



DESIGN  
AWARD  
2021



Ekin SPOTTER  
The First and Only  
Entirely Modular  
Smart City Furniture

**Ekin**  
SMART CITY SOLUTIONS

Smart City Solutions



A first of its kind smart city furniture that offers multiple solutions operated by several modules for traffic analytics and management, environmental analysis and city surveillance.





# Why Ekin Spotter?

## Easily Adaptable for Smart Cities

The Ekin Spotter is the only smart city furniture that is capable of multiple functions with customized modules. The system provides the flexibility to add modules according to a city's requirement while eliminating infrastructure costs, transforming cities into smart sustainable cities.

## All Compact Design

A self-contained unit that requires no additional hardware or infrastructure. One elegant and sleek smart city furniture encompassing all the features required by smart cities today.

## Day & Night Top-Tier Surveillance

Ekin's proprietary cameras can monitor wide-reaching areas and record videos with high-resolution images able to surveil throughout the night with its built-in illumination while maintaining sharpness and focus.

## Centrally Managed by Ekin Red Eagle OS

Ekin Red Eagle OS operates the entire traffic systems of a city from one central back-office including Ekin Spotter and other Ekin devices. Working simultaneously and in real-time to generate alerts and guarantee an effective response time.

## System Care for Environmental Conditions

Using its environmental sensors, the Spotter can monitor air quality index, temperature and humidity control. These solutions track and record data that can enact environmental policy reform to improve quality of life for citizens.





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Part 15 Subpart B

# FUNCTIONS



## Number Plate Recognition

- Recognition of every number plate in the field of view with its video-based number plate recognition technology
- Automatic number plate recognition simultaneously for incoming, outgoing, or parked vehicles
- Instant data base comparison of wanted or stolen vehicles



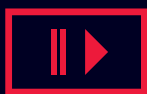
## Speed Detection

- Automatic speed detection range for all the vehicles in its field of view
- Adjustable speed limit in each traffic lane
- Automatic official fine or report issuing containing required violation information



## Parking Management

- Parking violation detection in designated parking zones
- Generates Instant citations or reports containing required violation information



## Video Surveillance

- 24/7 surveillance and video recording
- Day and night high-definition video recording in adverse weather conditions



## Red Light Enforcement

- High resolution videos and images of all red-light violations
- Automatic official fine or reports containing required violation information
- No cable connection required
- Utilizes video analytics to detect traffic light status



## Advanced Traffic Management

- Tailgating detection
- Bus/truck lane violation detection
- Low speed violation detection
- Emergency lane violation detection
- Lane violation detection for different vehicle classes
- Wrong way driving detection
- Object detection on the road for parked vehicle or pedestrians
- Accident detection
- Hard brake detection
- Average speed enforcement between Ekin Spotter and any mobile system



## Smart City Environmental Analysis

- Air Quality Index
- Temperature Detection
- Humidity Detection
- Carbon Monoxide Detection

# MODULES



## Antenna Module

Provides connectivity between other systems via LTE & Wi-Fi connection while housing the GPS unit.



## ATS Module

Anti-Tampering System – Ensures prevention of unauthorized access to the product.



## Eco-City Module

Provides environmental insights from air quality index to temperature measurement in real-time.



## Illumination IR Module

Provides perfect visibility and consistent results under various conditions with the help of IR capable led module.



## Illumination WF Module

Provides perfect visibility and consistent results under various conditions with the help of led white flash module.



## Hotspot Module

Deploys Wi-Fi network in public locations.



## Safe Traffic Module

Performs automated speed enforcement and advanced traffic management with ALPR (Automatic Number Plate Recognition).



## Speaker Module

Performs as a PA system (Public Announcement) that is capable of playing music, broadcasting announcements, and can perform as a voiced traffic light for crosswalks.





### Speed Sensor Module

Performs automated speed enforcement.



### Surveillance Module

Performs 24/7 high-definition video recording.



### U Turn Module

Performs U-Turn violation enforcement at banned junctions and automatically generates violation reports.



### Post

Provides a safe environment for processors to live in, while providing passive cooling with its design.

Post also provides energy management without the need of an external power box.



### ATS + U Turn Module

Anti-Tampering System & U Turn enforcement capabilities in a single module without compromising the performance.

# TECHNICAL FEATURES

## DETECTION

Speed Range	Up to 320 km/h
Coverage	6 lanes including approaching and departing vehicles (expandable up to 12 lanes)
Number of Simultaneously Detected Vehicles	Over 100 vehicles
Accuracy	±1 km/h speed detection range accuracy

## ILLUMINATION

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

## SYSTEM SOFTWARE

Automatic Number Plate Recognition	24/7 for all the vehicles in its field of view
Advanced Traffic Management	Optional
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 32 TB
Vehicle Color, Brand, Type and Model Detection	Optional
Communication with Other Safe City Solutions via Ekin Red Eagle OS	✓
Location information of the system via GPS	✓

## 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/400 Watt
Power Consumption Average	100 Watt/Hour

## ENVIROMENTAL FEATURES

Operating Temperature	-25°C to +60°C
Storage Temperature	-40°C to +85°C
Humidity Rate	80-95% non-condensing
Protection Class	IP66

## PRODUCT DIMENSIONS

Circumference	Ø 254 mm
Antenna Module	250 mm
ATS Module	492 mm
Eco-City Module	250 mm
Illumination WF Module	370 mm
Illumination IR Module	370 mm
Hotspot Module	492 mm
Safe Traffic Module	675 mm
Speaker Module	492 mm
Speed Sensor Module	370 mm
Surveillance Module	492 mm
U Turn Module	492 mm
Post	2000 mm
ATS + U Turn Module	492 mm



Smart City Solutions

## Mobile Products

Ekin Patrol G2

Ekin Micro Patrol

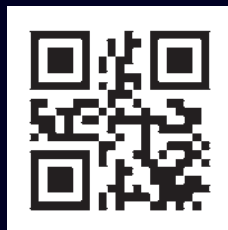
Ekin X Spotter Mobile

## Fixed Products

Ekin Spotter

Ekin Box Spotter

Ekin X Spotter



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

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