



Located in Riga (Latvia), ITC Traffic is a manufacturer and integrator of automated photo and video traffic control equipment. Company's speciality are complex solutions that make use of modern high-tech hardware and latest software.

Solutions, offered by the company, are based around a single core, which consists of ITC-EYE™ software and hardware complex and a unique licence plate recognition algorithm.

ITC Traffic offers stationary and mobile traffic control systems. Both are capable of controlling traffic in the streets or on motorways, as well as recording parking violations. Mobile systems may also serve as highly efficient tools for controlling paid parking areas.

Photo and video capture systems, manufactured by ITC, provide high quality of licence plate recognition. Recognition algorithm is able to identify 395 types of licence plates from 60 countries.





Company's principal product is ITC-EYE™ - a stationary multi-task automated vehicle identification, recording and control system.



ITC-EYE Mobile™ system is developed for purposes of recording parking violations, controlling paid parking areas as well as for mobile search of vehicles.



ITC-EYE Pocket™ hand-portable system is an efficient tool for controlling paid parking areas, recording parking violations and other offences, where stationary vehicles are involved.





Main feature of ITC-EYE™ is its monoblock design, i.e. a video module (camera) and a computer are integrated into a single body and protected by a single cover.



#### Other features of ITC-EYE™:

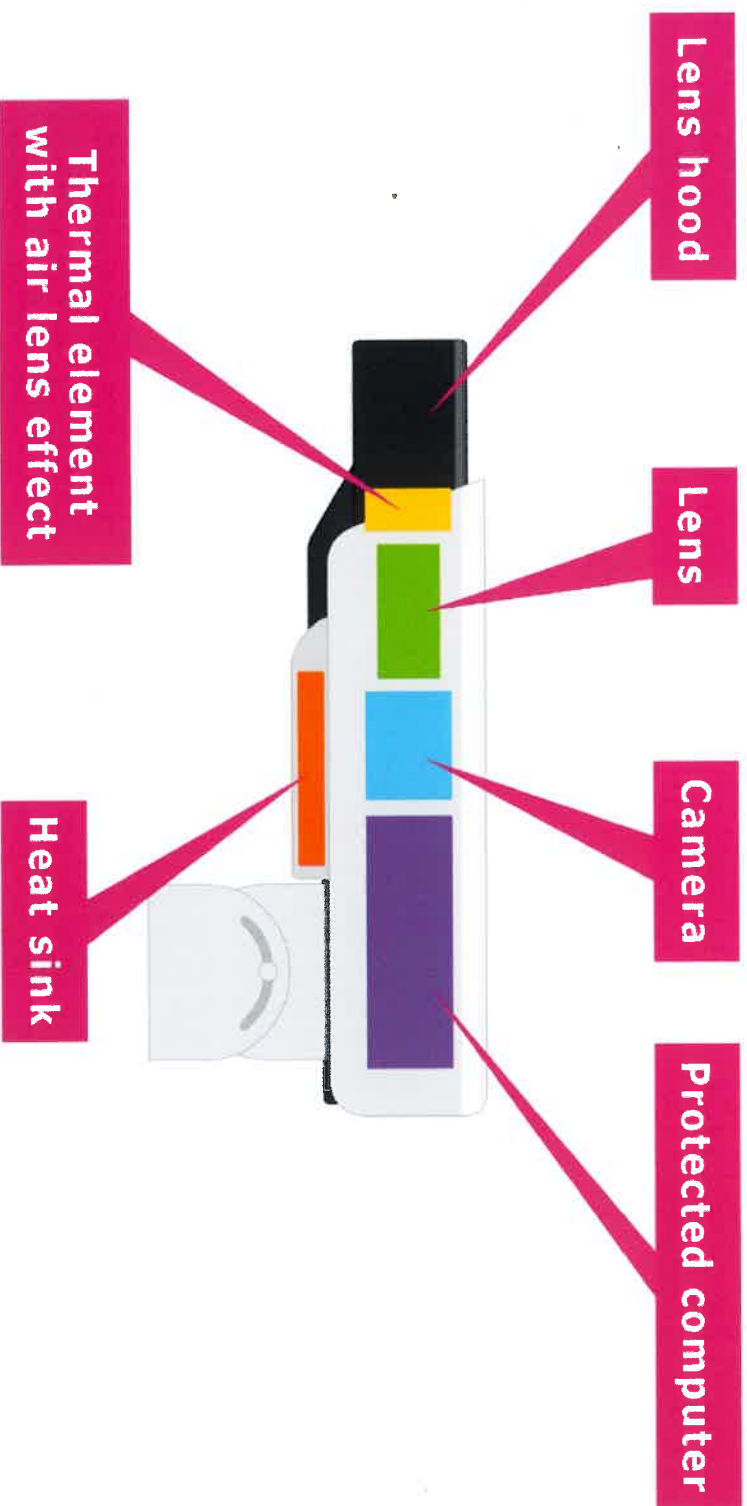
- speed is measured based on video footage (top speed – 255 km/h, discrepancy  $\pm 1$  km/h at speed below 100 km/h,  $\pm 2$  km/h at speed above 100 km/h);
- speed is measured in an interval between two control points (average speed);
- every ITC-EYE™ unit has a built in GPS receiver.

#### Basic features of ITC-EYE™:

- 98% license plate recognition rate by day;
- recognition of 395 license plate types from 60 countries;
- high rate of dirty or damaged license plate recognition;
- continuous traffic control at any time of the day in all climate conditions;
- operating unit cannot be detected by radar detectors;
- ability to record traffic violations other than speeding;
- automated database search.



## Elements and configuration of an ITC-EYE™ monoblock camera

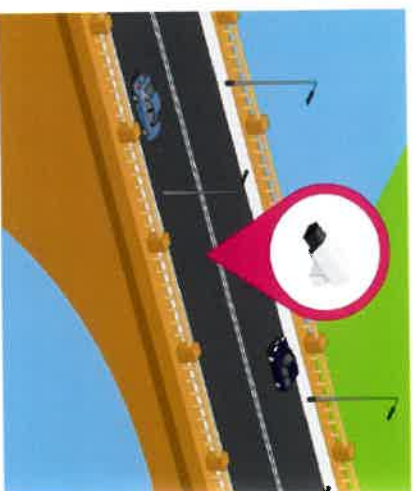
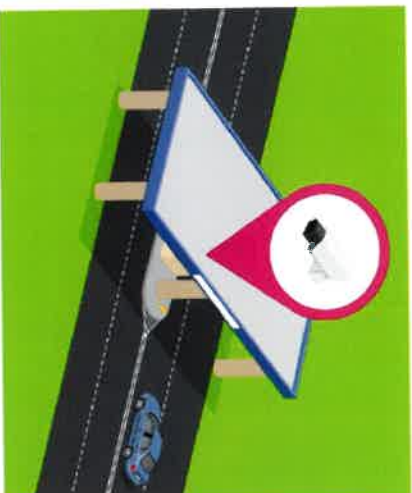
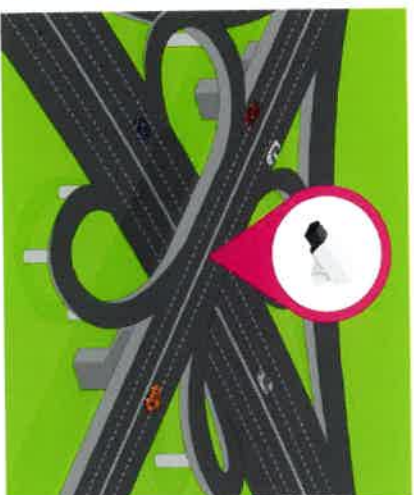
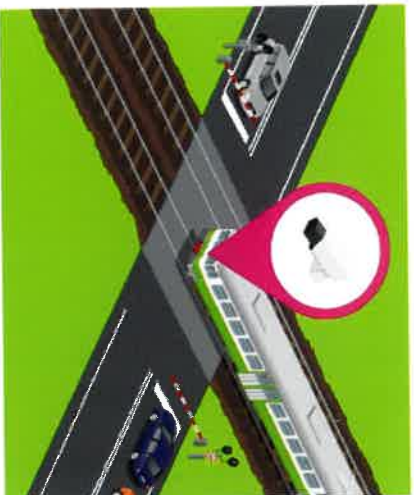


Compact monoblock body protects computer and the camera from the influences of environment, such as rain, snow, fog, dust and wind.  
Absence of cable connections decreases influence of vibration and electromagnetic interference.

## Possible applications of an ITC-EYE™ monoblock camera

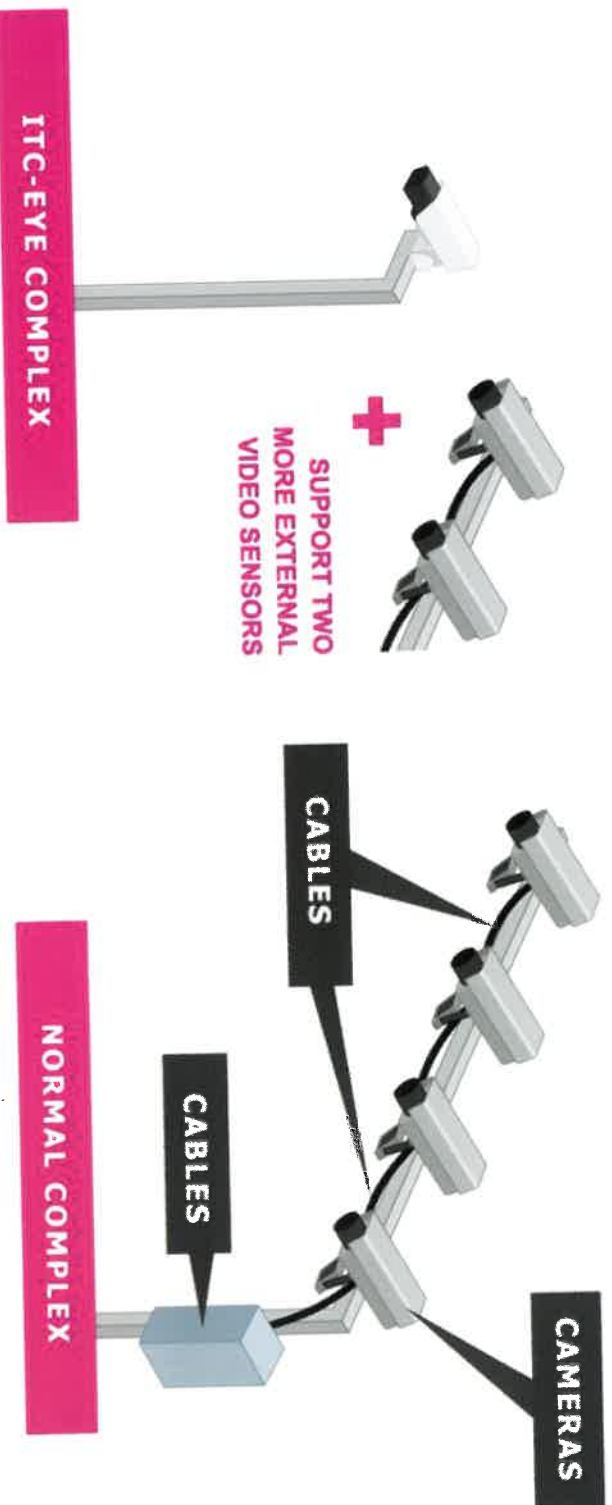
ITC-EYE™ monoblock camera is intended to control traffic in the following key points of traffic system:

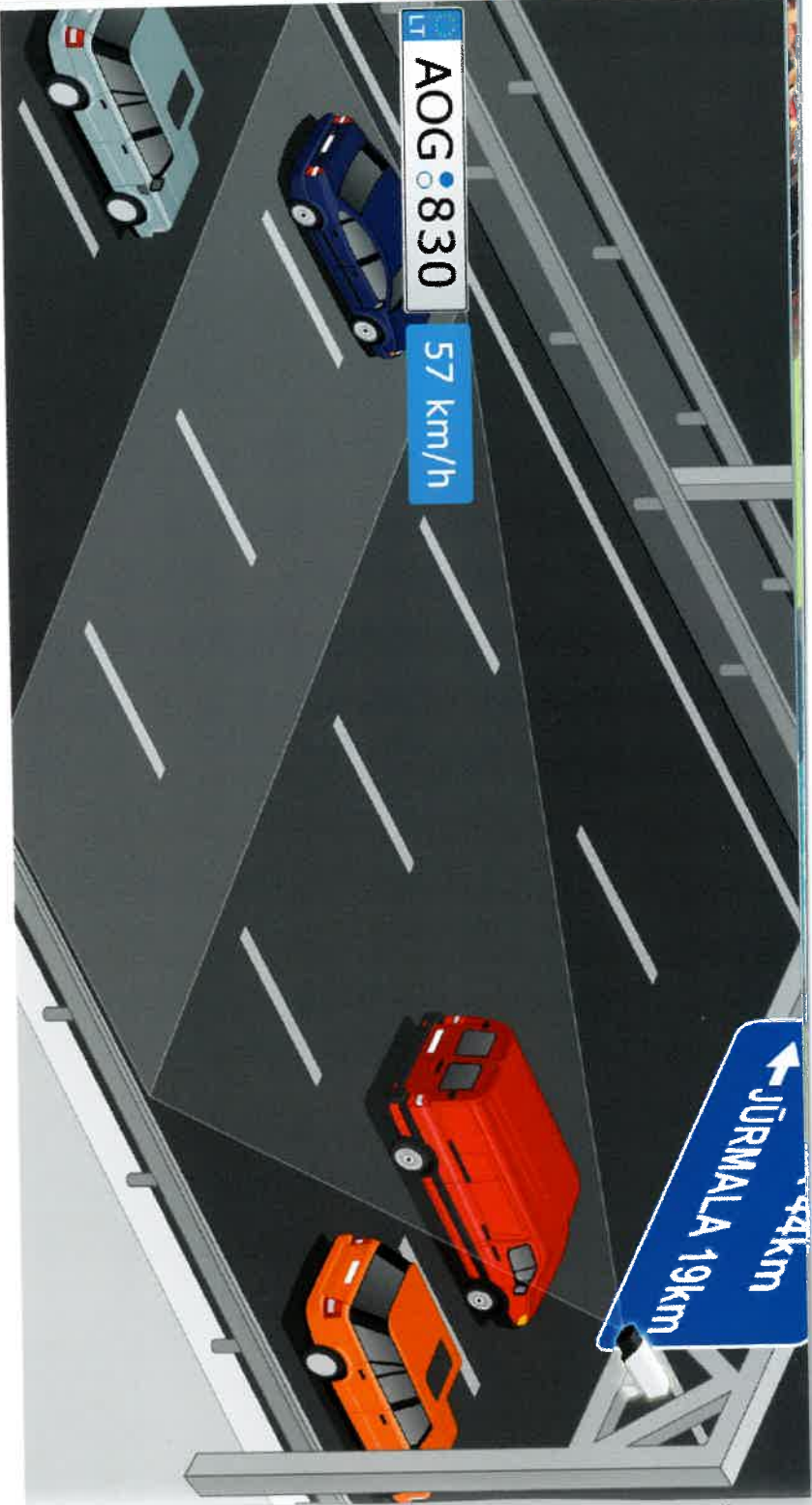
- City exits and entrances;
- Railroad crossings;
- Motorways;
- Crossings;
- Junctions;
- Bridges;
- Tunnels.



## Advantages of an ITC-EYE™ monoblock camera in comparison to a usual system

- Discrepancy  $\pm 1$  km/h at speed below 100 km/h,  $\pm 2$  km/h at speed above 100 km/h;
- Possibility to install additional video units (up to 2 additional cameras);
- Compact and easy to install;
- Possibility to install a unit onto existing structures (signposts, lampposts etc.);
- Lower deployment/tuning costs;
- Lower maintenance costs;
- Less external influence (incl. electromagnetic interference);
- Units are less noticeable, thus control is more efficient.

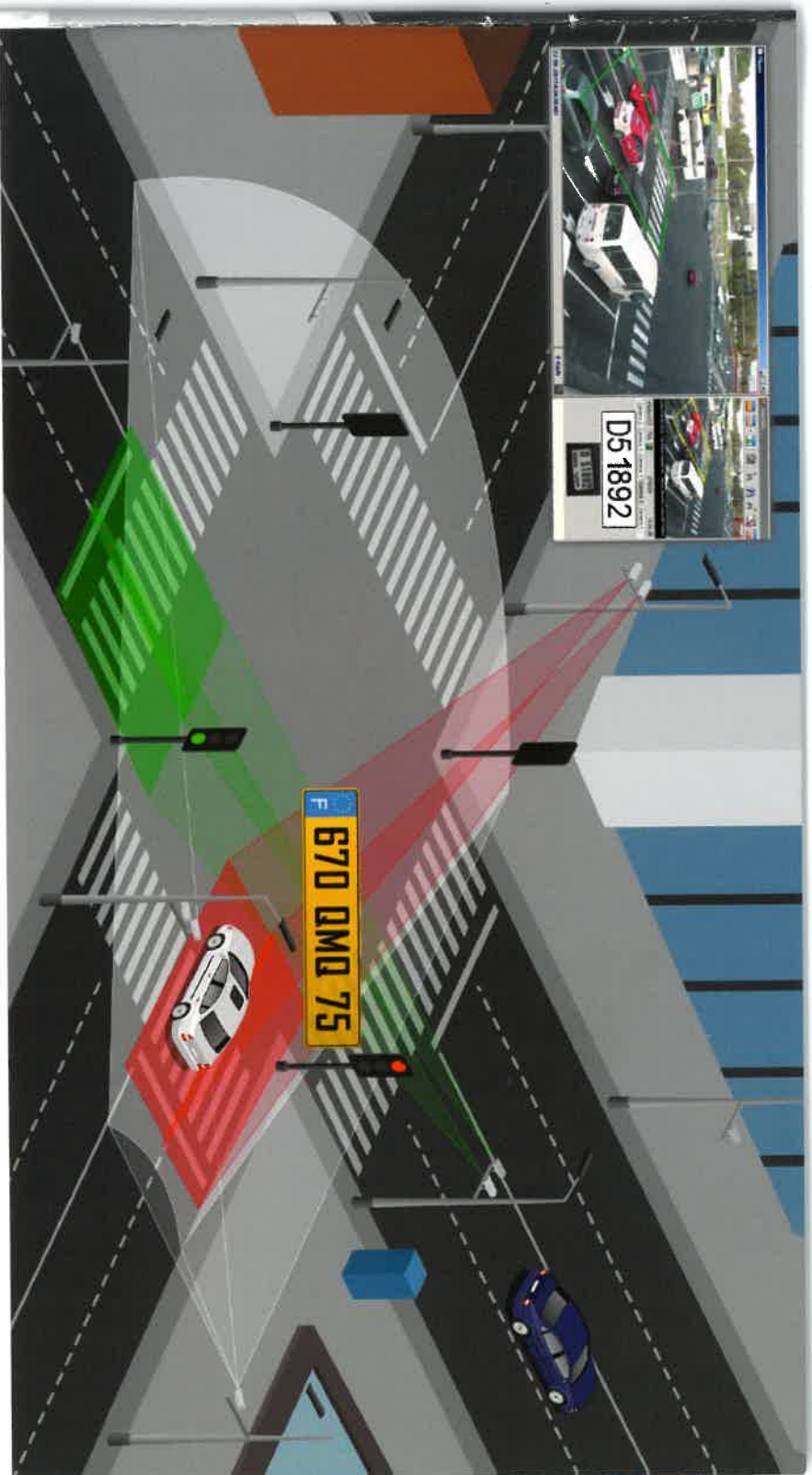




Stationary ITC-EYE<sup>™</sup> unit measures vehicle speed without the radar, using video footage, 24/7 in any weather. All identified licence plates are checked through a stolen vehicle database.

A single ITC-EYE<sup>™</sup> monoblock camera controls up to 4 traffic lanes even if it is placed at an acute angle towards the moving traffic.

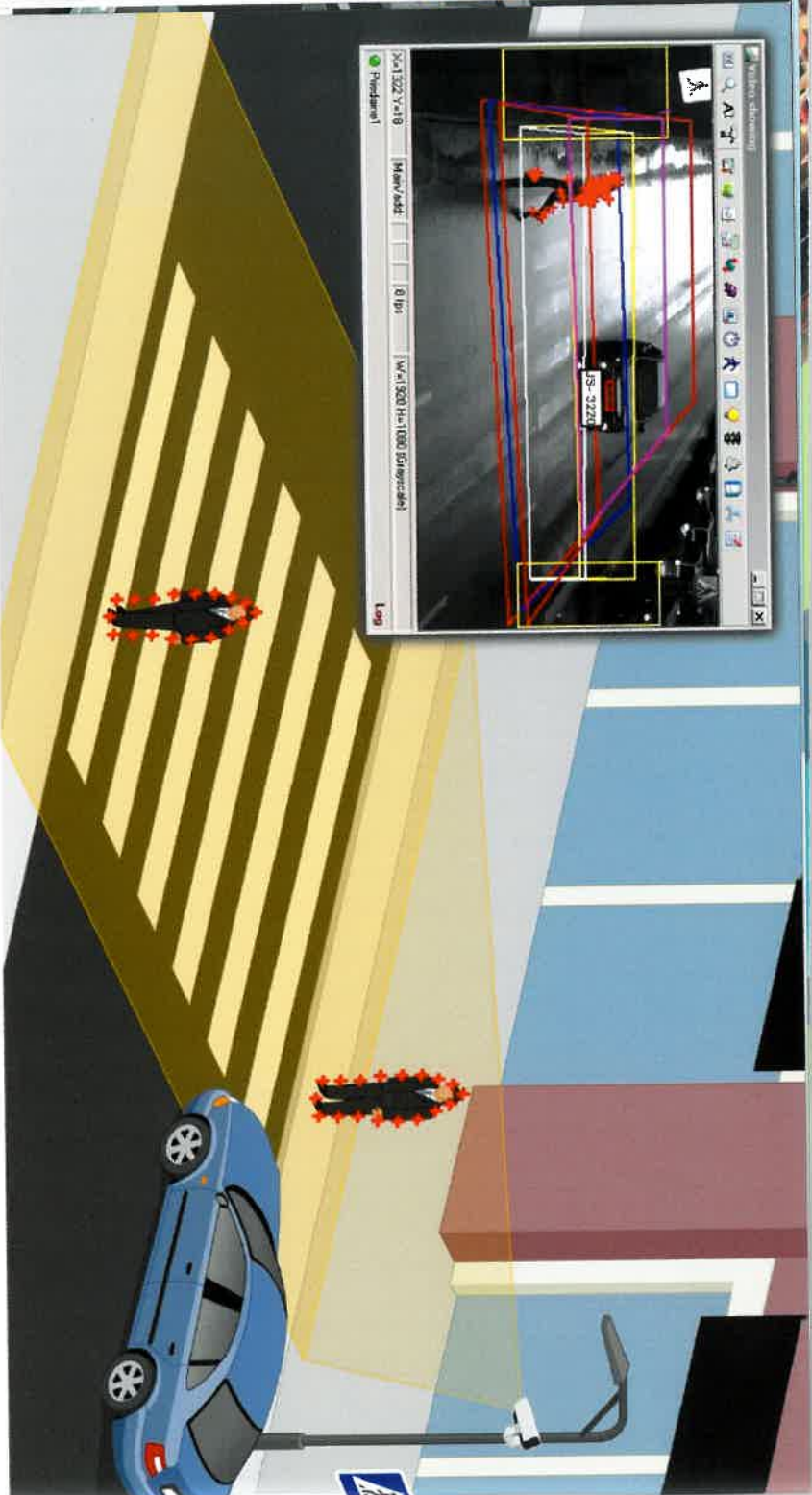




**ITC-EYE™** automatically detects and registers all vehicles, which cross stop lines as well as those, which cross the junction at the red light.

**ITC-EYE™** system is capable of controlling key elements of traffic network remotely, thus reducing number of accidents and traffic violations.





**ITC-EYE™ automatically detects presence of pedestrians on a pedestrian crossing.**

**Stationary ITC-EYE™ system uses video analysis to identify pedestrians, approaching the edge of the carriageway, and monitors their movement for the entire duration of their crossing. Systems flawlessly detects situations, where the driver failed to yield to pedestrian and distinguishes them from situations, where pedestrians were reckless about their safety.**



ITC-EYE™ automatically detects a windscreen area of a vehicle.

A detected windscreen area may be greyed out. This insures confidentiality of an image, printed on a template of a traffic violation protocol. Alternatively, ITC-EYE™ may highlight windscreen area, which may be necessary for e.g. police investigation purposes.



ITC-EYE Mobile™ system is unique in its abilities to perform detection and real-time data transfer and to operate efficiently at night. Its design allows installing the system into any car or onto any motorcycle or scooter.



System is attached to a dashboard of a car and can be either plugged into an internal power source, or be powered by an additional battery.

At the beginning of a patrol, operator adjusts video unit, so that both cameras capture the roadside. It takes about 5 minutes to install the system into a patrol vehicle and prepare it for work.

ITC-EYE Mobile™ system can be used for patrolling city streets, as well as for monitoring paid parking areas, i.e. accounting free spaces and detecting vehicles that have exceeded paid-for time limit.

A patrol, equipped with ITC-EYE Mobile™ is able to monitor large areas, which makes the ITC-EYE Mobile™ system exceptionally cost efficient.

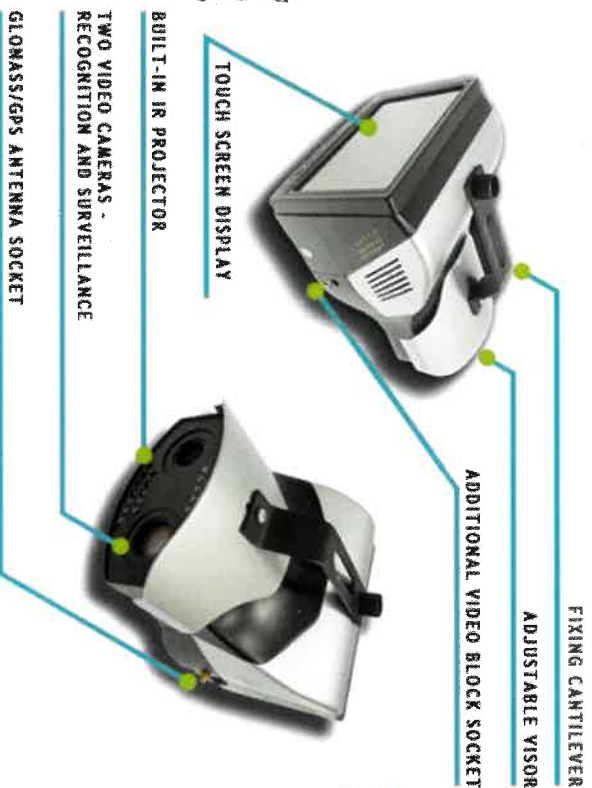
Police vehicles, with an ITC-EYE Mobile™ on a dashboard, may patrol the streets, simultaneously running the checks of all vehicles in wanted vehicle databases.



**ITC-EYE Mobile™** system has several layout options. Different layouts allow choosing a model, best suited for particular monitoring tasks.

System was developed with limited space of car's interior in mind; it is resistant to vibration, temperature changes and humidity.

#### EXTERNAL AND INTERNAL DESIGN MONOBLOCK ITC EYE MOBILE



#### STRADDLING ITC EYE MOBILE EXTERNAL AND INTERNAL DESIGN



Body has a modern and ergonomic design. If necessary, system can be supplemented by an additional video unit.

All components of the system are durable and were designed to withstand extensive daily use.



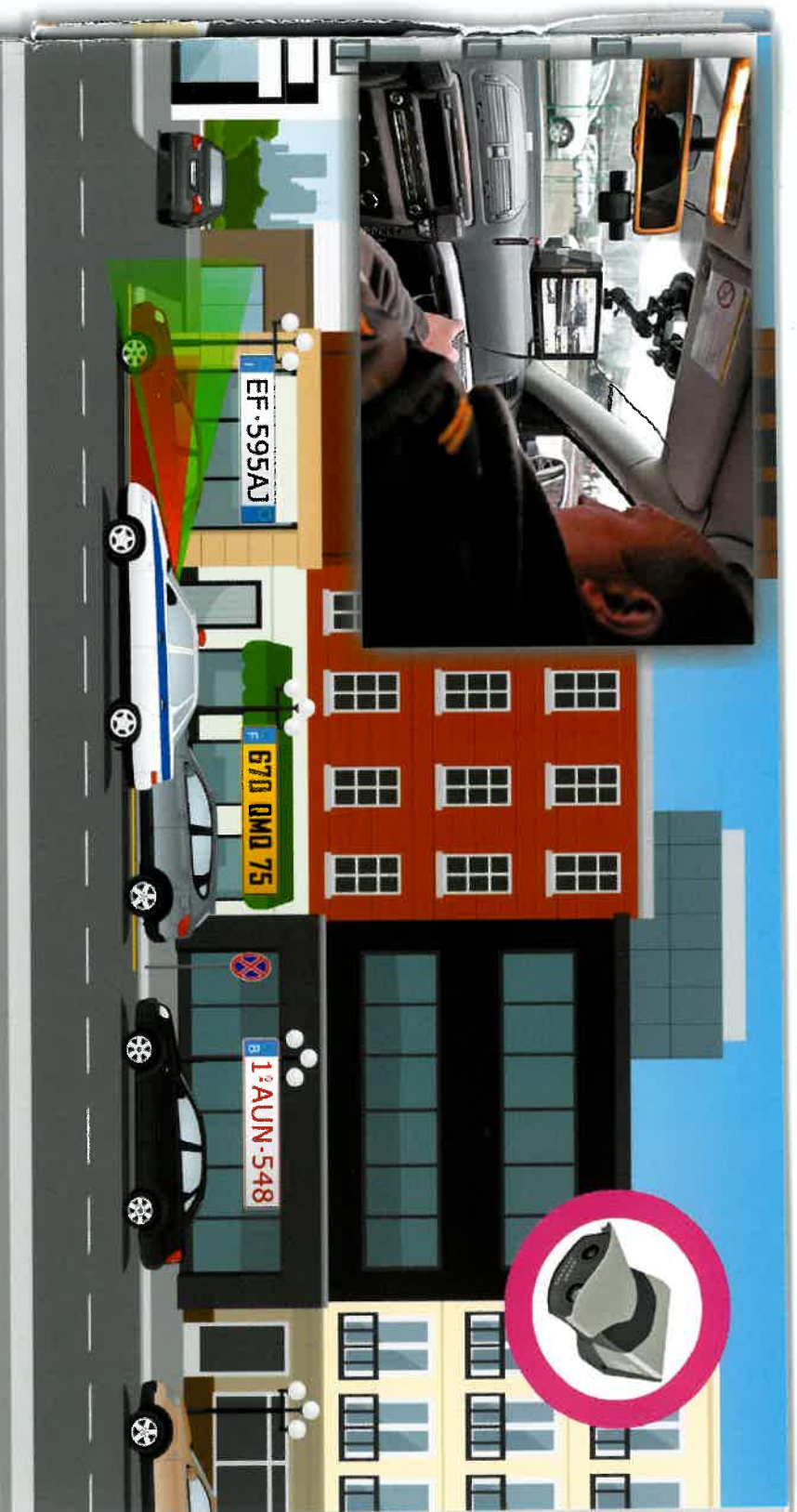
Before departing on a patrol, operator enters information, about the zones, where parking and/or waiting is not allowed, into a computer of an ITC-EYE Mobile™. Coordinates of those zones are saved by the system.

Position of a patrol vehicle is estimated by means of a GPS receiver. Two positioning systems are used simultaneously in order to estimate position of a patrol vehicle relative to pre-recorded control zones with best possible accuracy.



After the route with pre-set control zones has been plotted on one device, it can be copied onto other devices. This feature allows assigning other patrol vehicles to new routes.





Apart from recording traffic violations, system automatically checks all recognised licence plates in wanted vehicle databases. Mobile search with ITC-EYE Mobile™ is an efficient method of checking vehicles, missed by stationary cameras.

ITC-EYE Mobile™ system may be installed into public transport vehicles, as well as on patrol scooters. This is a very efficient low cost solution.





ITC-EYE Mobile™ may operate in registry mode – it automatically collects date, necessary for accounting free parking spaces on parking lots.

On the other hand, in detection mode the system searches for vehicles with unpaid parking fee or with exceeded parking time limit. Owners of such vehicles receive a ticket and must pay a prescribed fine.



**Advantages of using an ITC-EYE Mobile™ on a scooter:**

- better maneuverability in a congested traffic;
- possibility to patrol narrow streets and courtyards, inaccessible to patrol cars;
- minimum environmental impact;
- lower fuel consumption;
- scooter pays off much faster than a car.





Hand portable ITC-EYE Pocket™ system consists of a photo capture unit (a tablet with pre-installed software) and a remote server with recognition module for processing data.



Hand portable ITC-EYE Pocket™ system is intended for control of paid parking areas, recording violations of stopping and waiting rules, as well as recording other traffic violations, involving stationary vehicles.

ITC-EYE Pocket™ uses the same recognition algorithm as ITC EYE Mobile™ and stationary ITC-EYE™.

Hand portable ITC-EYE Pocket™ system automatically captures an image, recognizes a license plate number, records date, time and place and delivers this set of data to processing center via wireless channels. System can operate in two modes:

- Manual (Patrol officer selects necessary options from the menu)
- Automatic (Patrol officer only chooses a photo capture angle).





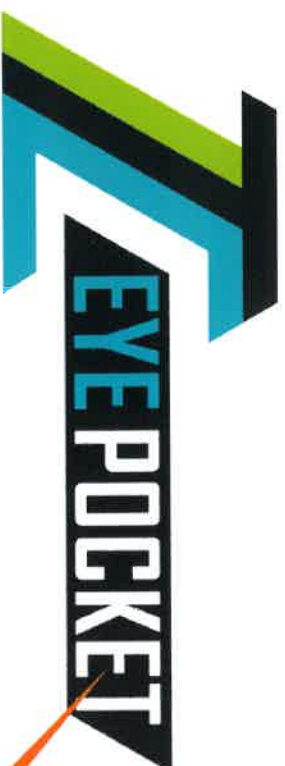
## Elements of an ITC-EYE Pocket™ protected tablet (photo capture unit)

**IP67 dust and moisture protection**

**Built-in flashlight**

**Touchscreen panel**

**Camera**



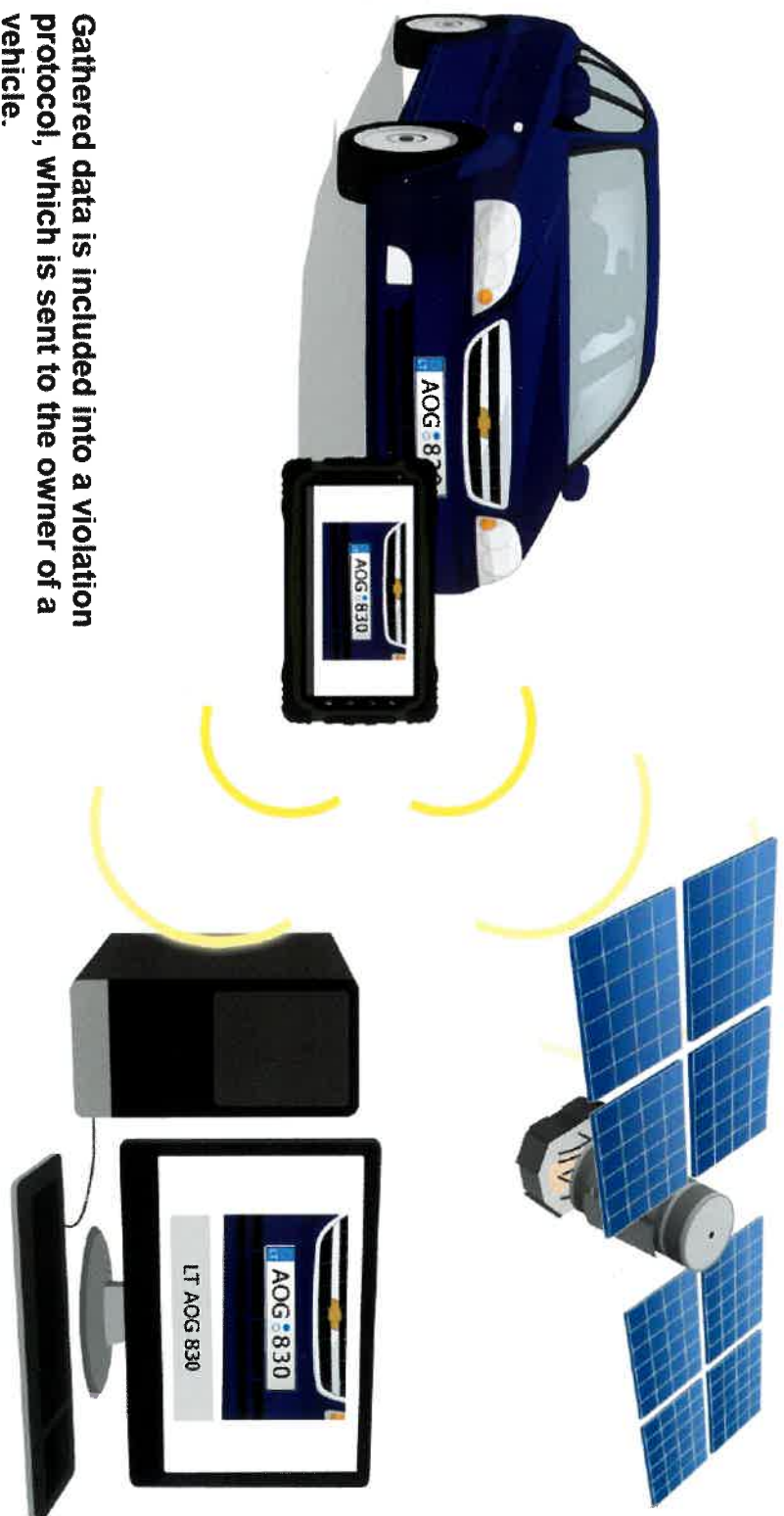
**GPS Receiver**

**Protected software**

Patrol officer is equipped with an ITC-EYE Pocket™ mobile device (photo capture unit) – a protected tablet with pre-installed software. Data processing server receives information from mobile devices and identifies license plate numbers.



Patrol officer follows an assigned route and takes photographs of parked vehicles and their license plates. Patrol officer, equipped with an ITC-EYE Pocket™ can inspect paid parking areas and detect vehicles with unpaid parking fee, or exceeded paid parking time limit. If necessary, patrol officer may send a request to tow an offending vehicle.



Gathered data is included into a violation protocol, which is sent to the owner of a vehicle.

Each violation record contains the following data:

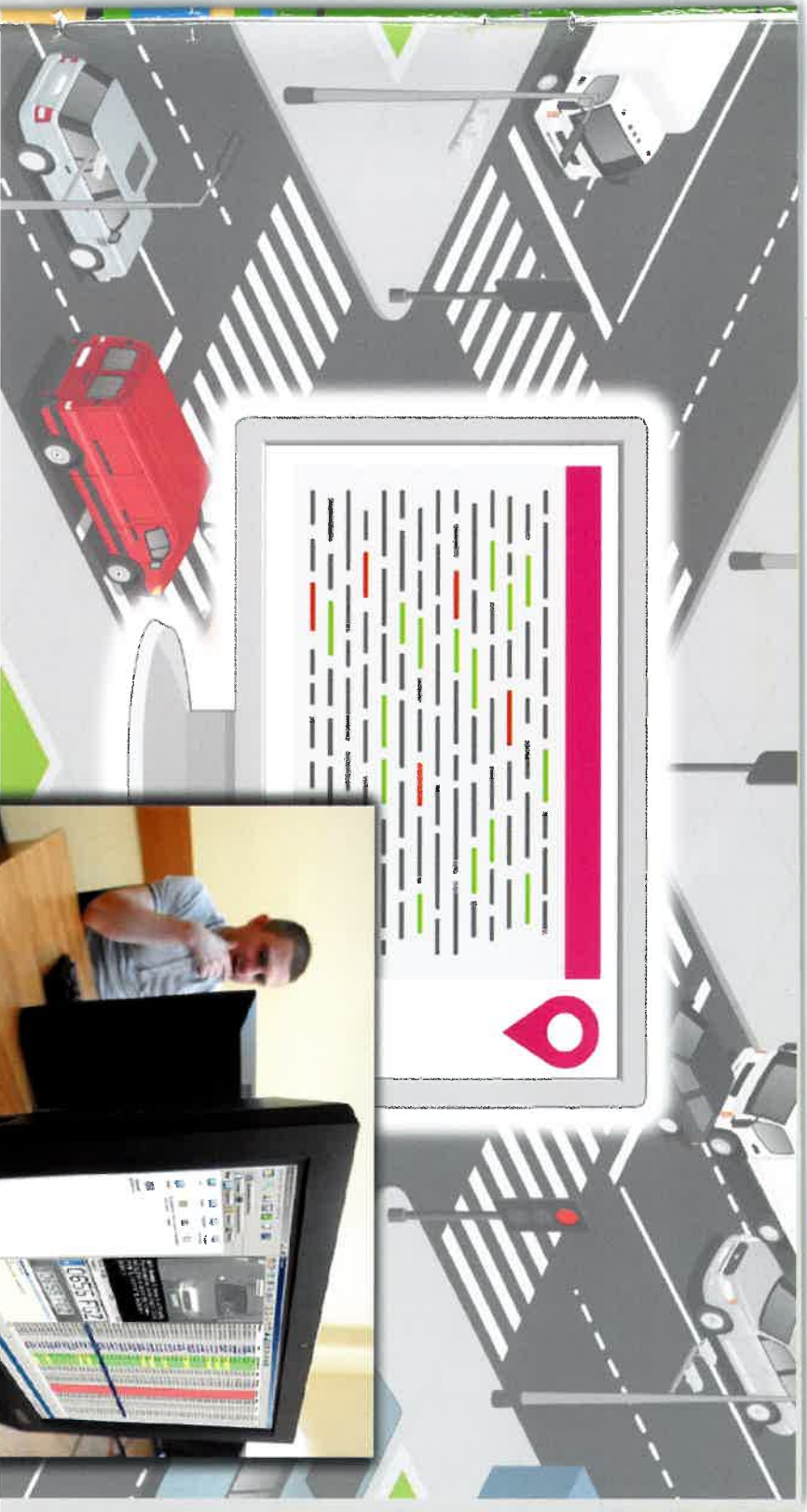
- Image of a license plate;
- Recognized license plate number;
- General view;
- Coordinates of the location;
- Date and time.





Using whole set of tools of photo-video fixation allow to indicate all types of road violences and efficiently manage of traffic flows on a speed highways and city roads.

Automatically data processing allow the monitoring of the exact situation on city roads as well as to react instantly on car accidents and to prevent the jams.



The outcome statistics allow to use the efficient management of Intellectual transport system of modern city.

Installing several automatic photo & video detection complexes helps decrease number of accidents and improves the discipline among drivers.