isbak

Architect of Smart City

PRODUCT AND SERVICE CATALOGUE 2021

ISTANBUL
METROPOLITAN
MUNICIPALITY | isbak

isbak

ARCHITECT OF THE SMART CITY

Contents

HISTORY

1986

ISBAK was established to perform vehicle maintenance and repair services of IMM and to carry out traffic signaling services in Istanbul.

1996

The newly established Research and Development (R&D) Department started professional works concerning Intelligent Transportation Systems.

1999

Turkey's first domestic LED traffic light LIGHTRA was produced.

2005

In Turkey, EDS was implemented with the Red Light EDS System Project.

2006

The entire signaling system of Istanbul was converted to LED lamps.

2012

Turkey's first Adaptive Traffic Management System (ATAK) was established.

2013

Turkey's First Tunnel SCADA system was implemented.

2015

Turkey's first licensed R&D center in the field of Intelligent Transportation Systems was established in the ISBAK's own campus area.

2017

The national navigation application, prepared with the cooperation of the IMM Department of Transportation and ISBAK, was broadcasted with the IMM Yol Gösteren (navigator) iOS and Android operation system.

2020

During the pandemic process, ISBAK produced the contactless pedestrian button, as the first in the world.

1995

The first national traffic signal controller and the first national traffic lamp application were implemented in Istanbul.

1996

National production started in Intelligent Transportation Systems sector.

2004

The first IMM Traffic Control Center was established in Turkey in accordance with international standards.

2006

Turkey's first transport mobile application Cep Trafik (mobile traffic) was implemented.

2010

ISBAK took its place in ITU ARI Technopole

2013

ISBAK won one of the top 10 Software Awards in the world for its Adaptive Traffic Management System Project Microscopic Traffic Simulation I-SIM (ISBAK simulation) at Oracle Duke's Choice Awards.

2014

Turkey's first University Traffic Laboratory was opened in cooperation with Istanbul Metropolitan Municipality, Yıldız Technical University and ISBAK.

2015

Smart Transport Systems Strategy of Turkey was prepared in cooperation with Ministry of Transport and General Directorate of Highways.

2018

Turkey's first and unique signaling systems manual was written and published.

2020

Artificial Intelligence-Based Vehicle Sensing System was implemented.

01

INTELLIGENT TRANSPORTATION SYSTEMS

INTELLIGENT TRANSPORTATION SYSTEMS

TRAFFIC MANAGEMENT SYSTEMS

01 INTELLIGENT TRANSPORTATION SYSTEMS | Traffic Management Systems | Electronic Detection Systems | Traffic Measurement and Information Systems | Public Transportation Systems | **02** PLANNING & PROJECT DEVELOPMENT | Transportation Planning | Traffic Engineering | **03** INTEGRATED SOLUTIONS | Management Centers | Camera Systems | Fleet Management Systems | PDKS | Lighting Systems

TRAFFIC SIGNAL CONTROLLER

It monitors the status of the traffic signal beacons at the intersections, ensures that they work in harmony with each other, and prevents conflicts.

It reduces traffic density and vehicle waiting times and prevents traffic accidents.

Expertra™2A9

With more than 30 years of experience in Intelligent Transportation Systems, we have designed Expertra 2A9, which performs perfectly in the toughest conditions.

In addition to its fixed or dynamic timed operating options, it optimizes the traffic in the fastest way by measuring the density in the lanes for traffic safety, by its adaptive working compatibility.

- Reduces Vehicle Waiting Time
- Suitable for Adaptive Operation Mode
- Central Intersection Management
- Compatible Operation with Green Wave
- Modular Structure Able to Expand to 32 Groups
- Multi-Link Variety

DATASHEET

Expertra™2A9 Central Software

It is now easier to manage signalized intersections with programs having a user-friendly interface developed by the ISBAK R&D team.

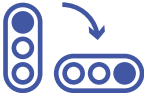## Central Software Programs

JSP - JUNCTION SERVICE PROVIDER

JSP provides access to traffic signal controllers from the center via GPRS Modem or Ethernet, lists the system connection states.

JM - JUNCTION MANAGEMENT PROGRAM

By JSP, JM enables the operation of the intersections with access to the center and their duration to be displayed on the created two-dimensional model.

JAB - JUNCTION ALARM BROWSER

JAB instantly reports the faults that occur at the intersections that have access to the center with JSP and saves it to the database. With JAB, historical fault query, reporting by type and regional fault tracking can be done.

JDB - JUNCTION DATABASE BROWSER

JDB transfers and archives the information on the intersections registered to the center in real time to the database with JSP.

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TRAFFIC SIGNAL LAMPS

Conforming to the image of the modern city, Lightra is the product of our meticulous work that demonstrates our firm's commitment to innovation, reliability, and efficiency.

It was designed for optimum performance and quality and tested in harsh weather conditions. It offers a flawless appearance and brightness and its service and installation are quite easy.

Horizontal and Vertical Mounting

High Energy Saving

Environmental Design

Long LED Life

UV Resistant

Resistant to Harsh Environmental Conditions

PDF DATASHEET

Lightra™Power LED Traffic Signal Lamp

By the long-lasting Power LED technology, it has a high light intensity and provides a homogeneous appearance.

Vehicle Signal Lamp
Ø200 / Ø300

Arrow Signal Lamp
Ø200 / Ø300

Flash Signal Lamp
Ø200 / Ø300

Pedestrian Signal Lamp
Ø200

Lightra™LED Traffic Signal Lamp

It provides a clear image at wide viewing angles and high daylight by the Through Hole/SMD LED technology.

In case of failure, easy and quick intervention is possible.

Vehicle Signal Lamp
Ø100 / Ø200 / Ø300

Arrow Signal Lamp
Ø100 / Ø200 / Ø300

Pedestrian Signal Lamp
Ø100 / Ø200
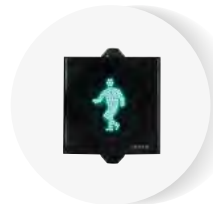
Pedestrian Crossing Signal Lamp
Ø200

Bicycle Signal Lamp
Ø100 / Ø200

Tram Signal Lamp
Ø200
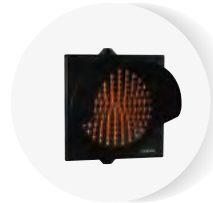
Flash Signal Lamp
Ø200 / Ø300

Countdown Signal Lamp
Ø200 / Ø300

Solar Signal Lamp
Ø200 / Ø300

PDF DATASHEET

PEDESTRIAN BUTTONS

With more than 30 years of experience, we provide solutions to enable pedestrians to cross the street safely through signalized intersections and to minimize traffic flow.

Pedestra™ Zero Energy Pedestrian Button

Zero energy pedestrian button ensures pedestrian safety at signalized intersections.

It helps reduce carbon emissions with low energy consumption.

Low Energy Consumption

Shockproof Body

Touch Button

Easy Assembly

Audible Feedback

Light Feedback

DATASHEET

Pedestra™ Accessible Pedestrian Button

The accessible pedestrian button gives an audible, vibrating, and visual warning for all pedestrians to cross safely.

It provides visually impaired pedestrians with information about the layout and direction of the intersection with the Braille alphabet.

Contactless and touch button options are available.

Braille Alphabet for the Visually Impaired

Impact Resistant

Language Options
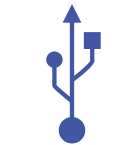
PC Connection via USB

Audible Feedback

PC Connection via Bluetooth

DATASHEET

INTELLIGENT TRANSPORTATION SYSTEMS

ELECTRONIC DETECTION SYSTEMS

ELECTRONIC DETECTION SYSTEMS (EDS)

With sensors and image processing technology, we detect traffic violations, prevent accidents and reduce the loss of life and property.

EDS 3.0 CENTRAL SOFTWARE

13 separate breach detection systems can be managed from a single center using cloud technology and can operate compatible with all communication systems.

Certified by international standards and accredited organizations, it is **Turkey's leading domestic traffic violation inspection and detection software.**

Managing 13 Separate Systems from a Single Center

Mobile Device Compatibility

POLnet Integration

Big Data Capacity

Map-Based Analysis and Monitoring

Ability to Manage Multiple Devices (Grouping Feature)

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AVERAGE SPEED **EDS**

It detects vehicles exceeding the speed limit by calculating the average speed information of vehicles passing through the starting and ending points at the arteries.

It differs from point speed measurement systems by its ability to measure speed in a particular corridor.

4 Photo Shoots

24/7 Video Recording
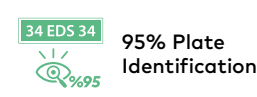
95% Plate Identification

Night Vision with Infrared

Automatic Operation at Defined Time Intervals

Private Security Signature in Violation Photos

PDF DATASHEET

RED LIGHT
EDS

At the points where it is positioned, it automatically detects red light violations and creates digital evidence of the moment of violation. By the high-resolution cameras, a clear image of the violation is taken even in low-light conditions.

Our image processing technology has the highest plate detection success rate in the industry.

3 Pieces of Photo and Video Recording

7/24 Video Recording

95% Plate Identification

Night Vision with Infrared

Easy Assembly

Recognizing Vehicles with Right of Way by Intelligent Software

PDF DATASHEET

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EMERGENCY LANE **EDS**

It detects vehicles that use the safety lane, which is separated to ensure continous flow in emergency situations, except in mandatory cases and outside of its purpose.

2 Wide 2 Narrow Angle Photo

95% Plate Identification

Multi-Vehicle Tracking

Automatic Detection of Fast Vehicles

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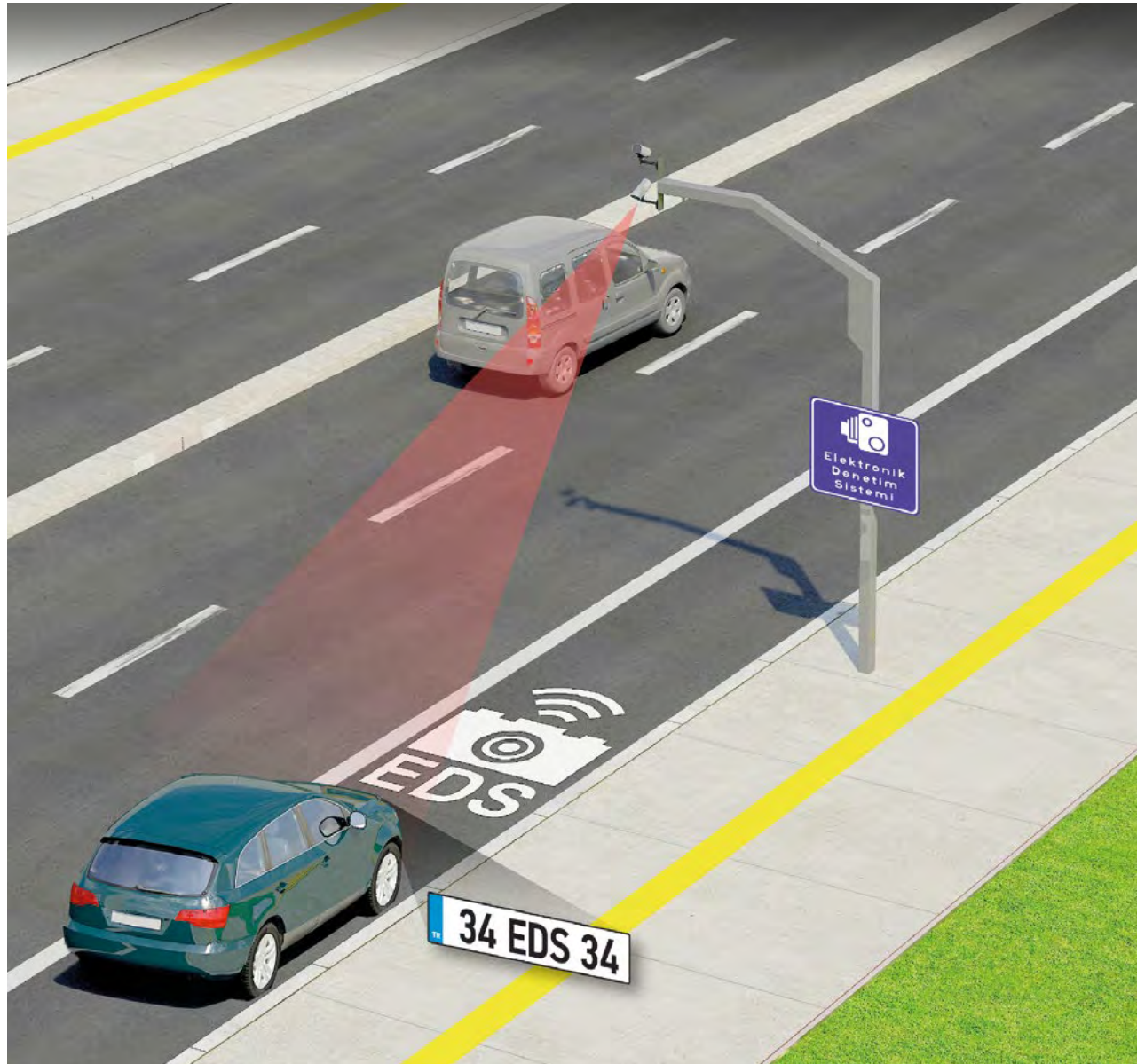
PARKING VIOLATION **EDS**

Parking violations negatively affect transportation and daily life, causing undesirable situations on narrow roads. Parking EDS detects vehicles that adversely affect traffic flow by not complying with city parking rules and creates digital evidence against them.

2 Wide 2 Narrow Angle Photo

95% Plate Identification

Multi-Vehicle Tracking

Flexible System Architecture

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PEDESTRIAN CROSSING **EDS**

It detects violations at crosswalks that do not have a signaling system in order to protect the pedestrians' right of way.

The Pedestrian Crossing EDS is designed in an innovative, stand-alone, compact and modular structure.

- 2 Wide 2 Narrow Angle Photo
- 24/7 Video Recording
- 95% Plate Identification
- Thermal-Based Pedestrian Detection System
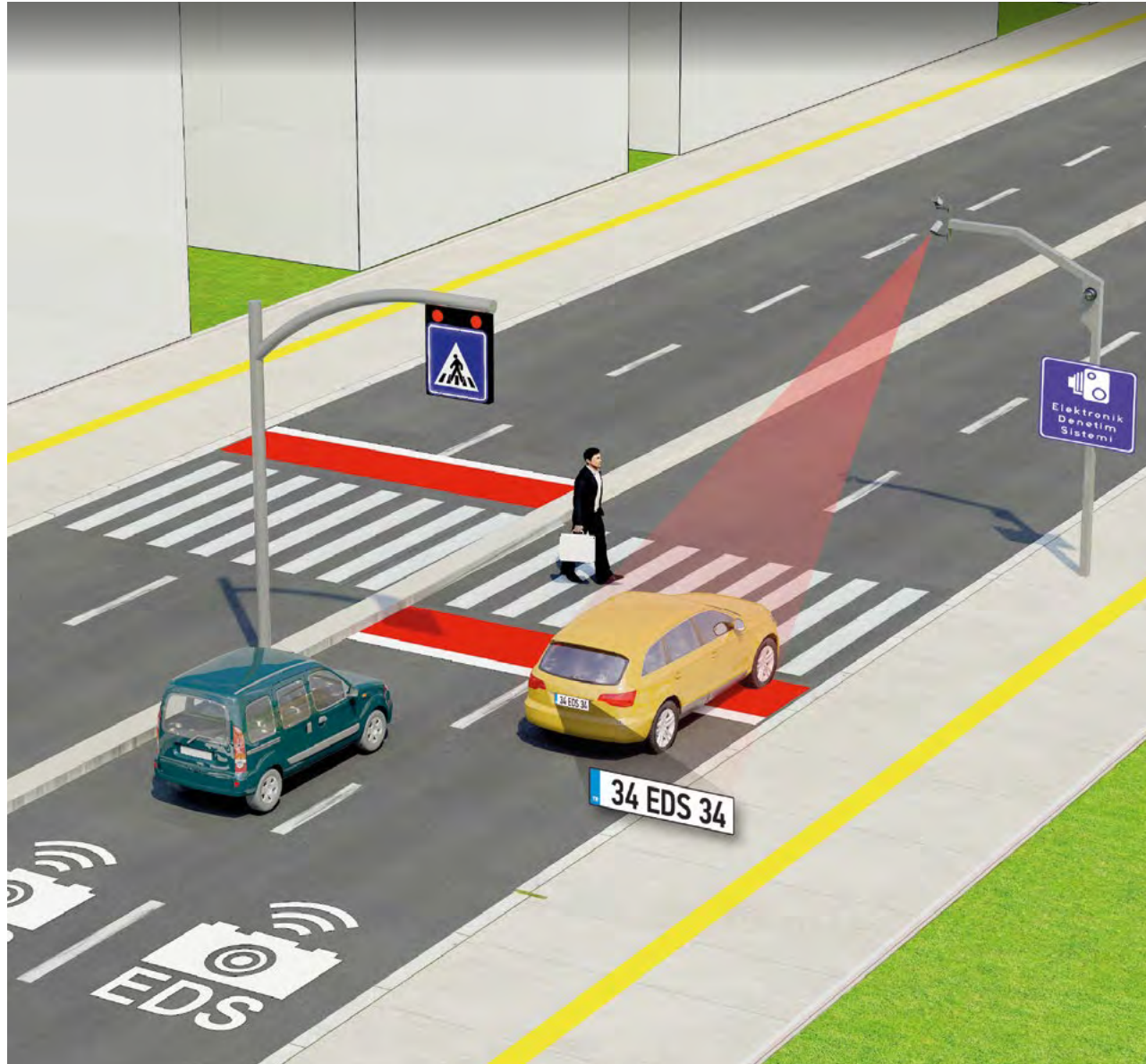
PDF DATASHEET

OFFSET SCANNING **EDS**

It detects vehicles that violate the shaded area at the traffic islands on highways.

- 2 Wide 2 Narrow Angle Photo
- 24/7 Video Recording
- 95% Plate Identification
- Multi-Vehicle Tracking

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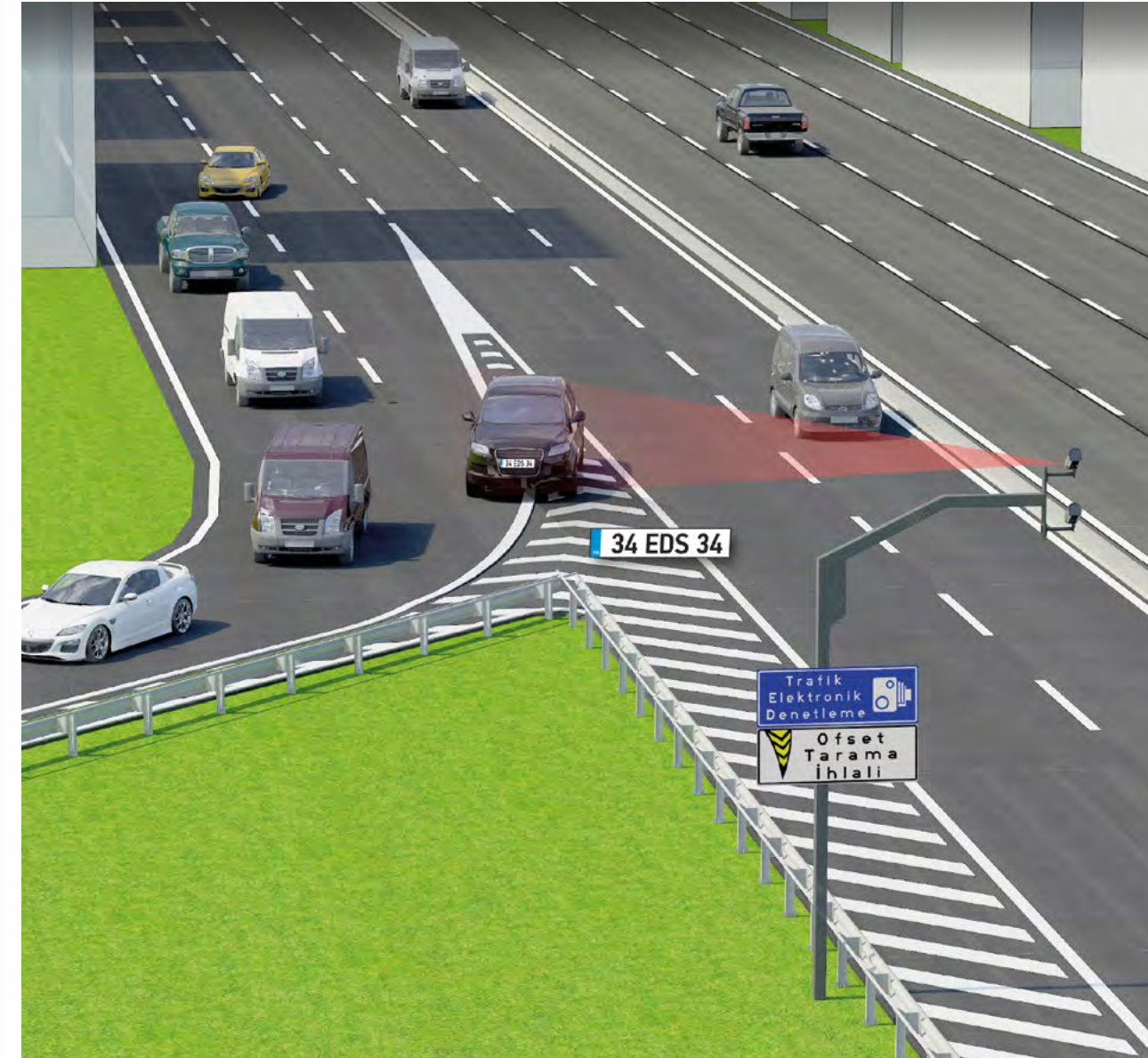
WRONG WAY
EDS

It detects vehicles in the wrong direction with magnetic sensors.

2 Photo Shoots for Each Violation

7/24 Video Recording

95% Plate Identification

Night Vision with Infrared

Remote Monitoring Option

Flexible System Architecture

PDF DATASHEET
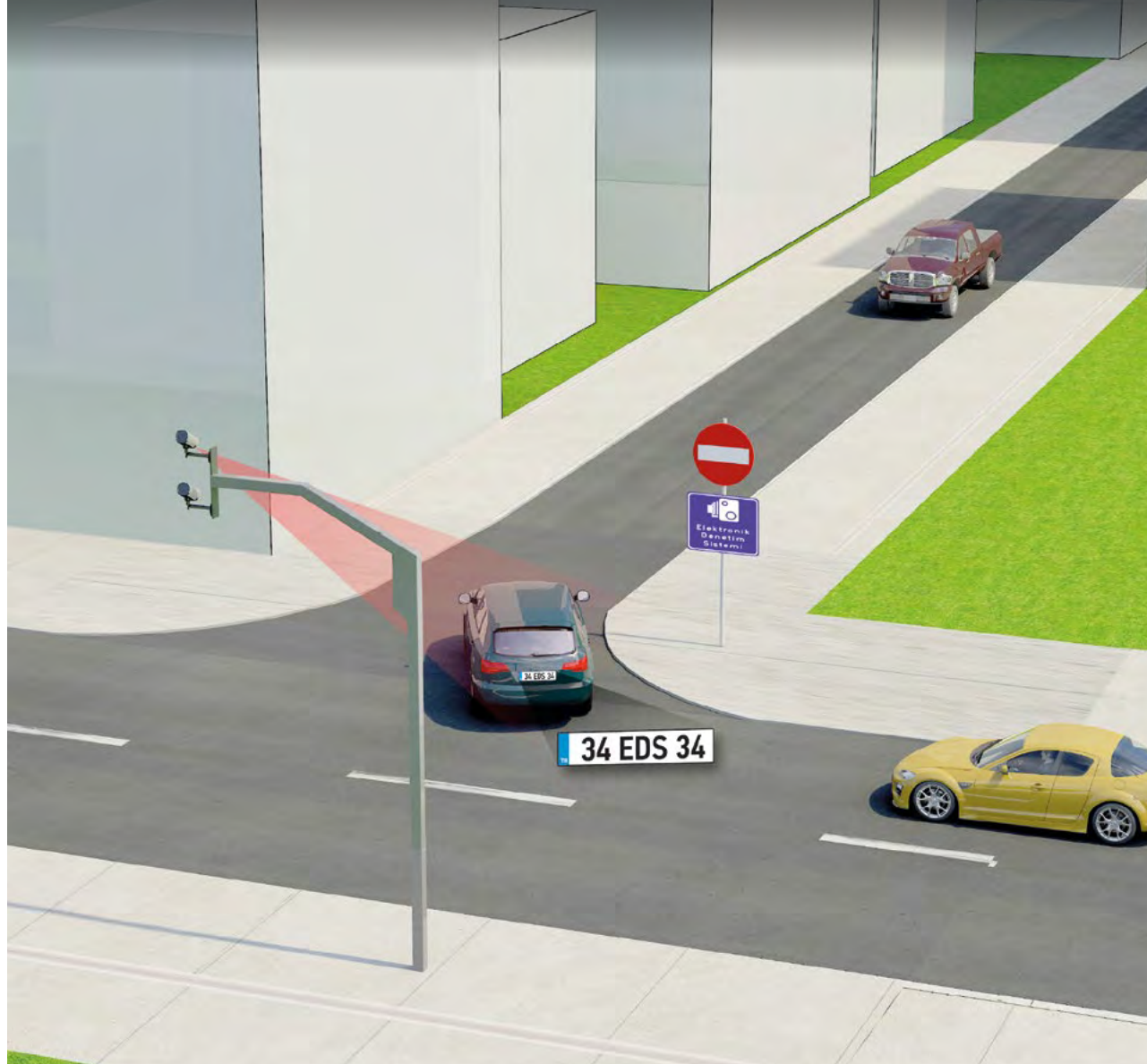
BOX JUNCTION
EDS

It automatically detects violations of the shaded zone located at intersections with high-resolution cameras in order to ensure more efficient use of intersections and reduce traffic density.

5 Photo Shoots for Each Violation

24/7 Video Recording

95% Plate Identification

Multi-Vehicle Tracking

Ability to Detect Violations in a 4-Laned Area

Flexible System Architecture

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TRAM LANE
EDS

In order to ensure the safety of the road allocated for the tram and to reduce the traffic accidents that may occur, it constantly monitors the tramway rail and automatically detects a violation as soon as the car enters the tram lane where the tramway is located.

2 Photo Shoots for Each Violation

7x24 Video Recording

95% Plate Identification

Multi-Vehicle Tracking
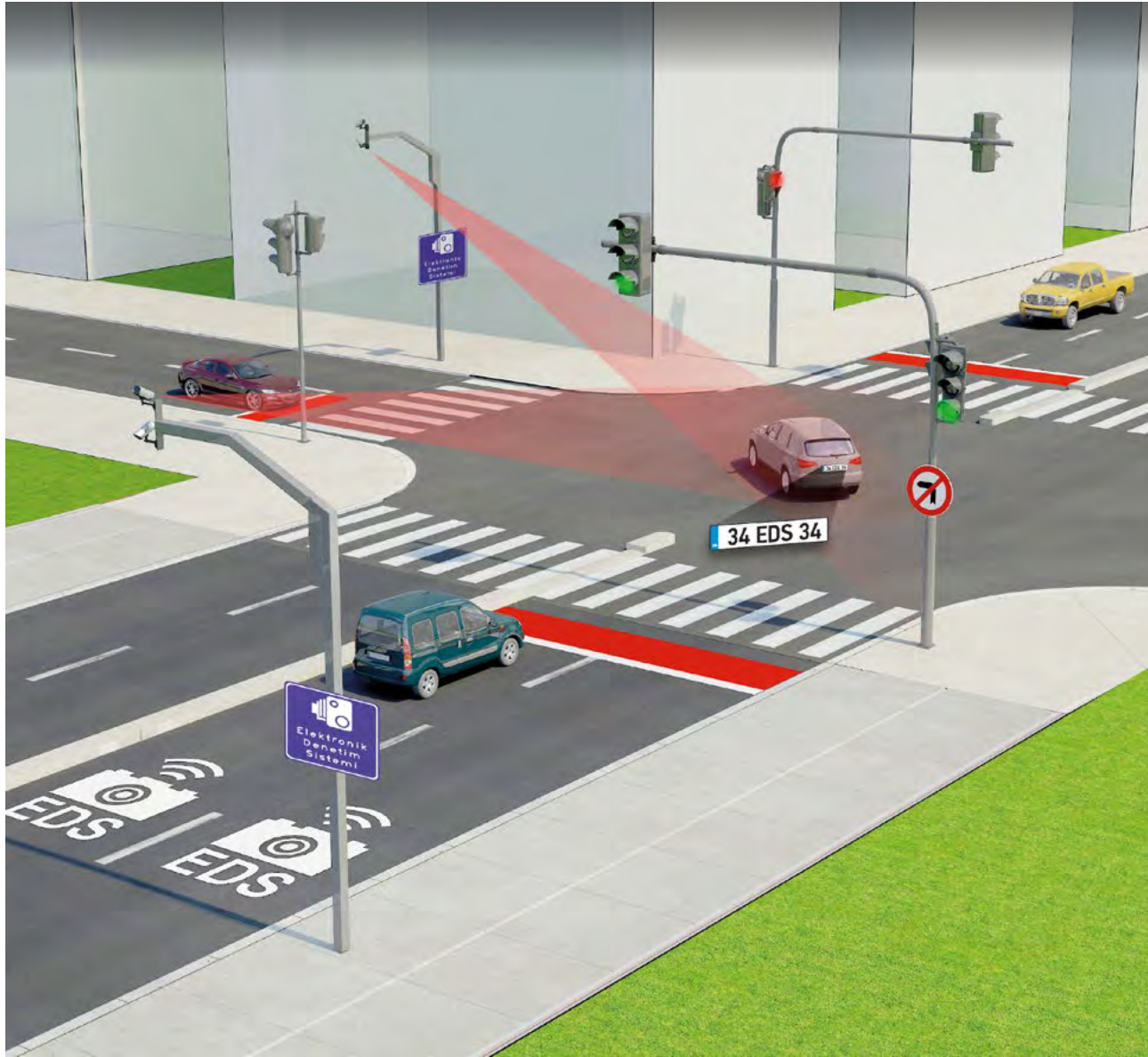
PDF DATASHEET

WRONG TURN
EDS

In order to ensure traffic safety, it detects vehicles that violates no-turn rule at intersections.

2 Wide 2 Narrow Angle Photo

24/7 Video Recording

95% Plate Identification

Multi-Vehicle Tracking

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MOBILE
EDS

For use in areas where fixed EDS cannot be set; it is a mobile monitoring tool equipped with advanced-technology moving cameras and equipment compatible with mobile operation. It detects violations of parking, emergency lane, and stopping which negatively affect the flow of traffic in the city.

It has been developed in order to prevent possible accidents and to ensure the safety of life and property by performing zone and intersection safety control through mobile cameras.

98% Plate Identification

Night Vision with Infrared

Optical Zoom Feature

Resistant Against Tough Weather Conditions

PDF DATASHEET

High Quality Color Photo and Video Recording

INSTANT SPEED
EDS

Built-in radar warning system detects vehicles that are above speed limits, warns drivers by informing them about their instant speed.

24/7 Video Recording

95% Plate Identification

Multi-Vehicle Tracking

Informing the Driver from LED Displays by Detecting the License Plate with Real-time Speed

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OVERSIZE
EDS

It detects vehicles that have exceeded the height limit, posing danger, such as trucks, vans, etc., by sensors and image processing technique.

It is a system that recognizes the license plates of the violating vehicles and makes notification on LED screens.

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OVERSIZE

INTELLIGENT TRANSPORTATION SYSTEMS

TRAFFIC MEASUREMENT AND INFORMATION SYSTEMS

01 INTELLIGENT TRANSPORTATION SYSTEMS

Traffic Management Systems

Electronic Detection Systems

Traffic Measurement and Information Systems

Public Transportation Systems

02 PLANNING & PROJECT DEVELOPMENT

Transportation Planning

Traffic Engineering

03 INTEGRATED SOLUTIONS

Management Centers

Camera Systems

Fleet Management Systems

PDKS

Lighting Systems

TRAFFIC MEASUREMENT AND INFORMATION SYSTEMS

These are systems used to inform drivers about traffic density, weather conditions and road condition; direct them to alternative roads in accordance with the information provided, and control the flow of traffic.

Traffic information systems, which can display graphic-based text, figures and images using LED screens, can be managed on a scenario-basis via map-based central software.

VARIABLE MESSAGE SYSTEM (VMS)

It informs drivers by converting segment information indicated by color in the traffic density map to text or image. It warns drivers and contribute to traffic safety regarding changing road and weather conditions (accident, icing, fog, etc.).

VARIABLE TRAFFIC SIGNS (VTS)

It informs and directs drivers with lane-based traffic signs in tough weather conditions, electronic control and speed limit applications, traffic density warnings and similar situations.

Reduces Traffic Density

Saves Time and Fuel

Navigation Safety Improves

Effective Road Network Use

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DATASHEET

SEMI-DYNAMIC SYSTEM (SDS)

It dynamically displays the travel time and traffic density information to the drivers with the LED screens integrated on the fixed direction signs.

SPEED WARNING SYSTEM

It detects instant speed information of drivers exceeding the speed limit and displays to them via LED screens.

PARKING LOT DATA SCREEN

It is a system that informs drivers of instant occupancy data of the closest parking lots on their route on LED screens.

INTELLIGENT TRANSPORTATION SYSTEMS

PUBLIC TRANSPORTATION SYSTEMS

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PUBLIC TRANSPORTATION SYSTEMS

These are systems developed to inform passengers about public transportation services and to ensure the safety of passengers.

PASSENGER INFORMATION SYSTEMS

Information Contact Point

These are systems that inform passengers about the line number, route, and time of arrival of vehicles at stops. Public transportation card loading live voice calls with the authorities to request assistance in case of emergency can be done. Stop-type and pole-type options are available.

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BilgiLED

It is a system that offers real-time travel information to passengers at transportation vehicle departure points such as metro, tram and bus stops/stations. It informs passengers at stops in cases such as schedule changes or cancellations. It can broadcast an emergency message from the center when required.

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PLATFORM SCREEN DOORS (PAKS)

It is a security system consisting of automatic sliding doors separating the metro line and the passenger platform at the station.

As the metro train stops at the predetermined location, the signal system ensures that the separator compartment doors are opened simultaneously with the vehicle's doors and thus, it prevents passengers from falling in the train line..

It is available in three different models: fully closed, semi-closed and semi-high.

Noise and Heat Isolation

Energy Saving in Air Conditioning

Ability to be Used on Autonomous Rail Lines

Reduces Platform Pollution Caused by Train Movement

Safety Glass Doors Resistant to External Conditions

Ability to Operate With Signaling Systems

PDF DATASHEET

IN-VEHICLE CAMERA SYSTEMS

These are systems that improve the service quality of public transportation and increase passenger safety by monitoring the entire mobility of public transportation vehicles such as buses, minibuses, and taxis. By installing cameras capable of recording in the cabin of public transportation vehicles, events can be monitored and recorded.

Also, the location, speed, and route information of the vehicles provided via satellite can be tracked and controlled.

PLANNING & PROJECT DEVELOPMENT

02

PLANNING & PROJECT DEVELOPMENT

TRANSPORTATION PLANNING

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TRANSPORTATION PLANNING

Within the scope of transportation planning studies, medium-and long-term solutions to the transportation issues experienced or projected to occur in cities are being developed.

In this context:

• Transport master plans
• Public transportation planning
• Parking planning
• Traffic demand management

are carried out.

TRANSPORTATION MASTER PLAN

In transportation master plans, which we have prepared or updated for cities with a population of more than 100,000 the following items are fulfilled respectively:

• Collection of available data
• Collection of new data
• Analysis of data and design of model inputs
• Establishment and calibration of transportation demand forecasting model
• Estimating target year inputs (target year projections)
• Creating alternatives and testing them in the model
• Preparation of Transportation Master Plan report

PUBLIC TRANSPORT PLANNING

Public transportation planning studies analyzes the current situation and design future plans in order to integrate public transportation and private transportation and act as a whole. These studies aim at:

• Providing high quality transportation services including economically optimized private and public transportation
• Ensuring comfort by maximizing transportation, access and security for every citizen from a social point of view
• Ensuring environmental sustainability by using resources correctly
• Providing solutions to transportation and traffic problems by giving priority to public transportation systems and environmentally-friendly forms of transportation
• Organizing stops and terminal areas with the integration of public transportation types, and developing various types of transport, including private transport, and transfer opportunities.

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PARKING LOT PLANNING

In the infrastructure of basic transportation systems, long or short-term parking areas in accordance with the traffic flow for motorized or non-motorized transportation vehicles are of great importance. In this regard, the following works are carried out within the scope of parking lot management and planning studies:

- Identifying the park demand and strategies that will provide sufficient parking space according to the environment and urban texture and support the growth principles of the city
- Identifying parking lots that will meet the demand in line with the pre-set strategies and designs
- Directing the daily operation of the city's on-road and off-road parking facilities in accordance with the smart urban development concept
- Evaluating pricing models that support the comprehensive parking lot strategy.
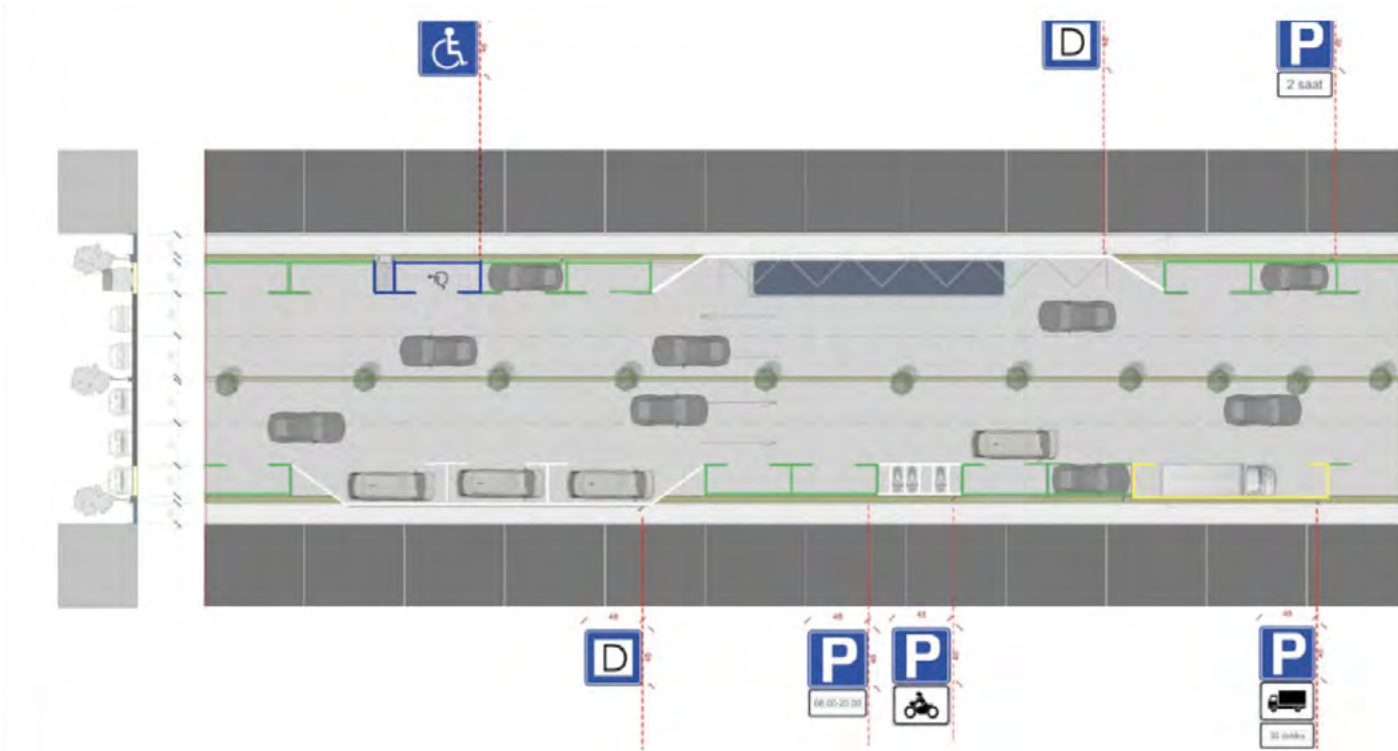
TRAFFIC DEMAND MANAGEMENT

Through traffic demand management studies, various strategies are developed to make the most of the existing transportation infrastructure, to distribute travel demand among transportation types and to manage travel demand. In this context, the following studies are carried out:

Congestion Charging
In places of congestion and where physical regulation is not possible, it releases vehicle traffic in certain time zones of the day and/or charges.

This application aims to manage the demand for the regions where traffic congestion is high.

Flexible Working Hours
These are plans developed with the aim of spreading work and school commutes throughout the day and reducing their negative impact on traffic.

In order to spread the traffic density formed during the morning and evening rush hours, entry-exit hours are organized for businesses and schools.

High Occupancy Vehicle Lane Applications
It is a demand management strategy aimed at improving the mobility of passengers, especially on free roads where density is high in metropolitan cities.

Instead of more vehicles, more passengers (two, three or four passengers) are allowed to pass through the defined lanes. In addition, some alternatives can be developed, such as the use of these lanes for charge in case of less passengers.

PLANNING & PROJECT DEVELOPMENT

TRAFFIC ENGINEERING

TRAFFIC ENGINEERING

The traffic engineering studies develop short and medium-term solutions to existing or anticipated transportation issues.

In this context:

- Traffic counts
- Traffic analysis and simulation studies
- Geometric arrangement and circulation studies
- Signaling projects and analysis studies
- Corridor analysis
- Traffic impact analysis
- Bike lane projects

are carried out.

TRAFFIC COUNT

Within the scope of traffic counting studies, the following detailed counts are obtained:

- Intersection counts
- Sectional counts
- Control counts
- Pedestrian counts
- Passenger counts
- Cordon / Screenline counts
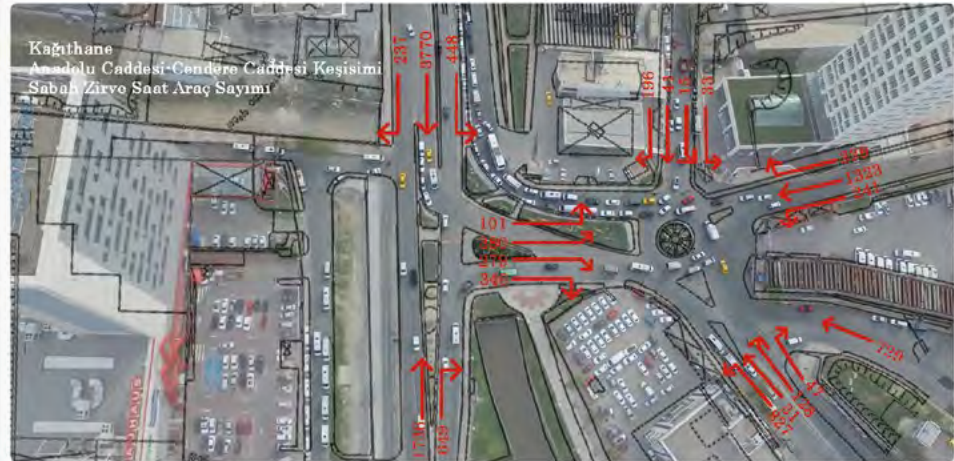
TRAFFIC ANALYSIS AND SIMULATION

- Macro, micro and meso modeling studies
- Analysis of the current situation at intersections with simulation and identification of inadequacies
- Testing the regulations made on the intersection and road sections with simulation
- Making square, crosswalk, train, tram, metro and metrobus simulations
- Conducting travel time detection and delay analysis studies
- Conducting speed analysis studies
- Conducting saturated current studies

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GEOMETRIC ARRANGEMENT AND CIRCULATION

- Preparation of circulation projects on the road network, where it is determined that traffic circulation should be carried out following the counting, analysis and simulation studies
- Making the necessary arrangements on the project by measuring the width of the lane and central median
- Making horizontal-vertical marking
- Determining the road segments suitable for expansion and making the necessary widening or narrowing as required
- Making arrangements at points and intersection areas determined to be problematic
- Making horizontal-vertical marking as required by geometric arrangements
- Arrangement of fuel stations, shopping malls, public buildings, parking lot area entrances and taxi stops on the project
- Arrangement of roadside P zones
- Arrangement of bus and minibus stop turn-outs

SIGNALLING PROJECTS AND ANALYSIS STUDIES

- Signal phase diagrams
- Signal duration optimization studies
- Signal coordination - Green wave studies
- Smart junction works
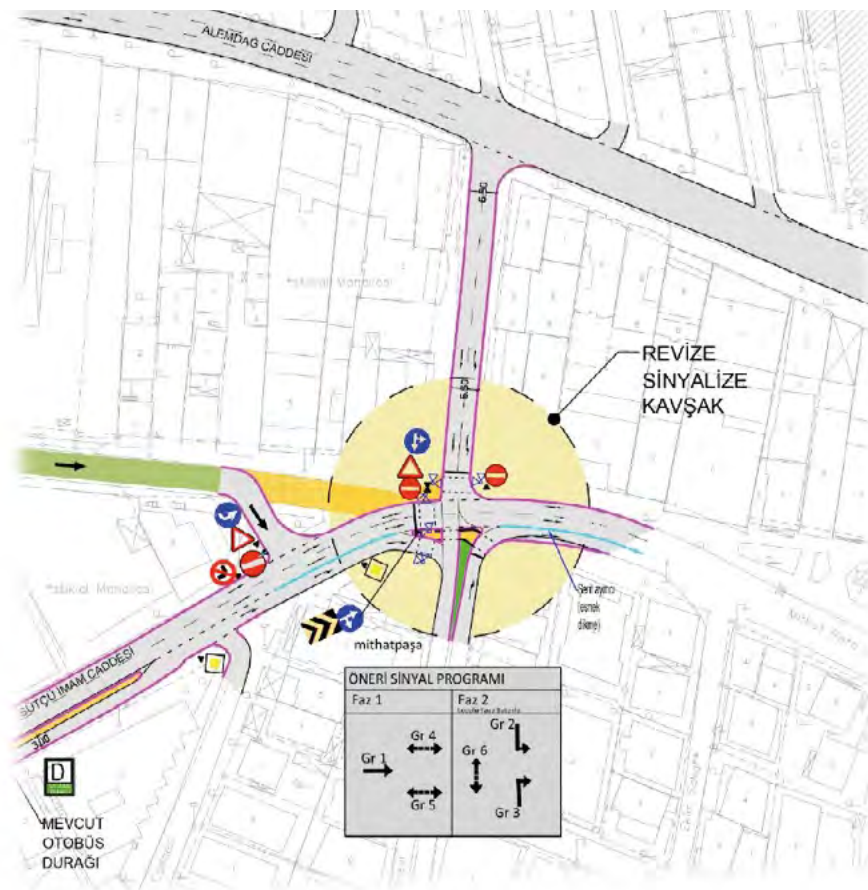
CORRIDOR ANALYSIS

Corridor analysis is carried out along intersections that interact with each other on certain arteries in the city.

Determining the current situation and problem by using various data collection methods on the determined highway routes, then, draft projects are designed and tested with micro-simulation method and evaluation of improvement alternatives along the corridor in accordance with the various criteria.
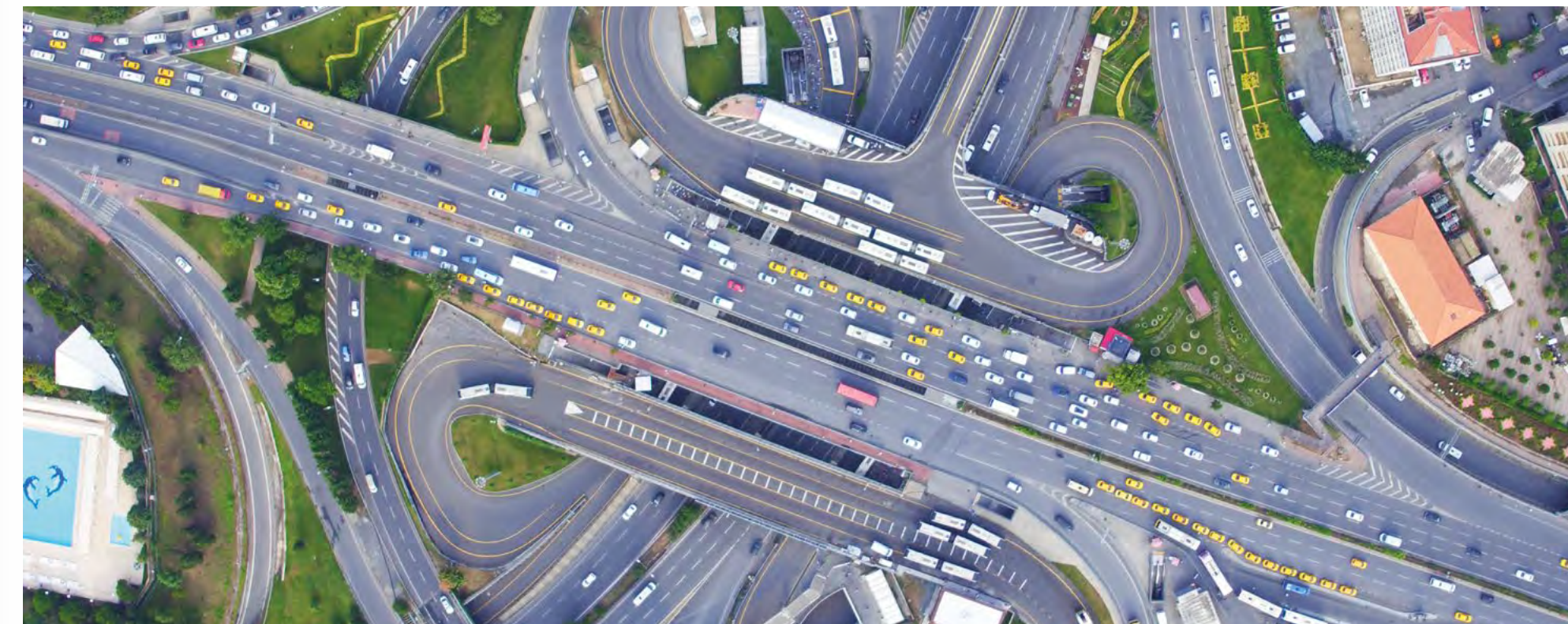
TRAFFIC IMPACT ANALYSIS

In determining potential transport issues, impact analysis studies make important contributions. It is prepared in accordance with the standards prescribed by local governments, credit institutions and foreign investors using international traffic engineering methods. Traffic impact analysis is performed to foresee traffic problems before new real estate investments, tourism and entertainment center investments, shopping malls, residential and office projects as well as tunnel, ring road, airport, public transportation projects.

BIKE LANE PROJECTS

"Micromobility" is among the new concepts on transportation. Bike lanes are one of the most important infrastructures of this concept.

- Determining the need for a bike lane, conducting feasibility studies and designing bike lanes
- Connecting public transportation stations, stops, piers and "park-and-ride" systems with intense passenger movements
- Improving the conditions of bike ride, ensuring a safer and more comfortable bike circulation in the region
- Implementation projects on designated bike lanes

03 INTEGRATED SOLUTIONS

INTEGRATED SOLUTIONS

MANAGEMENT CENTERS

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MANAGEMENT CENTERS

They are management centers that combine separate management platforms and smart city services, categorizing them by importance and providing quick and easy access to critical data.

TRANSPORTATION MANAGEMENT CENTER (UYM)

It provides 24/7 real-time monitoring of all activity and control and management from a single center with traffic cameras spread throughout the city.

TRAFFIC CONTROL CENTER (TKM)

It is the main component of traffic management in solving the increasing transportation problems of cities every day.

With Traffic Control Center, it is aimed to ensure the continuity of traffic flow to use the capacity of the road network effectively, to monitor and control the traffic in real time and on 24/7 basis, to control and manage it from a single center.

DISASTER MANAGEMENT CENTER (AKOM)

It is a control center equipped with imaging, sound, server, control and recording systems, suitable for 24/7 operation, which was established to ensure that cities can overcome all kinds of natural disasters with minimum damage.

ELECTRONIC DETECTION SYSTEM CENTER

It is a center that can instantly detect all traffic violations and manage them by monitoring from a single center.

INTEGRATED SOLUTIONS

CAMERA SYSTEMS

CAMERA SYSTEMS

They are systems in which images obtained from cameras are monitored, recorded and processed for needs-oriented services such as security, touristic activities, mobile applications and transportation planning.

- Durable design suitable for outdoor conditions
- Integrated and easy-to-manage software
- Active data with video analytics (object counting, forbidden zone, etc.)
- Multi-broadcast support

TRAFFIC CAMERA SYSTEMS

CLOSED CIRCUIT CAMERA SYSTEMS

TOURISTIC CAMERA SYSTEMS

TOURISTIC CAMERA
ZOOM IN

TOURISTIC CAMERA
ZOOM IN

TOURISTIC CAMERA
ZOOM IN

INTEGRATED SOLUTIONS

FLEET MANAGEMENT SYSTEMS

FLEET MANAGEMENT SYSTEMS

With our fleet management systems, we provide security and manageability in transportation with technological solutions.

FLEET MANAGEMENT CENTER SOFTWARE

With web-based central software and ISMOBIL mobile application, the location and speed information of the vehicles can be tracked in instant/former time.

It displays information about institution-specific reporting, driver and task assignment, maintenance time alarm, and time for rented vehicles in a single interface.

ISMOBIL mobile app is fully compatible with Android and iOS devices.

- Instant Tracking on the Map
- Multi-Language Support
- Alarm Identification
- Vehicle Grouping
- API Support
- Driver Performance Evaluation

VEHICLE TRACKING DEVICE (VTA900)

The vehicle tracking device (VTA900) transmits the location, speed, route information of the vehicle it is connected to, as well as other sensor data that can be added as an option to the server.

It can update software via SMS and GPRS, and keep up to 50.000 records of data in memory in case of disconnection.

- Instant Tracking on the Map
- Unauthorized Damper Release Alarm
- Anti-Vandal System

PDF DATASHEET

INTEGRATED SOLUTIONS

PDKS

01 **INTELLIGENT TRANSPORTATION SYSTEMS** | Traffic Management Systems | Electronic Detection Systems | Traffic Measurement and Information Systems | Public Transportation Systems | **02** **PLANNING & PROJECT DEVELOPMENT**
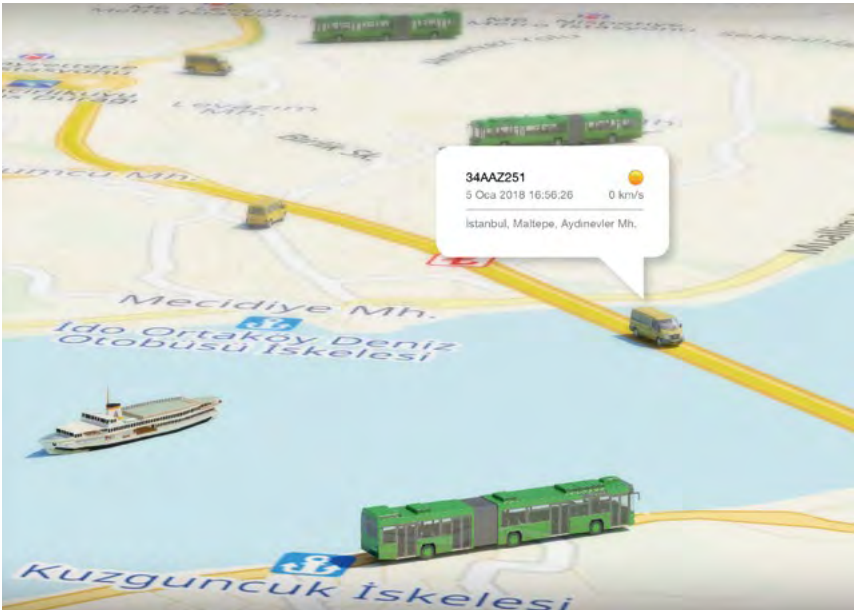
Transportation Planning | Traffic Engineering | **03** **INTEGRATED SOLUTIONS** | Management Centers | Camera Systems | Fleet Management Systems | PDKS | Lighting Systems

PDKS

These are the systems where personnel entry and exit are monitored to ensure safety and time management in institutions. Installation, maintenance and repairs of devices that allow authorized personnel to enter and exit safely with the card are carried out.

DOOR CONTROL SYSTEMS

8:30

17:30

TURNSTILE SYSTEMS

HUMAN RESOURCES

PDF
DATASHEET

INTEGRATED SOLUTIONS

LIGHTING SYSTEMS

01 INTELLIGENT TRANSPORTATION SYSTEMS | Traffic Management Systems | Electronic Detection Systems | Traffic Measurement and Information Systems | Public Transportation Systems | **02** PLANNING & PROJECT DEVELOPMENT

Transportation Planning | Traffic Engineering | **03** INTEGRATED SOLUTIONS | Management Centers | Camera Systems | Fleet Management Systems | PDKS | Lighting Systems

LIGHTING SYSTEMS

We offer integrated solutions with road and tunnel lighting fixtures, general purpose projector and lighting control software for high performance, energy efficient applications for city lighting.

ROAD LIGHTING FIXTURES

They are energy efficient LED road lighting fixtures with high optical performance in compliance with standards and regulations.

LIGHTRA™Power 140W and LIGHTRA™Power 165W options are available.

PDF DATASHEET

TUNNEL LIGHTING FIXTURES

Complying with international standards, they are energy efficient LED luminaries with high optical performance located at the entrance and exit of the tunnel and in a way that does not discomfort sight and provides the best vision.

The armature options are symmetrical and asymmetric.

PDF DATASHEET

GENERAL PURPOSE PROJECTOR

It is a general purpose projector used for lighting areas such as parking lot, square, factory and astroturf.

There are options as aluminum reflector 4xCOB LEDs and NEMA socket, and Power LED.

PDF DATASHEET

01 INTELLIGENT TRANSPORTATION SYSTEMS

Traffic Management Systems

Electronic Detection Systems

Traffic Measurement and Information Systems

Public Transportation Systems

02 PLANNING & PROJECT DEVELOPMENT

Transportation Planning

Traffic Engineering

03 INTEGRATED SOLUTIONS

Management Centers

Camera Systems

Fleet Management Systems

PDKS

Lighting Systems

LIGHTING CONTROL SOFTWARE

It is an intelligent lighting control system that allows the luminous flux to be adjusted according to needs in order to provide solutions that increase energy efficiency in lighting.

- Remote programming
- Switching on-off, dimming
- Operating by sunrise and sunset hours
- Ability to change the luminous flux daily, weekly, monthly or as determined by the user
- Ability to control fixtures individually or in groups
- Ability to monitor fault detection, alarm and energy data of the lighting system from the center
- Maintenance planning and reporting
- Ability to track armature working life using the LifeTimer feature
- Map-based interface
- Monitoring and management via mobile devices

Mobile Control Units

Site Control Device

ARCHITECT OF SMART CITY

ISBAK

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BY INTELLIGENCE, SCIENCE, AND DATA

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