

"CORDON-M"KR

STATIONARY RADAR VIDEO RECORDING SYSTEM

AUTOMATIC CONTROL OF:

- Road crossings
- Railroad crossings
- Controlled pedestrian crossings



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"CORDON-M"KR

The new "CORDON-M"KR photo radar system is designed for automatic traffic enforcement and data transfer to the Police Back-Office on road intersections, railroad crossings and controlled pedestrian crosswalks:

- Red light running.
- Crossing the STOP line on red light.
- Wrong way driving.
- Speed infringement and other violations.

BASIC FUNCTIONS AND FEATURES

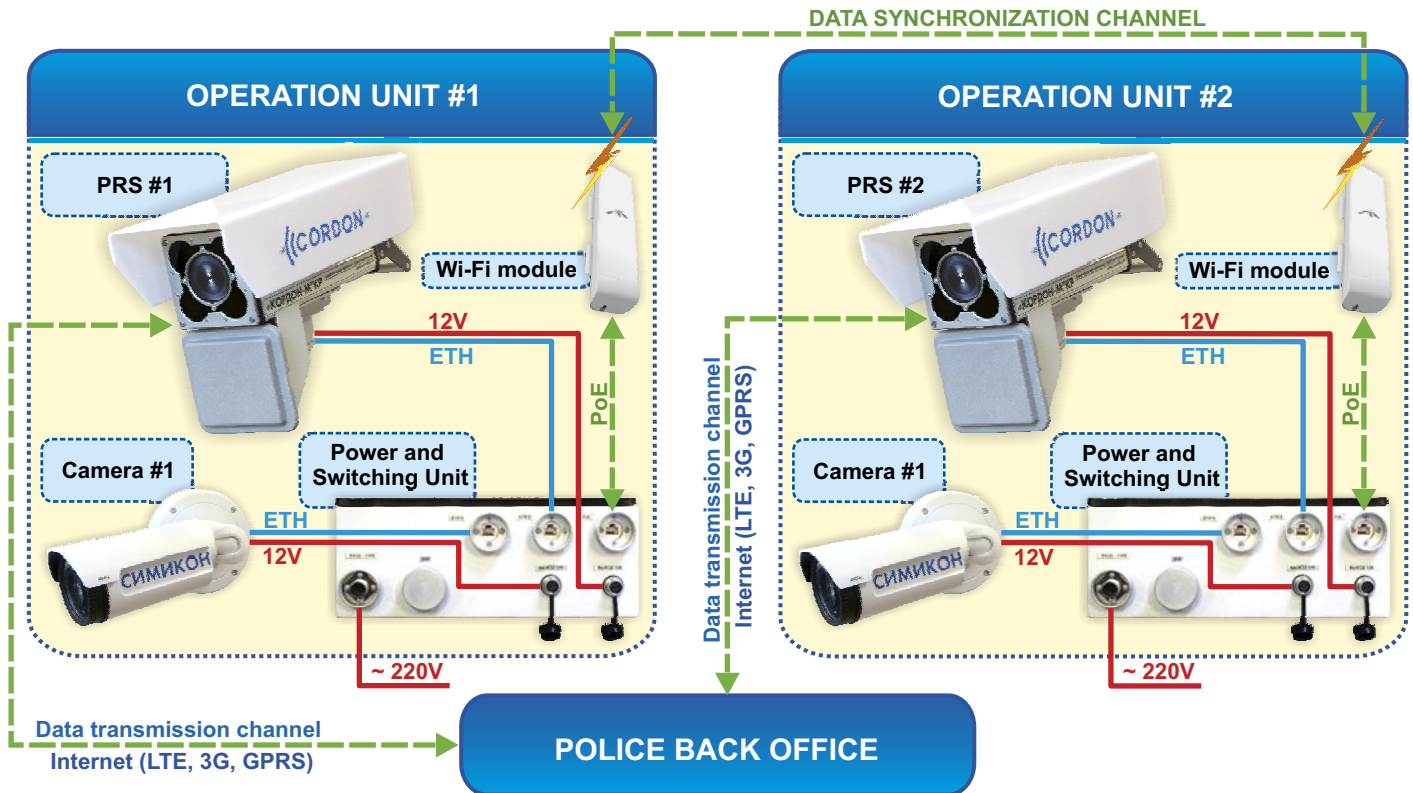
- Automatic detection of vehicles running the red light on road intersections, railroad crossings and pedestrian crosswalks.
- Automatic detection of vehicles crossing the STOP line on red light.
- The traffic light status is determined by optical recognition from the driver's side, without direct connection to traffic light controller.
- Automatic detection of other violations: speed infringement, driving on the wrong side of the road, driving on the roadside or reserved bus lane, unlawful turn on intersection.
- Automatic License Plate Recognition (ALPR) for Europe and CIS license plates.
- The ALPR system is based on neural network technology and can be trained in short time to recognize new patterns of license plates.
- Ability to check the recognized license plates through various databases (vehicle owners, stolen and wanted vehicles, etc.) on site.
- Specific speed limits for each lane and for the various categories of vehicles (cargo truck, passenger car) can be set.
- Automatic saving of violation data in internal storage.
- Saving the video clip with visual violation proof for each detected violation.
- Ability to transmit the recorded violation data to Police Back Office via wired or wireless communication channels.
- The data is protected by Digital Signature using the hardware key.
- Ability to export the recorded violation data from Photo Radar Sensor (PRS) to laptop in patrol vehicle via backup communication channel (Wi-Fi).
- On-board GPS/GLONASS navigation unit provides the geographical coordinates and precise timing for the violation record.
- Real-time high resolution surveillance of enforcement zone.
- Ability to stream the video in real time using RTSP protocol.
- Automatic recording and storing the video clips of road situation to the archive (up to 24 hours of video), ability to search through archive for specified time period.
- Nighttime operation using the embedded and external IR spotlights.
- Collecting of traffic intensity statistics.
- Logging of all system events and user actions.
- Automatic system internal diagnostics, remote diagnostics and telemetry streaming/monitoring features.
- Small weight and dimensions of the units, low power consumption.
- IP65 ingress protection rating for all system units.
- Electromagnetic interference protection conforms to railroad standards for electronics.
- The special rotary quick-installation bracket is used for installation the PRS on lamp post or other support.

OPERATION PRINCIPLE

The system consists of several operational units installed on the road sides in vicinity of the controlled area — road intersection, railroad crossing or pedestrian crosswalk. The existing lamp poles can be used for installation due to light weight of system units.

Each Operation Unit includes the Photo Radar Sensor (PRS), Surveillance Camera and power unit. The data exchange between the Operation Units is performed using the wired or wireless data channels, such as Wi-Fi with directional antennas.

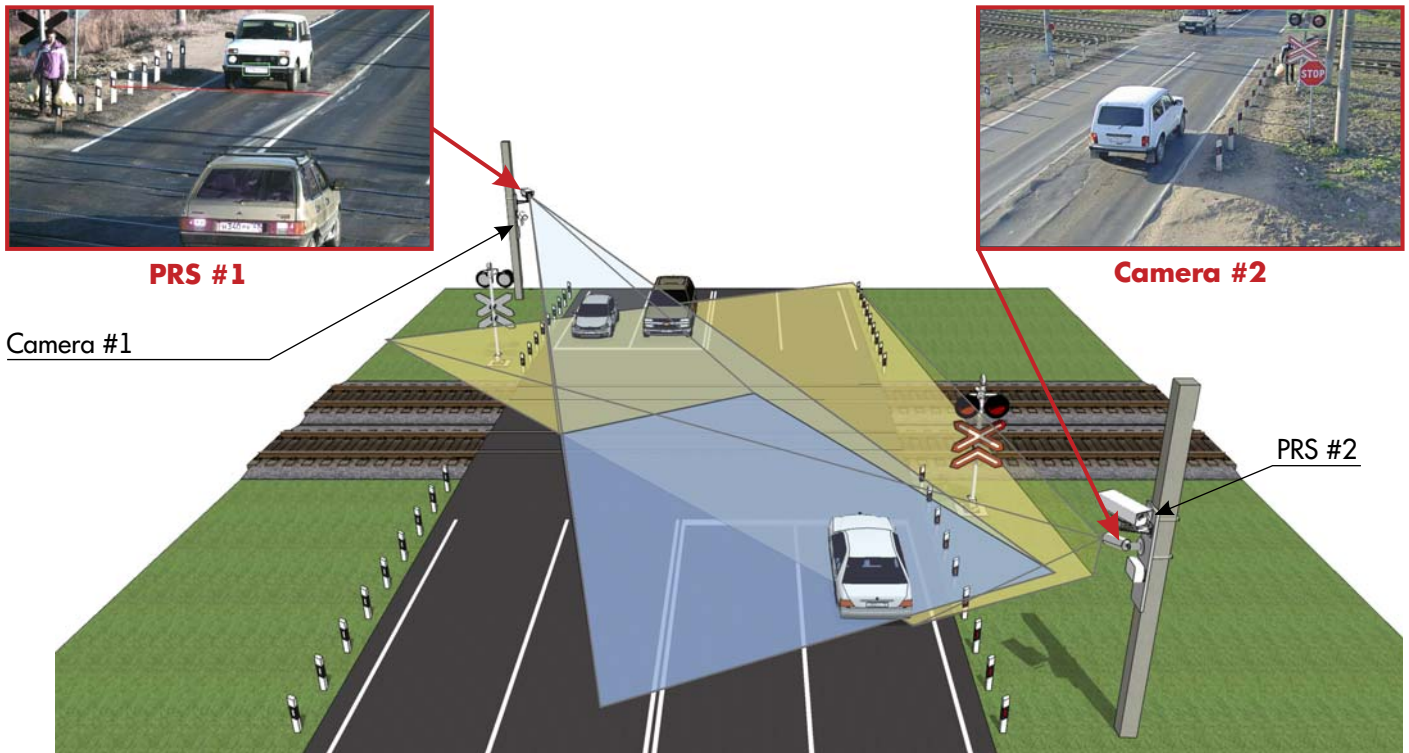
INTERSECTION AND RAILROAD CROSSING TRAFFIC ENFORCEMENT SYSTEM



System diagram with two Operation Units

Each PRS controls up to two lanes of oncoming traffic on the far side of controlled area. The PRS performs speed measurements, ALPR and captures the vehicles entering the controlled area.

The red light is automatically detected without direct connection to the traffic light controller using the image from Camera located at the driver's side.



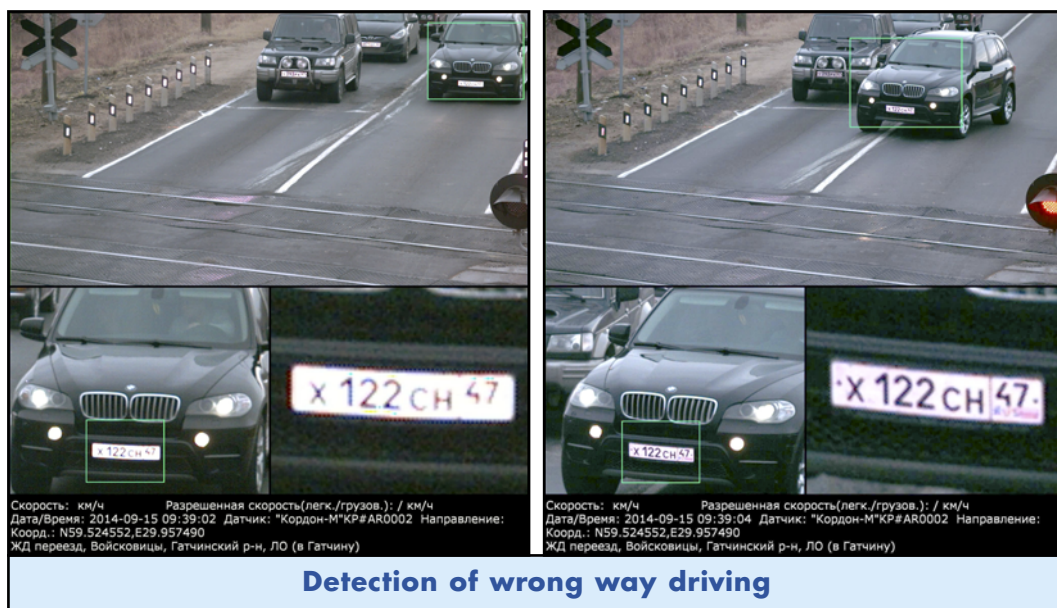
The controlled area of PRS and Camera of the railroad crossing

INTERSECTION AND RAILROAD CROSSING TRAFFIC ENFORCEMENT SYSTEM

Each vehicle entering the controlled area is simultaneously captured by PRS from the front and by Camera from behind. The latter image reflects the driver's view of traffic light and road situation.



The system simultaneously detects all violations performed by each passing vehicle (for example, red light running on the opposite lane with exceeding speed). The video clip with visual proof is automatically recorded for each detected violation.



During the operation the system also records data on all vehicles passing the controlled area, including the image, license plate, time and direction of movement.

The collected data is automatically transferred to Police Back Office using the wired or secure wireless data channels (e.g. VPN over 3G/4G mobile data).

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