

**SISTEMI PER LA GESTIONE DEL TRAFFICO - TRAFFIC CONTROL SYSTEM**



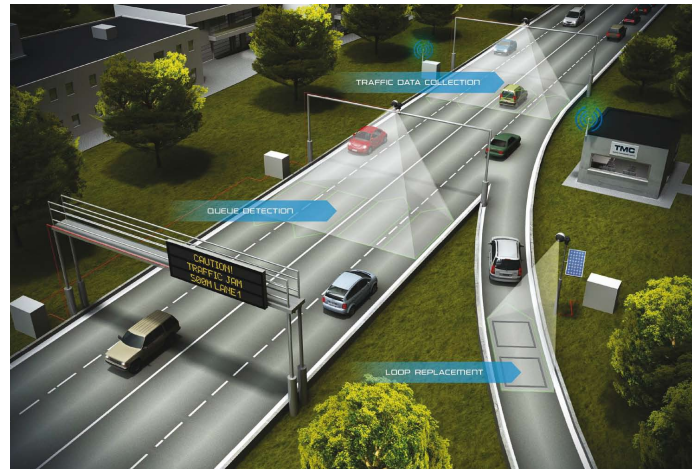
**DATA COLLECTOR VIRTUAL LOOP**

TrafiCam Collect-R is a cost-effective solution to **collect traffic data**, monitor traffic flow and emulate or simulate loops on highways and inter-urban roads. It can be used for temporary or permanent applications. Plus, its low power consumption is suitable for a stand-alone solar powered installation.

TrafiCam Collect-R **integrates both CMOS sensor and detector** in a compact, stylish housing.

The design of this sensor ensures fast and easy **above-ground installation** without the need for intrusive adjustments.

User-friendly configuration software guarantees quick configuration. TrafiCam Collect-R is based on **field-proven** video detection technology and is part of the La Semaforica product range.



*TrafiCam Collect-R is an above-ground sensor providing a wide range of traffic data on up to four lanes.*



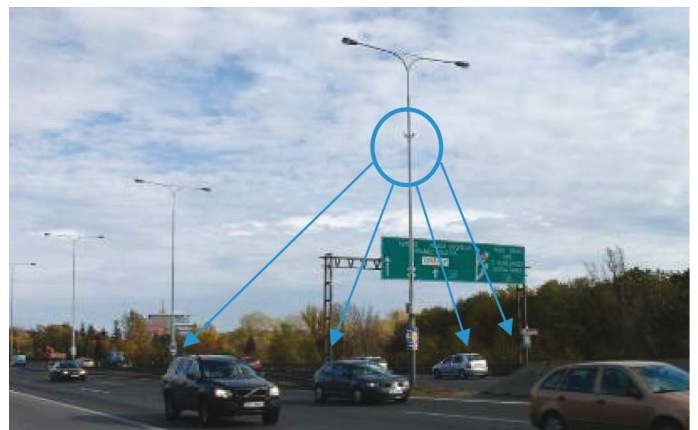
*TrafiCam Collect-R combines traffic flow monitoring, traffic data collection, loop emulation and simulation in one single sensor*

**KEY FUNCTIONALITIES**

- Data collection
- Flow monitoring
- Loop simulation/emulation

**KEY BENEFITS**

- All-in-one sensor (camera + detector)
- Above-ground sensor
- Multi-lane detection coverage
- Easy installation & quick configuration
- Overhead/ side-fired mounting
- Direct visual feedback
- Local/remote data retrieval
- Reliable detection 24/7
- 25 Years of experience in traffic video detection



## SISTEMI PER LA GESTIONE DEL TRAFFICO - TRAFFIC CONTROL SYSTEM

### TRAFFIC DATA COLLECTION

TrafiCam Collect-R provides all relevant traffic data such as **volume, speed, occupancy and classification** on multiple lanes, day and night and in all weather conditions.

Depending on sensor positioning (overhead/side-fired) TrafiCam Collect-R can cover **up to four lanes**. Data is provided for each lane and each vehicle class.

Integrated data is stored in the sensor and can easily be transferred via an open protocol SDK (La Semaforica Management System) or an off-line download tool. Downloading this data to a PC can be done locally or remotely. This transmission of data can be done at predefined times or on command of the operator.



*TrafiCam Collect-R installed on existing structures*

### FLOW MONITORING

TrafiCam Collect-R monitors traffic flow. Via the flow speed and the zone occupancy, the sensor automatically distinguishes between 5 levels of service: normal, dense, delayed, stop-and-go and congested.

Alarms can be generated on the outputs for each of these service levels, or can be transmitted to the Traffic Management System. Together with the traffic alarm an image can be sent for visual verification.

TrafiCam Collect-R can also be used to trigger third party systems such as flashing lights, barriers, CCD cameras and VMS panels when traffic flow exceeds a certain predefined level.

### LOOP SIMULATION & LOOP EMULATION

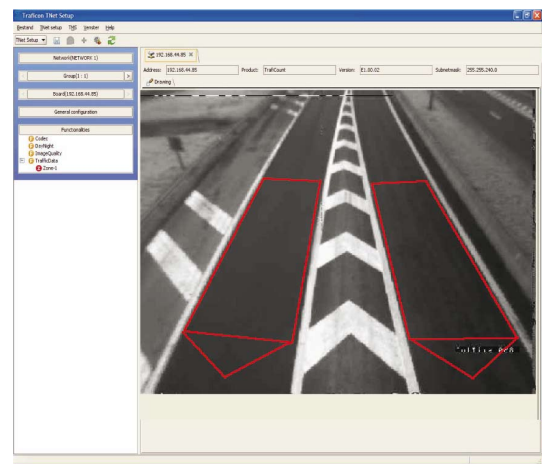
TrafiCam Collect-R is also used to **simulate or emulate single or double loops**. Physical inductive loops are simply replaced by 'virtual loops'. Vehicles are detected by the sensor when crossing these virtual loops. The outputs of the TrafiCam Collect-R can be connected to a controller board to ensure predefined actions, similar to the single and/or double loops.

### QUICK & EASY CONFIGURATION

TrafiCam Collect-R is an out-of-the-box product: install it, configure it and start analyzing traffic.

Configuration of the sensor happens via a portable computer or via a modem and a remote PC. It is quick and easy ('**click and drag**') and can be done on-site or remotely.

An **image** allows accurate positioning of the data zones ('virtual loops') as well as visual verification of the system outputs communicating to the traffic counter/controller.



*Quick and easy configuration via user-friendly software.*

### RELIABLE DETECTION 24/7

TrafiCam Collect-R uses a state-of-the-art CMOS camera and has an intelligent day and night detection algorithm on board for accurate and relevant data collection around the clock. **Advanced filters** suppress unwanted detection that may be caused by changing light conditions or the effects of extreme weather conditions.

### HARDWARE

#### General Hardware description:

Camera and detector board are integrated in a compact and esthetical round housing.

#### Material:

- Housing:
  - Front Shell (detection part): painted semi sphere of Polycarbonate
  - Mid Section: Central piece of Fibre reinforced Polyamide
  - Back Shell (connection part): painted semisphere of Polycarbonate

#### Mounting bracket:

- Mounting device: 18cm long U-profile of Fibre reinforced Polyamide

## SISTEMI PER LA GESTIONE DEL TRAFFICO - TRAFFIC CONTROL SYSTEM

- Clamps for TrafiCam Collect-R: 2 tube clamps of Fiber Reinforced Polyamide
- Clamps for U profile: 2 tube clamps of Fiber Reinforced Polyamide
- Connection TrafiCam Collect-R / Mounting device: 25cm long Aluminium tube with diameter 13mm

**Weight:** Approximately 600g (Sensor: approx 300g / Mounting bracket: approx 300gr)

**Dimensions,** inclusive mounting bracket (Height x Width x Depth):

- Mounted vertically: approx. 45cm x 16cm x 10cm
- Mounted horizontally: approx. 41cm x 18cm x 10cm

**Diameter housing:** approx. 10cm

**Camera details:**

- Camera type:
  - Black and white CMOS Camera
  - Sensor size = 1/3"
  - Camera resolution: 640 x 480 pixels
- Lens type:
  - Wide angle lens
  - Focal distance = 3,0 mm
  - Viewing angles:
    - Horizontal: 95°
    - Vertical: 85°
    - Corner to corner: 103°

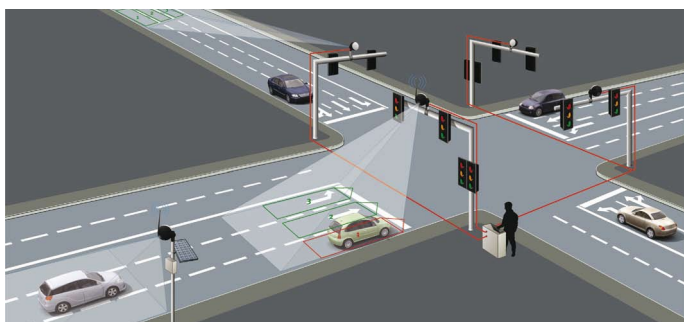
**Power Requirements:**

Input power: 12-26V AC/DC

- Maximum power consumption: 1,2 W
- 85mA @ 12V DC – 50mA @ 24V DC

**Communication:**

- RS485 connection for configuration and output of collected data
- Optional: converter RS485 / USB



AUTHORIZED DISTRIBUTOR



**Outputs:** 4 Opto-isolated MOSFET outputs

- Pmax = 300mW
- Imax = 50mA
- Umax = 48V DC

### REGULATORY ISSUES

**Shock and Vibration:** Compliant with

- NEMA II specifications

**EMC / EMI:** Compliant with

- CE directive 85/336/EEC ; product standard EN55022 Class A
- FCC part 15 Class A

**Water resistance:** Compliant with

- Housing sensor: IP67
- Other materials: Waterproof (UV-resistance)

**Temperature and humidity:**

- Temperature range: -34C to +80C @ 95% non-condensing

### SOFTWARE

**Configuration and Data download via software on portable PC**

**Detection zones:**

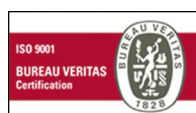
- Up to 4 data zones per TrafiCam Collect-R
- Simulate virtual loops and emulate virtual loops (loop emulator interface required)
- Generate Traffic Flow levels

**Output assignment**

- 4 outputs per TrafiCam Collect-R

### CONNECTIONS TRAFICAM COLLECT-R

- Max 9 wires + shielding (2 x power, 2 x communication, 5 x outputs)
- Minimum wire diameter: 0,3 mm
- Maximum wire diameter: 2,0 mm
- Minimum cable diameter: 5,0 mm
- Maximum cable diameter: 9,2 mm (determined by available free space to pull the cable into the TrafiCam Collect-R connection part)
- Maximum cable length: 300m (highly depends on cable quality and presence of interference)



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Company with ISO 9001:2008 certificate for projects, installation and maintenance of luminous signs for traffic safety. Clearance SOA cat. OS09 class IV.