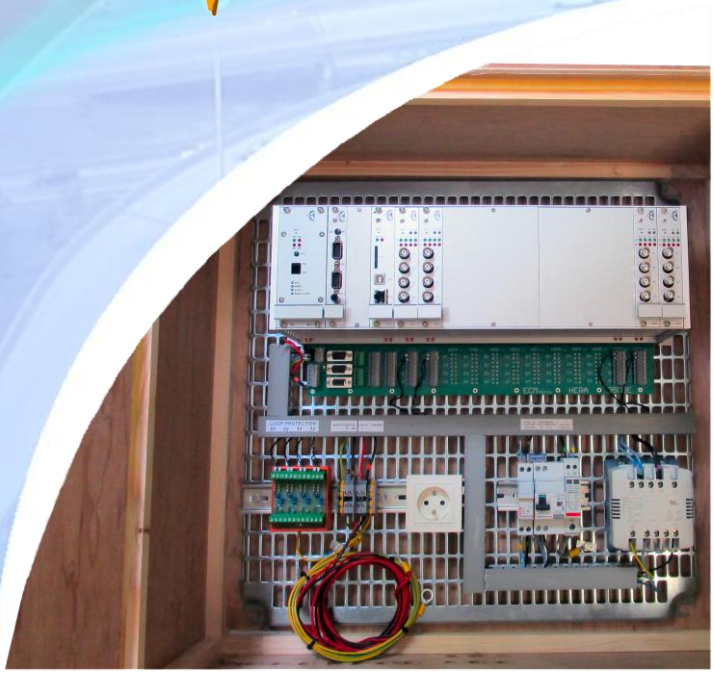
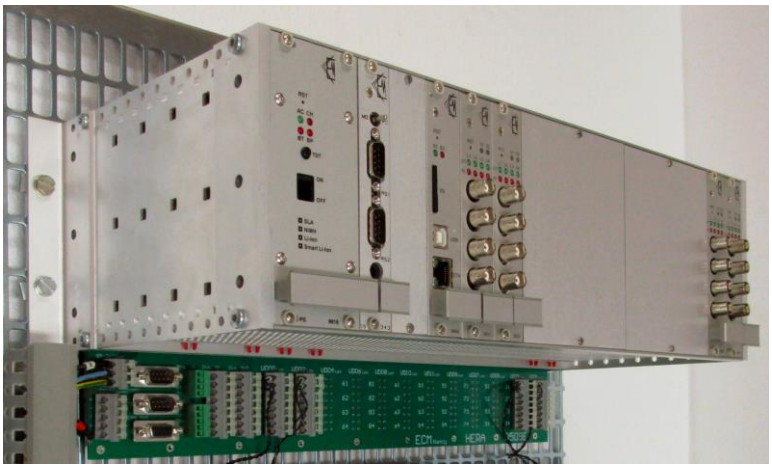
HERA

TRAFFIC ANALYSIS STATIONS



Based on state-of-the-art technology. **HERA** is the result of ECM's 25+ years of technical knowledge and experience in Weigh-in-Motion solutions.

- ✓ **HERA** is offered in 3 main versions :
  - **HERA C :** Counting,
  - **HERA A :** Automatic Classification,
  - **HERA W :** Weigh-In-Motion, classification and traffic counting.
- ✓ Available in permanent and portable versions.
- ✓ Statistical traffic data files.
- ✓ Individual vehicle data files.
- ✓ Traffic/WIM collection in up to 12 lanes.
- ✓ Great weighing accuracy (Class B of COST 323).
- ✓ Experienced auto calibration methodology.



Main features :

- ✓ Up to 4 piezoelectric sensors and 4 loops per detector board (per lane).
- ✓ Communication: Ethernet, RS232.
- ✓ TCP/IP communication protocol (XML format).
- ✓ SD card flash memory (up to 32 GB) - FTP access.
- ✓ Back panel CAN bus communication.
- ✓ Easy to access card/rack format.

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HERA
Traffic analysis stations

HERA design is based on proven concepts and 25 years of WIM experience :

- The architecture of HERA is based on new generation components providing high efficiency and high reliability with low power consumption.
- Each traffic lane is managed by an intelligent detector board (Cortex M3 architecture). Up to 4 loops and 4 piezoelectric sensors can be connected on each detector board and up to 12 detector boards can be installed per station.
- The central processing unit (CPU) board manages the traffic data coming from the detector boards via high speed CAN Bus.
- A Trigger board (TG) can be add to control up to 8 external devices (camera, red light, boom barrier,…).
- The traffic data (statistic files and individual vehicle data files) are stored in SD card flash memory (up to 32 GB) and are accessible through Ethernet or RS232 communication ports. RTC, GSM, fiber optic or Wi-Fi interfaces can be installed if specified.
- The standardized TCP/IP (XML format) protocol has been implemented for communicating with the station, including programming and data configuration. FTP protocol can be used for data files retrieval.

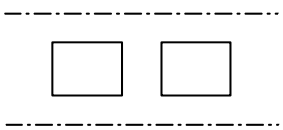
HERA is designed for flexibility and harsh environments :

- Power supply: permanent 110/220VAC or 12VDC with solar panel and battery.
- Housing: permanent cabinet or portable enclosure.
- Protection: IP66 for permanent cabinet.
- Operating temperature range: from – 40°C up to +85C (– 40°F up to +185°F).
- Autonomy: up to one week with a 90 Ah battery.

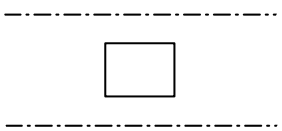
HERA architecture provides incredible flexibility for several applications :

HERA C : Traffic Counting

- Counting,
- Speed,
- Length,
- Occupancy rate,
- Classification (length),
- Time between vehicles,
- Distance between vehicles,
- Etc.



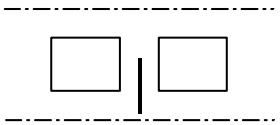
2 induction loops for traffic counting applications with speed measurement and length based classification



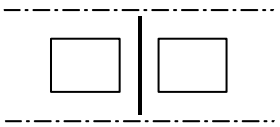
Single induction loop for traffic counting applications

HERA A : Automatic classification and traffic counting based on axle spacing, length, etc.

- Counting,
- Speed,
- Length,
- Occupancy rate,
- Time between vehicles,
- Distance between vehicles,
- **Classification (axle, length),**
- **Axle spacing,**
- **Etc.**



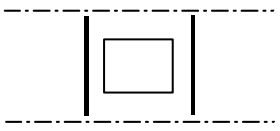
2 induction loops and 1 piezoelectric sensor (typically 2.2m - 6ft) for traffic counting, speed and axle classification



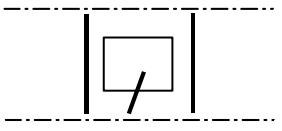
2 induction loops and 1 long piezoelectric sensor for shadow toll applications

HERA W : Weigh-in-Motion, automatic classification and traffic counting based on axle spacing, length, etc.

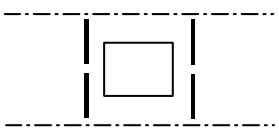
- Counting,
- Speed,
- Vehicle length,
- Occupation rate,
- Time between vehicles,
- Distance between vehicles,
- Classification (axle/weight),
- Axle spacing,
- **Axle weights,**
- **Separate left side/right side wheel weights,**
- **Gross vehicle weight,**
- **Dual wheel detection,**
- **Etc.**



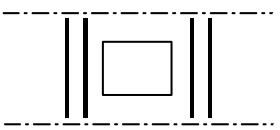
2 piezoelectric sensors, with or without 1 induction loop for standard weigh-in-motion



1 additional short sensor (slanted or straight) for dual wheel detection or on – scale



4 piezoelectric sensors and 1 induction loop for left side/right side wheel weighs



4 piezoelectric sensors and 1 induction loop for applications requiring more accurate truck weight data