



NO MORE PARKING HEADACHE SMART PARKING MANAGEMENT SOLUTION

 smart solution **2.0**

Parking Management 2017-H2

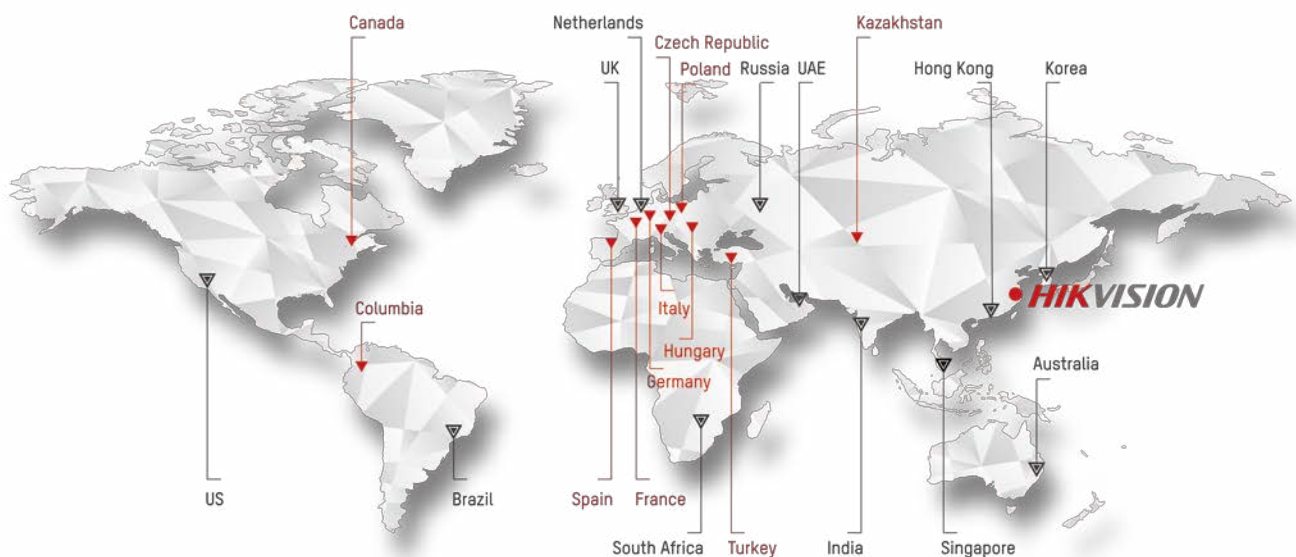
WITH HIKVISION AS YOUR INTEGRATION PARTNER, YOU WILL STAND ON A SOLID FOUNDATION.

RAPID GROWTH

Hikvision is the world's leading supplier of video surveillance products and solutions, featuring the industry's strongest R&D workforce and state-of-the-art manufacturing facilities. In just 15 years, Hikvision has developed from being a single-product provider to a complete product and solution provider and a global market leader.

GLOBAL REACH

- 33 Regional Subsidiaries
- 57% of Employees in International Business Center are locals



BROAD PORTFOLIO

Hikvision's success stories extend over a number of vertical markets. Each year, we add new successes to our list. Still a relatively young company, we continually conquer new applications, building excellence and intelligence into all we do.

Our successful vertical market applications around the world include:

- Smart buildings
- City surveillance
- Parking facilities
- Banking and finance
- Critical infrastructure
- Hotels, casinos, and resorts
- Retail centers and warehouses
- Police, military, and mobile law enforcement
- Education, transportation, healthcare – and more!



FUTURE INNOVATION

Hikvision re-invests upwards of 7% of annual revenue into R&D. We hold over 600 copyrights (100+ increase from 2016) and 1,300 patents (400+ increase from 2016). Of our 20,000 employees, we employ over 8,000 engineers, of which over 2,000 are software engineers.

Hikvision's Research Institute conducts innovative research and development to keep us at the forefront of technology.

- Research topics: Perceptive Technology, Intelligent Analysis Technology, Big Data and Cloud Storage Technology, and Multimedia Technology.
- The largest R&D team in Artificial Intelligence in the security industry.
- Sophisticated experience of video target detection, image segmentation, video structuring and video retrieval.
- Ranked No.1 in Scene Classification at ImageNet 2016 challenge and ranked top in the MOT Challenge Evaluation.

STRONG NAME

Hikvision continues to build close partnerships with distributors, system integrators and installers, as well as third-party technology partners. Today, Hikvision has over 350 technology partners globally.

ECOSYSTEM PARTNER PROGRAM WE SUPPORT YOU ALL THE WAY!



When joining this partner program, you will enjoy access to a wealth of technical and commercial resources, and we ensure that your solution enjoys strategic marketing through our communication channels. You will also get instant access to our entire sales organization. A vital part of our program is the streamlined online communication with our technical teams as well as the tools to plan the go-to-market activities.

PROGRAM TOOLS AND BENEFITS

- **ISAPI** – Hikvision unifies the Application Programming Interface for all products
- **HEOP** – The Hikvision Embedded Open Platform enables you to download and run your applications directly in the cameras
- **Device Simulator** – Simulate communication protocols for testing and development
- **Integration Checker Tool** – Test your applications against the online integration checker tool
- **H-Certification** – Certify your integration/application as proof of compatibility

SUPPORT

- SDK Training
- Integration Support
- Access to Integration Resources

SALES & MARKETING

- Dedicated Business Development Planning
- Networking Opportunities with the Hikvision Salesforce
- Co-marketing and Event Opportunities



Parking Management

CHALLENGES TO EFFECTIVE PARKING LOT MANAGEMENT

Whether it's a small parking lot or a busy, multi-level garage, parking headaches turn visitors or customers away. Solve that problem for good with Hikvision's Smart Parking Guidance Solution. Give customers precise parking guidance using indicating lights and displays, straightforward vehicle search with Kiosks, and quick entry and exit with ANPR systems. Resolving accident disputes is simple since Hikvision Parking Guidance Cameras double as surveillance cameras. This system is easy to install, initialize, operate, and maintain, whether at hospital, office building, or shopping centers.

Solve parking problems and keep customers happy and safe. With Hikvision.

SMART PARKING MANAGEMENT SOLUTION



SOLUTION APPLICATIONS



Parking Guidance

- Detects available parking spaces automatically
- Available spaces indicated by arrow and color



Video Surveillance

- Provides images and video for auto-related security events
- Robust parking log includes vehicle data, alarm info, more



'Find My Car' Application

- "Find My Car" Kiosk locates user's car
- Provides shortest route



Parking Management

- Improve parking lot management efficiency



Entrance & Exit

- Automatic control via ANPR improves efficiency
- Under-Vehicle Screening System guarantees higher level of security

ENTRANCE & EXIT



1 More than just a camera: ANPR, Access Management, Monitoring

- Built-in License Plate Recognition algorithm based on video
- Black/Whitelist configuration and comparison in the camera
- Barrier control by the camera

DarkFighter and True WDR technologies, as well as optional IR or built-in white light LED, ensures crisp and clear images and video of each vehicle for recognition and recording.

An LED display can also be connected to indicate listed plate numbers, available parking spaces, or welcome message.

2 Sensing radar overturns traditional sensing coil

- Easier installation and maintenance – No pavement removal required for the sensing coil
- Extra Safety – Both vehicles and pedestrians benefit from protection
- Robust Design – Free from environmental influences including light, dust, rain and snow

Two radars for each access lane:

- Trigger radar detects approaching vehicle and triggers ANPR and barrier
- Safety sensor ensures the barrier remains open when passageway is not clear

3 Entrance & Exit Controller

These controllers supplement ANPR Cameras, providing tickets for vehicles without plates or with unreadable plates as well as an intercom to call for help in case of emergency situations.



PARKING GUIDANCE



1 Until your way is clear

Parking guidance displays are installed in critical junctions within the carpark, displaying the number and location of available parking spaces, reducing the time taken for drivers to find an available space.



Cameras
1.3 MP



Cameras
3 MP



Cameras
A dual-lens 3MP

3 There is always a suitable camera

1.3 MP Parking Cameras detect and monitor one or two spaces while the 3 MP camera covers three. A dual-lens 3 MP camera detects and monitors six bays with a single camera.



2 Every bay is under control

High-definition and real-time video is provided by the parking guidance cameras for surveillance and incident evidence preservation. What's more, parking bay status detection and number plate recognition are also processed at the front-end based on surveillance video.



4 Let the color do the talking

The indicator light inside the parking guidance camera has seven configurable colors, allowing for dynamic indication of the purpose of the parking bay – disabled users, VIP, or other reservations – and instant indication of parking bay availability. Unique parking status, such as reserved, unlicensed use, or parking over the line can also be indicated.



5 Smart networking

The Parking Guidance Terminal provides not only power and network access for up to 32 nearby cameras, but also provides edge storage for video and images. What's more, the terminal backs up critical data locally and runs parking guidance offline to ensure optimal system reliability.

1

2

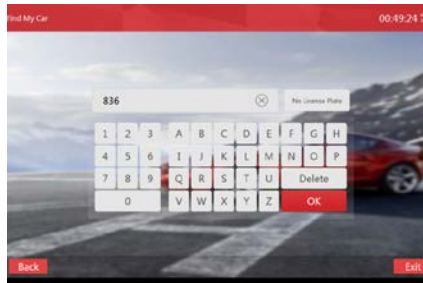
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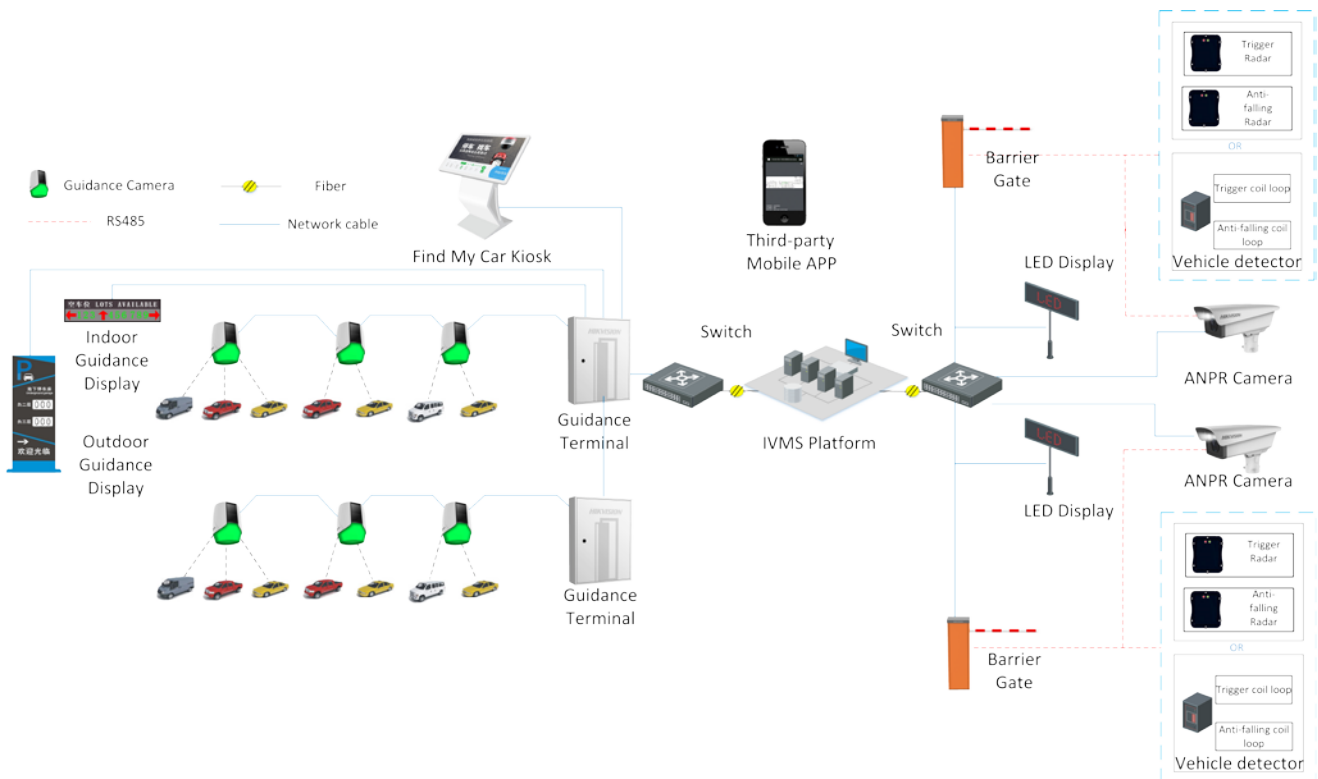
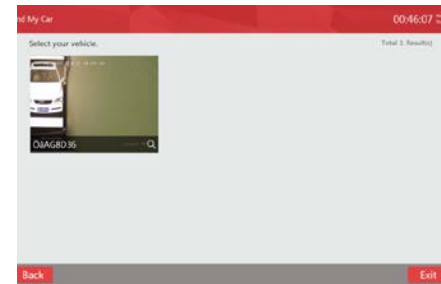
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FIND MY CAR SOLUTION STRUCTURE & TOPOLOGY

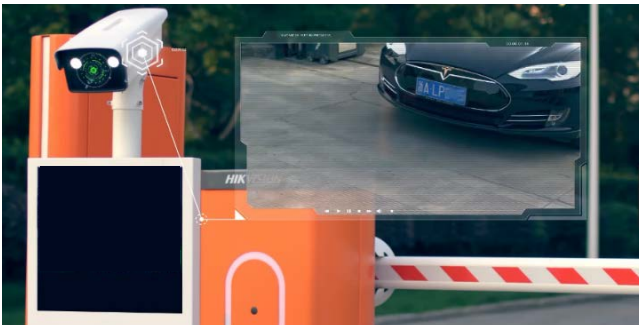


Show me the way

Drivers can use the query kiosk touchscreen before leaving the carpark. By simply entering their plate number in full or in part, vehicles can be easily located on the floor map as well as the shortest and best route. No more getting lost in a large parking garage!

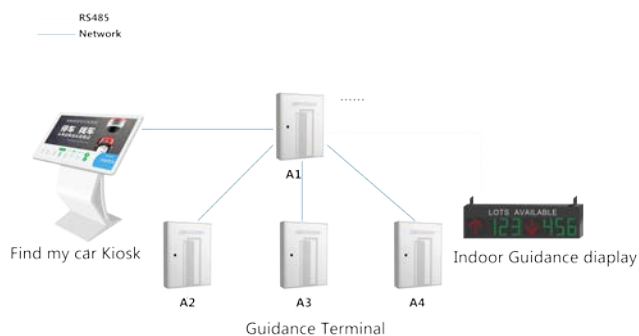


KEY TECHNOLOGY



ANPR

- Uniquely developed LPR algorithm for more than 70 countries
- High recognition accuracy
- Recognition in less than 150 milliseconds
- Algorithm is built into the camera, instead of at the server
- Offline mode ensures continuous operation under network failure



Simplified Cabling

- Up to 8 cameras cascaded connection for both power and network
- Both power supply and data transmission transmitted over a single cable
- Guidance terminal cascades with built-in Gigabit ethernet port
- Flexible guidance display and query kiosk connect to any terminal

System Reliability

- Video, images and data can be stored locally offline if disconnected from central management software, preventing loss of critical information, then automatically forwarded to the CMS upon re-connection
- Parking Guidance continues proper operation even when the CMS is offline due to a distributed backup of the parking database at the guidance terminal
- Health status of all the system's devices is under real-time monitoring, and alerts can be sent automatically and instantly when system status abnormal



Deep Learning Technology

- Optional deep-learning server for supplementary analytics
- Parking status detection accuracy increases with vehicle characteristic recognition



Highly Integrated Guidance Terminal

- 8 built-in PoE ports, 8 non-PoE ports, and 4 Gigabit ports
- Power supply and network connection for camera loops
- Free from power boxes, equipment cabinets, access switches
- Up to 24 TB edge storage for video and images from 32 parking guidance cameras

Indoor Navigation Based on iBeacon

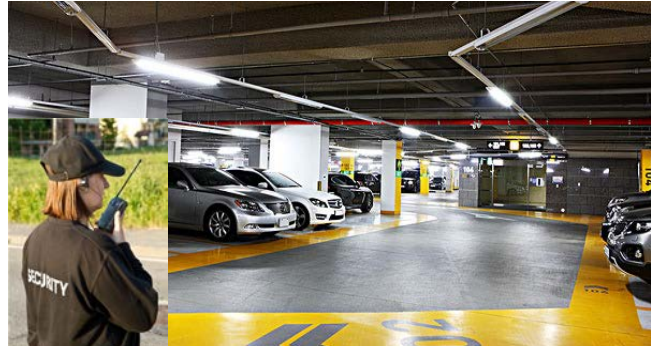
- Optional iBeacon module in parking guidance cameras
- Apple Inc. technology standard for location awareness and interactivity
- API for mobile app (iOS and Android) creates Find My Car and indoor real-time navigation

PARKING MANAGEMENT PLATFORM



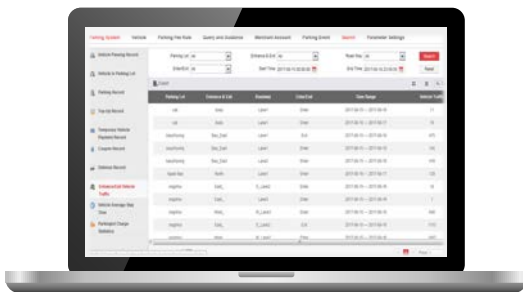
1 Central Management

- Central management for monitoring and configuring all the system's devices
- Support for remote operations including intercom, barrier control, manual correction of license plates, and more



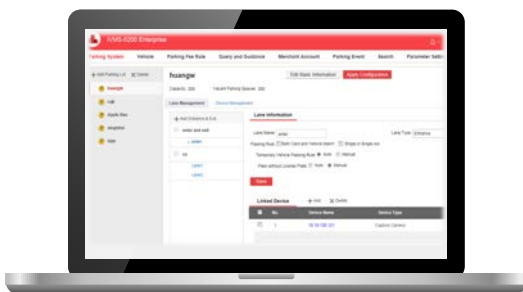
2 Accurate Vehicle Parking Management

Various alarms are supported for unauthorized parking, over-time parking, illegal access, and abnormal status



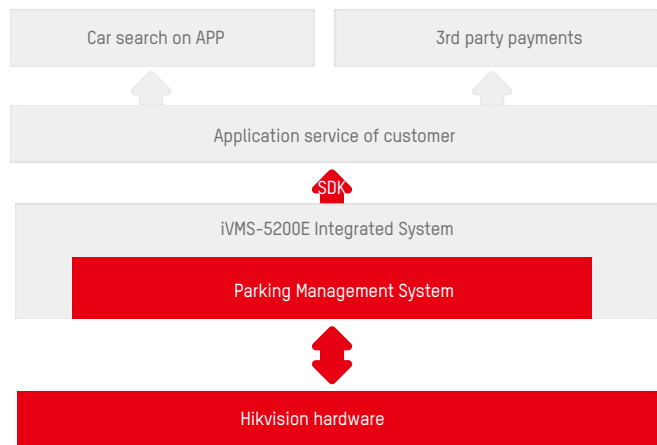
3 Parking Statistics

Statistics report for parking status history, parking bay usage rate, parking vehicle flow, and more



4 System Integration

Highly modularized platform software with options for Video Surveillance, Parking, Access Control, Alarm, Under Vehicle Screening, Visitor Management, more



5 Open Framework

Open SDK for third-party system integration in both mobile and desktop versions for Find My Car, indoor navigation, payment methods, and others

Entrance & Exit



DS-TC6225
ANPR Unit

- 2 MP, CMOS, 1920 x 1080, built-in LPR algorithm
- Integrated camera, housing, lens, power adaptor, supplement Lights
- Motorized lens
- Software one-key focus, easy debugging
- Built in whitelist, LPR identification support, barrier / gate control, audio output



IS-TVL224-4-5Y
E&E Outdoor LED Display

- Four lines of text, LED outdoor Display
- Integrates with speaker
- LED Brightness: 1,200 cd
- Colors: Red, yellow, green
- Pixel Resolution: 64 x 64
- Dot Pitch: P4.75
- Dimensions: 364 x 484 x 60mm



DS-TPE100(1T/2T/4T)
Control Terminal

- 4 Channels of lanes access
- 4 x 10/100 Mbps Ethernet ports, 2 x 1000 Mbps Ethernet ports, dual NICs
- 2 x RS485 ports, 3 x RS232 ports
- 4 x Relay ports support barrier / gate control
- 1 x Audio Output
- 1, 2, or 4 TB HDD included



DS-TME401/402
Entrance / Exit Controller

- Distributes up to 350 cards, accepts and reads cards
- Speaker, LED screen, and intercom integrated
- Supports offline barrier gate control
- Status indicator



DS-TRI400-4
Bluetooth Card Reader

- Ranges from 3 m to 30 m
- Supports Wiegand and RS485 output
- 433 M



DS-TMG400
Barrier Gate

- Barrier Type: Straight-arm; 90°crank- or fence-arm
- Lift Speeds: 1.6 – 6 seconds
- Arm: 3 – 6 m
- Switching quantities control, loop detector, radar, accessible infrared detector
- Manual switch when power is off
- Rebound resistance

PRODUCT SHOWCASE



DS-TMG140
Barrier Gate – All in one

**Region limited*

- Integrates barrier gate, LPR camera, supplemental lights, LED screen, speaker, sensors in one unit
- Speed Adjusting: High-speed barrier 0.9 – 1.8 seconds; mid-speed barrier 1.5 – 3 seconds
- Arm: 3 – 4 m, straight only
- Effectively protects equipment in case of collision
- Manual switch when power is off
- Rebound resistance



DS-TMG033
ESE Radar

**Region limited*

- Emission Frequency: 24 GHz
- Beam Width: Pitch 12 degrees, horizontal 34 degrees
- Trigger Distance: 6
- Response Time : 1 ms
- Detection Area: Transverse width 1 m
- Detection Target: Vehicles and pedestrians
- Relay output



DS-TCPX45-XX
Guidance Camera

- HD 1.3 MP and 3 MP camera, Single / Dual lens options
- Integrated with indicator light, up to 7 colors can be configured
- Covers 1 – 6 parking bays
- Built-in iBeacon module (optional)
- Three external lights can be extended
- Hikvision POE cabling



DS-TVG400
Parking Space Indicator Light

- 7-color parking bay status indicator



**DS-TPM400-
P(3T/6T/12T/18T)**
Guidance Terminal

- Accesses up to 32 guidance cameras
- Integrates power supply, cabinet, and switch for accessing indoor screen, kiosk
- Wall-mounted design provides flexible camera access
- Video and image storage for up to 32 guidance cameras, 6 HDD slots



DS-TPS100
Deep Learning Terminal

- Accesses up to 500 parking bays
- Linux operating system
- Based on deep learning algorithm, two-step recognition of license plates and parking bays
- 1 TB HDD



DS-TPT327-3
Find My Car Kiosk

- 27-inch LCD, capacitive touch screen
- "Find My Car" application
- Displays parking space info, quickest route to vehicle, and a parking space images
- Advertisement display when on Standby



DS-TVL121-X-6D
Indoor Guidance Display

- Indoor one, two, or three-direction indicator
- Single-color display
- Supports RS-485 and Network Transmission

APPLICATION REFERENCE



Beijing International Airport

The Beijing Airport ranked tenth in the 2015 list of the world's top 100 airports. A super-large, world-class facility, China's capitol airport is Asia's number one in passenger throughput, and number two in the world. The parking solution, built by Hikvision, provides convenient parking guidance, helpful car locator, and video surveillance.

Management easily resolves parking disputes based on recorded footage – whether the dispute is over a collision, impact, or scratching. The overall efficiency of the 4,300-parking space structures was enhanced many times over.



Cade Dream in Shanghai

Cade group – one of Asia's largest multinational real estate companies – has long dreamed about developing Minhang Square, which consists of a four-storey shopping mall and a 32-storey hotel. The complex has three ground floors.

Hikvision provided a total parking solution that includes the ESE System and VPGS, hosting 1,600 parking spaces.



Hangzhou Civic Center

The new office and conference center for the Hangzhou municipal government a business center with central business district functions. This project is a typical application of Hikvision intelligent parking management systems in a large-scale integrated service center.

The building accommodates 2,700 parking spaces.



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Distributed by



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