

# T-EXSPEED

## v.3.0



Advanced technology for Traffic Applications

**PATENTED** Intellectual property: KRIA S.r.l.

### Speed, red light and trajectory-based violation detection System



T-EXSPEED v.3.0 is the newest and most innovative digital system for detection of vehicle speed (instantaneous/average), red-light and trajectory-based violations. It does not need, external sensors (inductive loops, radars or lasers), as it detects the vehicle directly from images taken by its high definition stereo cameras, repeating the real time recognition process at every new video frame. It measures the speed of the vehicles up to 300 km/h.

It detects simultaneous violations of parallel and queued vehicles.

The T-EXSPEED v.3.0 Acquisition Unit is equipped with three cameras (two monochrome, one colour) for 3D

reconstruction and license plate reading and for a detailed documentation of the alleged violation.

The T-EXSPEED v.3.0 high degree of scalability and modularity allows the application in multilane highways (4 lanes and 6 lanes versions).

Central T-EXSPEED v.3.0 Event Server manages every connected device and can be interfaced with third-party backend software.

### Architecture of the T-EXSPEED system

**Acquisition Unit** (3 cameras with lighting systems in an IP66 housing).



**Processing Unit** (T-EXSPEED industrial PC, Windows OS and T-EXSPEED processing software for violation detection).

**Central Unit** (Event Server database and GUI for operator access).



**On site: reduced visual impact**

Acquisition Unit: compact IP66 housing (40cmx50cmx25cm) systems

Vertical pole mount 15-30m before the monitored site

T-EXSPEED v.3.0 Processing Unit

**On site: no civil works**

Automatic non-invasive vehicle detection does not require civil works or calibration

Available both in fixed and mobile configuration

Simply installable at the side of the road

The installation of the fixed Acquisition Unit can be done without traffic suspension in short time

**Features**

Instantaneous and section speed detection on 4 to 6 lanes

Detection of parallel, queuing, lanes crossing transits

Red light, overtaking, wrong way, Tailgating and generally every trajectory-based violation detection

License plate black-list for immediate alarm to police

3D Vehicle classification

Self-check of the device calibration for speed estimation

Data encryption and watermarking

**T-EXSPEED v.3.0 Processing Unit (on site)**

Worldwide layouts and fonts, Kemler ONU code Dangerous Goods automatic recognition

Video rate automatic license plate reading

Transit detection up to 300 Km/h

Night-time and all-weather transit detection

**Event Server (Central unit)**

User interface for data check (place, time, license plate, speed), with images and videos

Violation documents and video export

Interface to third-party backend systems

Traffic statistics

Rev 1.11