



DESIGN  
AWARD  
2021



# Ekin X SPOTTER

Fixed ANPR, Speed  
and Traffic Violation  
Recognition System

**Ekin**

Leader in Smart City Innovations

**Ekin X Spotter** is a fixed smart AI-based traffic enforcement system that performs automatic number plate recognition, speed, and violation detection of all vehicles in its field of view. Equipped with a 4K Super High-Resolution sensor and video-based number plate recognition technology, it's able to perform continuous traffic monitoring.



# Why Ekin X Spotter?

## Self-Contained Design

Offering a compact design, it can be easily mounted on a post, cross arm or tripod to perform traffic analytics and violation detection. Built-in and ready LTE, Wi-Fi, ethernet support, providing versatile application and range.

## Fixed Surveillance

Our fixed application provides a surveillance range of 9 lanes. Able to operate in communication with all smart systems citywide, ensuring 100% continuous traffic monitoring.

## High-Resolution Videos

Equipped with a 4K Super High-Resolution sensor, the Ekin X Spotter ensures high-resolution video and ANPR. Able to capture images and videos while maintaining maximum focus and sharpness.

## 24/7 Surveillance and Traffic Control

Ekin's video-based number plate recognition technology can capture the violation moment as well as the entire traffic flow which offers a distinct benefit when compared to conventional photograph-based systems.

## Internationally Applicable

Ekin X Spotter recognizes number plates from multiple regions including Europe, North America, Latin America, Asia, and the Middle East with high accuracy identification.

## Central Management by Ekin Maestro OS

The Ekin Maestro OS operates the complete traffic systems of a city from one central back-office including Ekin X Spotter and other Ekin devices. Working simultaneously and in real-time to compare databases, it generates alerts to assure an effective response time from law enforcement officials.



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# FUNCTIONS

\* More than one device is needed for all functions



## Smart Traffic Analytics

- ! Analysis of rush hour congestion for specified points of interest, flow of cars passing toll points including delays and "hotspots" of traffic congestion by date and time
- ! Congestion time monitoring
- ! Vehicle counting and identification in designated points of interest



## Number Plate Recognition

- ! Ability to capture every number plate in its field of view with its video-based number plate recognition system
- ! Advance technology for up to 3 lanes
- ! Simultaneous automatic number plate recognition for approaching, departing, or parked vehicles
- ! Identification of wanted or stolen vehicles within a specific database
- ! Vehicle type classification (bus, truck, car, motorbike) based on AI image processing
- ! Vehicle make, model, color recognition from the front and rear of vehicle



## Speed Detection \* Optional

- Automatic speed detection range for the vehicles in the field of view
- Different speed limit adjustment for each lane and/or vehicle type
- Generates automatic citations or reports accurately and with required violation information



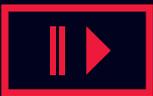
## Traffic Management Detection

- Red light enforcement and illegal turn violations
- Illegal lane change, tailgating, safety lane violations
- Generates alerts of traffic congestion and accidents



## Parking Enforcement

- Detection of vehicles exceeding the parking time in the defined parking zone
- Generates automatic citations or reports containing required violation information



## Video Surveillance

- 24/7 surveillance and video recording
- Day and night 4K video recording, including in adverse weather conditions

# ON-BOARD INTELLIGENCE

[ XY 38 Z ]

Fully Automated NPR



Speed Detection\*



Red Light Violation Detection\*



Vehicle Counting\*



Vehicle Make, Model, Color Recognition\*



Traffic Density Analytics\*

\* Optional



Vehicle Classification\*



Tailgating Detection\*



Lane, Turn, Wrong Way Violations\*



Vehicle Detection\*



Stopped Vehicle Detection\*



Pedestrian Detection\*

# TECHNICAL FEATURES

## DETECTION

Fixed Application Speed Detection Range	Up to 320 Km/h
Coverage	3 lanes including approaching and departing vehicles
Number of Simultaneously Detected Vehicles	Over 100 vehicles

## ILLUMINATION

IR Spot	✓
Day and Night Number Plate Detection	✓
Flash	Optional

## SYSTEM SOFTWARE

Automatic Number Plate Recognition	24/7 for all the vehicles in the field of view
Web Service	✓
Protocol	TCP/IP, UDP, NTP, FTP, RAW
Various Database Support	SQL/NoSQL
Alarm Management	✓
Remote Secure Installation and Access	✓
Violation Photo and Video Evidence	✓
24/7 Surveillance Record	✓
Watermark	Applied on all photos and videos
Storage Capacity	Up to 8 TB
Vehicle Color, Brand, Type and Model Detection	Optional
Communication with Other Smart City Solutions via Ekin Maestro OS	✓

## CENTRAL SOFTWARE

Various Database Support	SQL/NoSQL
Graded Authorization	Admin, Supervisor, Users
Customizable Fine Printing	✓
SMS and Mail Support	✓
Automatic Update	✓
Log Record	✓

## ELECTRICAL FEATURES

Connection Interfaces	Ethernet, LTE
Required Power Supply	12 VDC/120 Watt
Power Consumption	<40 Watt/Hour

## ENVIRONMENTAL FEATURES

Operating Temperature	-40°C +60°C
Storage Temperature	-40°C +85°C
Humidity Rate	80-95% non-condensing
IP Class	IP67
Impact Protection Class	IK10

## PRODUCT DIMENSIONS

Dimensions (Width × Length × Height)	220 mm × 260 mm × 120 mm
Weight	3.5 kg



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## Fixed Products

Ekin Spotter

Ekin Box Spotter

Ekin X Spotter

## Mobile Products

Ekin Patrol G2

Ekin Micro Patrol

Ekin X Spotter Mobile

[Ekin.com](https://www.ekin.com)

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