

TrafiCam X-STREAM



TrafiCam x-stream is an integrated camera and detector offering vehicle presence detection and traffic data collection with video compression up to H.264.

Vehicle presence detection

TrafiCam x-stream offers **detection and monitoring** of moving and stationary vehicles at signalized intersections. Via detection outputs or via IP protocol, vehicle presence information is transmitted to the traffic controller so that signal timing can be adjusted dynamically. This results in **reduced waiting time**, improved traffic flow and less pollution.

Traffic data collection

TrafiCam x-stream is also a cost effective solution for **traffic data collection, queue detection and traffic flow monitoring** on highways and inter-urban roads. It can be used for temporary or permanent applications.



KEY FUNCTIONALITIES

- » VEHICLE PRESENCE DETECTION AT INTERSECTIONS
- » STOP BAR AND ADVANCE DETECTION
- » DATA COLLECTION
- » FLOW MONITORING
- » QUEUE DETECTION

KEY BENEFITS

- » ALL-IN-ONE SENSOR (CAMERA + DETECTOR)
- » ABOVE-GROUND INSTALLATION
- » UP TO H.264 IMAGE COMPRESSION
- » IP-ADDRESSABILITY
- » REAL-TIME VERIFICATION AND MONITORING
- » EASY INSTALLATION AND QUICK CONFIGURATION
- » LOW POWER CONSUMPTION
- » UP TO 16 PRESENCE AND 4 DATA DETECTION ZONES
- » RELIABLE DETECTION 24/7
- » FIELD-PROVEN TRAFICON DETECTION ALGORITHMS
- » AESTHETICAL DESIGN, USING DURABLE MATERIALS

TrafiCam x-stream is an **IP-addressable** video detection sensor. **Streaming video** at full frame rate is available for system and traffic monitoring. You can configure, view and control the system both on-site and remotely.

The system **setup is quick-and-easy**: just use the set-up software to connect to all TrafiCam x-stream devices on the network and position your virtual detection zones fast and accurately. Your system is operational in a few minutes' time.

TrafiCam x-stream is a **cost-effective and reliable** solution that offers all benefits of video detection. This is an above-ground system without expensive installation and maintenance costs that are typical for traditional inductive loops.



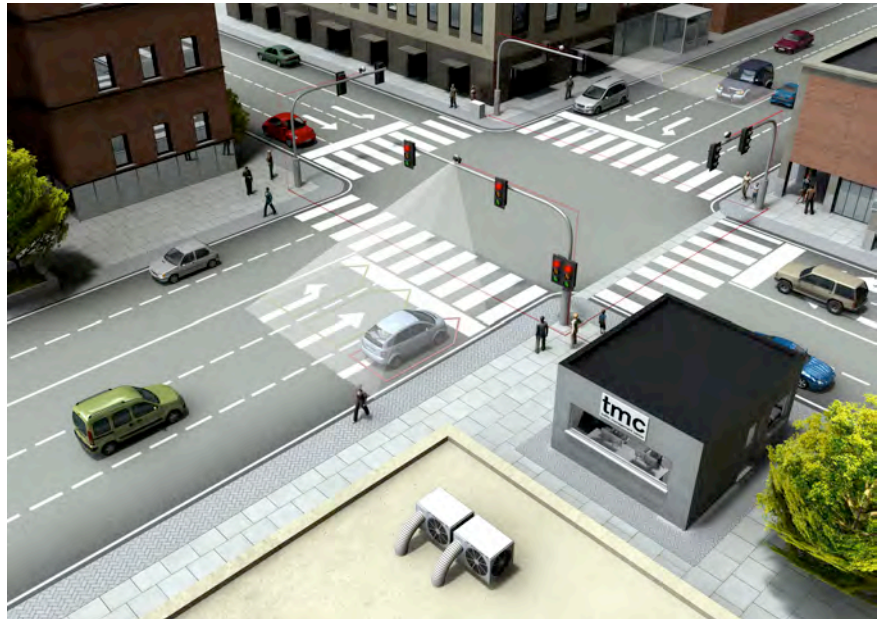
TrafiCam C-Walk PC software allows quick and easy configuration.

Vehicle presence detection

At signalized intersections

Main goals:

- Minimize vehicle idling time
- Create smoother flowing traffic in cities
- Reduce vehicle emissions



Verification and presentation of detection zones can be done from the traffic management center.

GREEN ON DEMAND

A typical TrafiCam x-stream application is direct replacement of inductive loops for **stop bar detection** at signalized intersections. A common application is **green on demand**. If there is no vehicle present, there will be no green for that particular phase.

Both moving and stationary vehicles (including bicycles and motorcycles) can be detected, from an overhead or a side-fire position.

TrafiCam x-stream is able to handle **up to 16 virtual detection zones**.

LENGTHENING GREEN TIMES

TrafiCam x-stream can also be used for **advance detection**: detection of traffic approaching an intersection. It can replace inductive loops or radar.

A common application is **lengthening the green time**. If there is a vehicle in the dilemma zone - the zone where the driver can hesitate between stopping or driving in case the traffic light turns to amber - the green time can be extended until the vehicle has left the area.

TrafiCam x-stream In the field



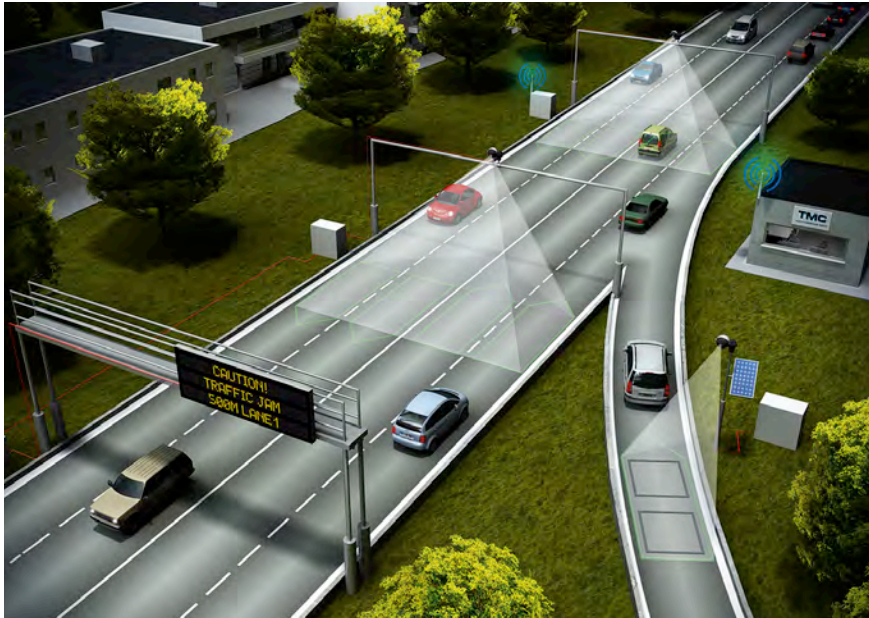
Mumbai, India



Bergisch Gladbach, Germany

Data collection

On highways and inter-urban roads



Main goals:

- Traffic data collection
- Traffic flow monitoring
- Queue detection

TrafiCam x-stream is an above-ground sensor providing a wide range of traffic data on up to 4 lanes.

TRAFFIC DATA COLLECTION

TrafiCam x-stream provides traffic data such as **volume**, **speed**, **occupancy**, **gap time**, **headway** and **classification** on multiple lanes, day and night and in all weather conditions.

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

Integrated data is stored in the sensor and can easily be transferred via an open protocol SDK or via the Traffic Management System or via an off-line download tool. Downloading this data to a PC can be done locally or remotely **over a TCP/IP connection**. This transmission of data can be done at predefined times or on command of the operator.

FLOW MONITORING / QUEUE DETECTION

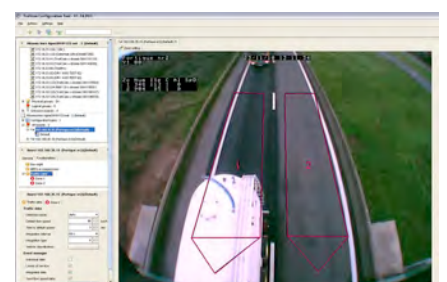
TrafiCam x-stream monitors the **traffic flow in real-time**. Via the flow speed and the zone occupancy, the sensor automatically distinguishes between **5 levels of service**: normal, dense, delayed, congested and stop-and-go traffic.

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

TrafiCam x-stream In the field



Chengdu, China



Calais, France

FAST & EASY SYSTEM SETUP

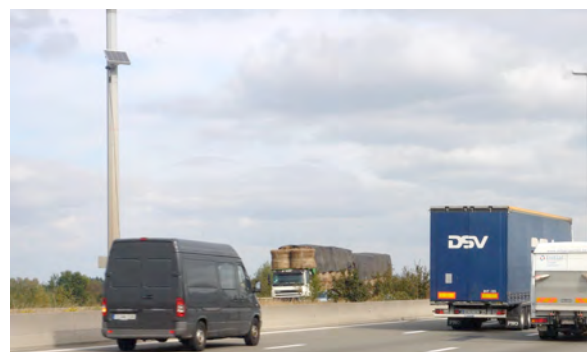
TrafiCam x-stream is easy to install. It can simply be mounted on existing infrastructure. A flexible bracket allows horizontal and vertical mounting.

Configuration of the sensor is done on site or remotely via portable PC with pre-installed **user-friendly** software.

Using camera images (JPEG snapshot), virtual detection zones can be positioned accurately. Verification and viewing of the detection is possible via **streaming video**.

WEB INTERFACE

A web interface allows TrafiCam x-stream users to **manage** their video sources **online**. Video streams in multiple video stream formats can be presented without the need to install any local software. TrafiCam x-stream supports **dual video streams**, which allows you to choose between low or high video quality, depending on the available bandwidth.



TrafiCam x-stream can be powered by solar panels and used as a stand-alone queue detection system on the highway.

RELIABLE DETECTION 24/7

Based on field-proven Traficon video detection technology, detection performance is highly reliable for any road surface, day and night. Advanced filters in combination with **smart detection algorithms** allow TrafiCam x-stream to be used for vehicle detection at night (detection on headlights or taillights when no/poor public illumination) and to suppress unwanted detections that can be caused by e.g. vehicle shadows or headlight reflections.

PN 10-7000: TrafiCam x-stream wide angle BPL
 PN 10-7001: TrafiCam x-stream narrow angle BPL

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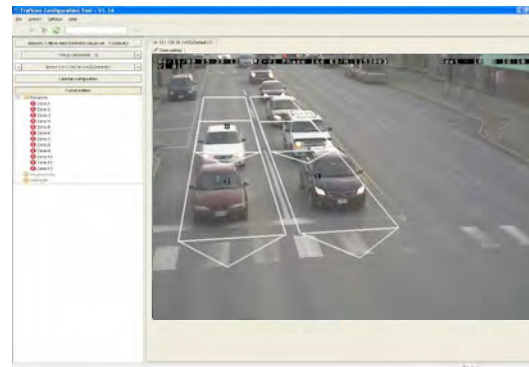
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TrafiCam x-stream configuration PC software



TrafiCam x-stream web interface



Installing the sensor is quick and easy and can be done on existing structures.

A fail-safe mode is integrated into the TrafiCam x-stream firmware just in case accurate detection is not possible due to power failure, dense fog or when the lens is covered by snow or dirt.