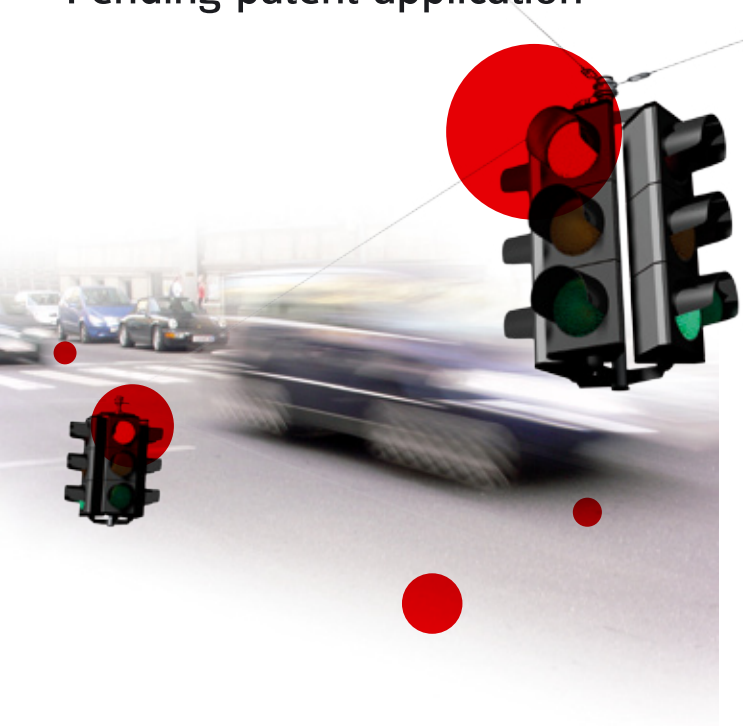
# SMARTSPECTOR Red!Detector™

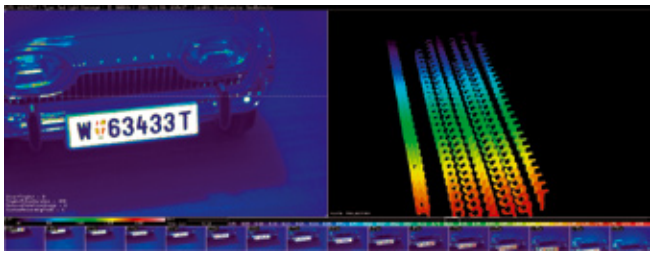
Pending patent application



## Fields of application

- Statistical analysis of driver behaviour in the ambit of stoplights
- Identification and documentation of traffic misdemeanour
- Red light enforcement

Traffic sensors by Smartspector are targeted to enhance road safety as well as efficiency and sustainability in individual traffic. The brand-new Red!Detector™ by Smartspector is a highly efficient analysis tool that promotes road safety and is best suited for red light enforcement. A special visualisation technique allows precise motion analysis and documents red light offence in a single result image. The identity of the vehicle is determined via its front licence plate.




sample result image

### Fully automatic

As a statistical instrument, the basic model features a one-camera system with a digital input. This input interfaces the monitored red light state of the traffic light controller. Depending on the status of the traffic light, the camera system analyses motion of vehicles fully automatically and documents whether vehicles are passing the stop line during the red-light phase.

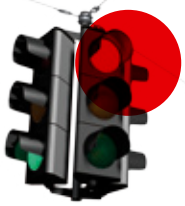
For enforcement purposes, Red!Detector™ comprises another camera, which observes and detects the status of the stop light. As a further piece of evidence, the same camera device delivers an additional overview image.

### Reliable and efficient

The system is independent of external detectors, excellent value-for-money, and can be installed swiftly. Since Smartspector Red!Detector™ has the capability to detect, identify and track vehicles with one and the same sensor device, Smartspector's overall system is extremely compact, highly available, and guarantees low operational costs. Equipped with clear shield technology, soiling of the camera devices is minimised and on-site maintenance is hardly required.

### Secure

In the context of enforcement systems, data authenticity is of vital importance. All Smartspector enforcement systems implement advanced methods to guard against data manipulation. In the case of message manipulation, Smartspector sensor devices automatically close communication ports. No more data can be received until an authorised recipient responds correctly to a TAN code request. All in all, cutting-edge standards as to data authenticity and safety are met.



# SMARTSPECTOR Red!Detector™

## Specifications Red!Detector™

| | Basic | Enforcement | Enforcement LPR |
|---|---|---|---|
| Cameras | 1 stop line detector | 1 stop line detector, 1 red light detector | |
| Licence plate | default configuration*: - non reflective characters upon undamaged reflecting field<br>- characters: 0-9, Latin letters A-Z - single-spaced | | |
| Sensor arrangement | - pose, distances, and illumination site dependent<br>- max. angle between optical axis and perpendicular plate-axis: 35°<br>- max. angle between principal of field of view and principal of plate: 10° | | |
| Passage speed | max. 60km/h | | |
| Result | **colour coded image with text header:**<br>- passage ID<br>- time stamp<br>- device ID and name<br>- full-size photograph<br>- full-size trajectory picture<br>- look-up table for brightness, and time code<br>- time diagram incl. red-light state<br>- index-image sequence (max. 16 images, 1/8 size with time offset) | **colour coded image with text header:**<br>- passage ID<br>- time stamp<br>- device ID and name<br>- full-size photograph<br>- half-size trajectory picture<br>- half-size overview picture<br>- look-up table for brightness, and time code<br>- time diagram incl. red-light state<br>- index-image sequence (max. 16 images, 1/8 size with time offset)<br><br>**Result message:**<br>- passage ID | **colour coded image with text header:**<br>- LPR result<br>- passage ID<br>- time stamp<br>- device ID and name<br>- full-size photograph<br>- half-size trajectory picture<br>- half-size overview picture<br>- look-up table for brightness, and time code<br>- time diagram incl. red-light state<br>- index-image sequence (max. 16 images, 1/8 size with time offset)<br><br>**Result message:**<br>- passage ID<br>- LPR result (encrypted) |
| Operating temperature | -25°C - +45°C | | |
| Power supply | 24VDC ±5% / 2A stabilised, short-circuit proof | 2 x 24VDC ±5% / 2A stabilised, short-circuit proof | 2 x 24VDC ±5% / 2A stabilised, short-circuit proof |
| Device integration | Smartspector SVE-DeviceManager** | | |
| Device administration | Smartspector SVE-DeviceManager<br>GUI: Smartspector SVE-Toolbox** | | |
| User authentication | password, TAN code | | |
| Interface | 100MBit Ethernet<br>1 x Digital In „Red“ | 100MBit Ethernet | |

* different configurations upon request ** Windows® 32 compatible

SMARTSPECTOR® artificial perception engineering GmbH
Sonnenhofgasse 6/14 | 1050 Vienna | Austria | FN 276499t | CEO: Dieter Schmidradler
Phone: +43 664 8559 281 | Fax: +43 1 2533 033 4564 | Mail: office@smartspector.com | Web: www.smartspector.com
Erste Bank, IBAN: AT 33 2011 1288 1891 2000, BIC: GIBAATWW | tax number: 244/8068 | VAT: ATU 62 514 755