stations.
- SIREN II : allows managing the low-speed WIM system.



GAIA: overweight vehicle enforcement

The GAIA system regroups several skills of ECM, which are :

- HERA, high-speed WIM system,
 - VESTA, vehicle screening system,
 - PIREN, low speed and static weighing system.
- It allows the local authorities to punish all the overloaded vehicles. The vehicles are preselected by the Hera and Vesta systems. They are then directed to a low speed weighing area where they are weighed with high accuracy using the PIREN scale.

