WWW.DASHOU-CHINA.COM

TCP/IP Parking Management System

V32-910 Pay At Exit Ticketing System

Xiamen Dashou Technology Ltd.

The 2nd Floor, No. 882 2nd Tonglong Road,
Torch High-Tech Zone (Xiang`an) Industrial Park,
Xiamen City, Fujian Province, China, 361006

Tel: 0086 592 5558660   Fax: 0086 592 5511002
Email: info@dashou-china.com   www.dashou-china.com

TCP/IP Communication

Web-based Software

Pay-to-Park Parking Management System

V32-910 Pay At Exit--- Barcode Ticket Dispensing & Pay at Exit System

V32-910 Pay At Exit is a TCP/IP based ticketing Parking Management System for managing pay-to-park facilities, for both hourly and season parkers. Hourly parkers take QR code ticket at entry and pay cash at exit, season parkers get access and leave by self-service swiping their cards on Entry Station & Exit Station respectively, or enter and leave w/o stop if window shield tag is read by long range reader. It is ideal solution for parking lots of premises such as shopping mall, airport and hospitals etc.

Web-based management software helps you remotely and centrally manage multi parking lots anywhere and anytime. API provides easy integration of parking system with your own system. airports etc

① Entry Station   ④ CCTV Cameras *
② Exit Station   ⑤ Parking Space Display *
③ Barrier Gate   ⑦ Parking Fee Display *
⑥ Computer
⑧ Loop Detector & coil   Traffic Lights *
                              Voice Prompt *
   Web-based Software   Intercom *
   Charging Software   Cash Box *
   Central Server   Receipt Printer *
   QR Code Scanner   **Remark: items marked * are optional**
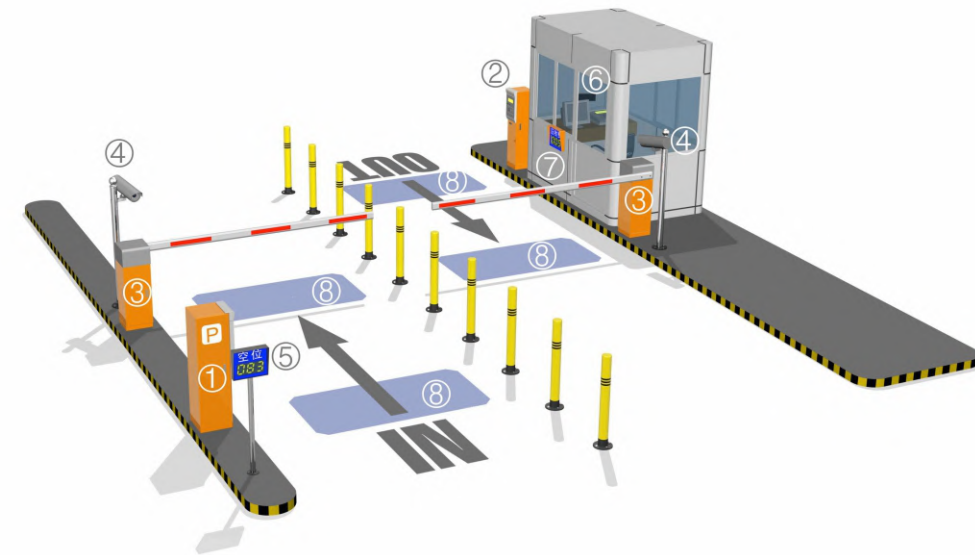
How does Parking System works---For Hourly Parkers (Visitors)

   See video at https://youtu.be/OgA4J89osSA

----- A vehicle approaches entry and triggers Loop Coil of Entry Station

----- The visitor presses ticket button of Entry Station to get a QR code ticket

----- Entry Barrier opens automatically, and it closes automatically after the vehicle passes loop coil of Entry Barrier

----- He drives to the payment point which is located at the exit, and gives the ticket to the cashier

----- The cashier scan the ticket by a QR code scanner, and payment information will be shown on the display

----- The visitor pays cash, then the cashier open the exit barrier

----- Exit Barrier closes automatically after the vehicle passes the loop coil of Exit Barrier.

How does Parking System works---For Season Parkers (Members)

   See video at https://youtu.be/w8f44drYOJw

----- A vehicle approaches entry and triggers Loop Coil of Entry Station

----- The visitor swipes proximity card onto the proximity card reader built-in Entry Station

   Or long range RFID tag on window shield was read by long range RFID Reader

----- Entry Barrier opens automatically, and it closes automatically after the vehicle passes loop coil of Entry Barrier

----- Same will happen at exit

Features

Web-based Management Software

Web-based management software was pre-installed into the Central Server before delivery, which helps you remotely and centrally manage multi parking lots anywhere and anytime.
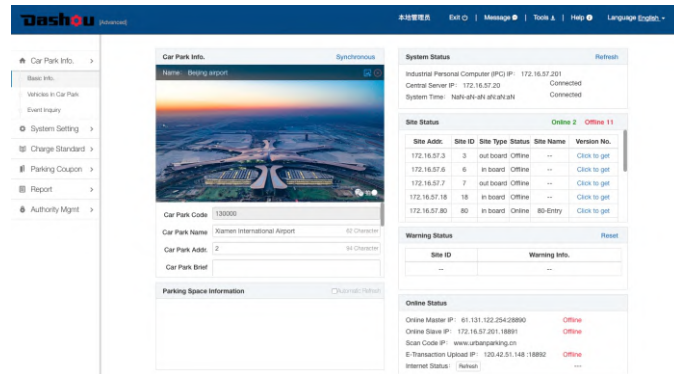

API for Easy Integration

With the open Dashou system and its flexible interfaces (API provided), you can easily and securely integrate Dashou parking system with the third party system such as APP on smartphone.
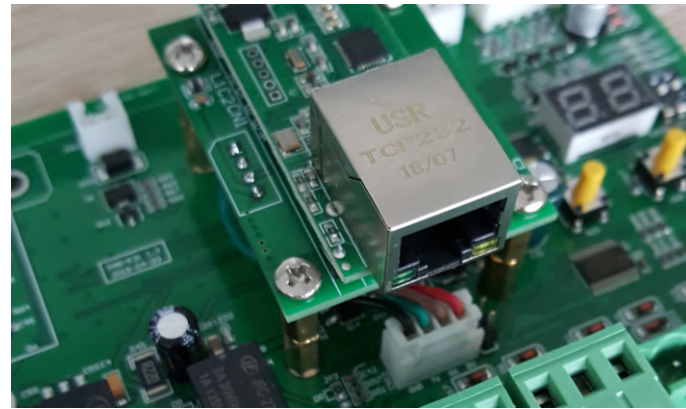
Customizable Charging Standards

The software provides several customized charging standards, each comprises of several sub items such as free time, charging rates during different periods, charging fee during the night etc. Customized charging standards matches all your charging requirements.
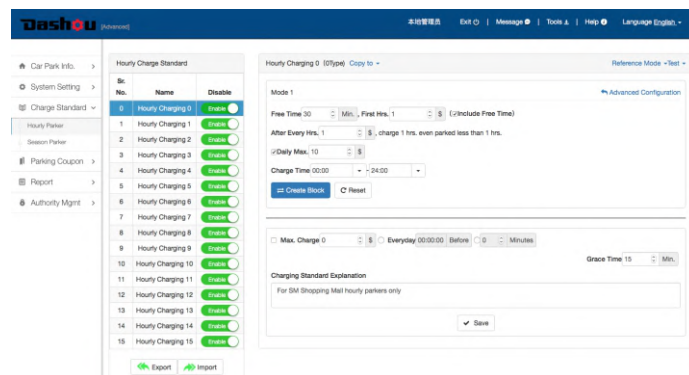

Centralized Report Helps you Increase Sales

Dashou reporting solutions give you access to all datas such as turnover, number of parking customers, etc. - for single or multiple facilities. Reports helps you understand how to improve the operations quality and therefore increase your sales, as well as for your internal auditing, and to analyze customer behavior to steer the development of customized products.

Features

Classical-design Heavy Duty IP54 Cabinet

The cabinet adopts 2mm precise machining cold-rolled plate and static electricity sprayed anti-UV surface which is non-scale and unfading, conformed to the IP54 dust-proof and water-proof. Classical design also decorates your premises.
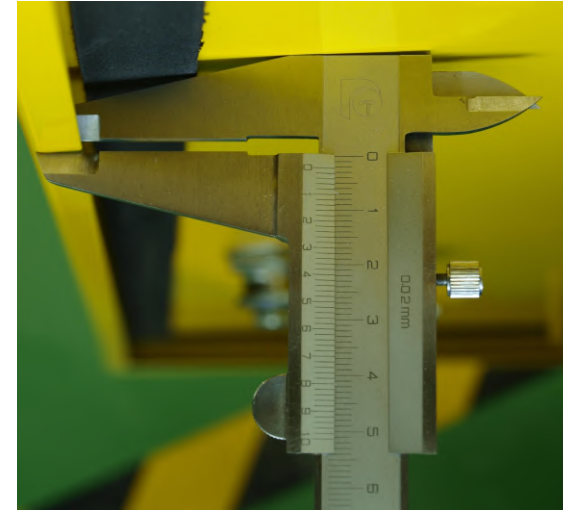

Customizable LCD/LED & Voice Prompt

The entry & exit station can be equipped with LCD or LED screen on which detailed operation and system info. are simply and friendly shown. Voice Prompt gives a warm-hearted welcome and operation guide to parkers. Both LCD and voice prompt can be customized.


Unmanned Entry

Unmanned entry helps you reduce labor cost. Hourly parkers themselves take QR code ticket from Entry Station, season parkers get access by self-service swiping their cards on Entry Station, or enter w/o stop if window shield tag is read by long range reader.
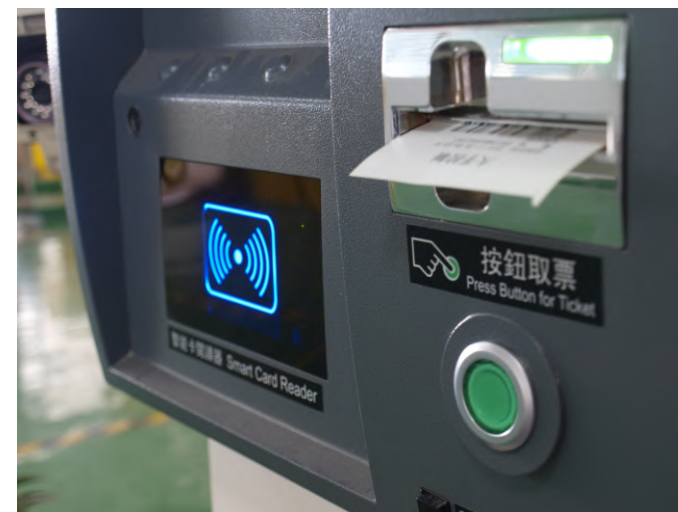
"Image Comparison" Make Parking Safe

When vehicle leaves at the exit, two photos respectively taken by CCTV cameras (installed at entry and exit) will be shown together side by side on PC for comparison, to ensure it is the same vehicle in and out.
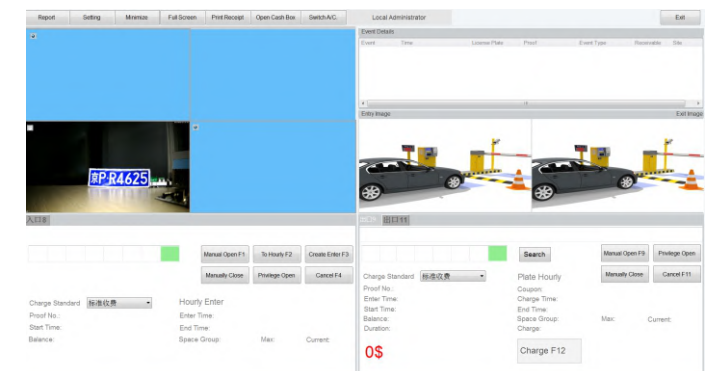
Customizable Parking Coupon

Some shopping malls issue parking coupons to customers for long term relationship. Different types of coupon can be created on the parking management software and sold to shops or end users to deduct parking fee.

Customizable Receipt (optional)

By connecting a receipt printer to the charging PC, you can print out a receipt which can be customized upon your unique requirements on the charging software, even the receipt required by your tax bureau.

Customizable QR Code Ticket (optional)

Some parking lots may require different ticket format which conform with reading habit of natives, some may want the ticket to show charging rate, some want to put their name or blessing on the ticket for advertisement and attract more customers. Customizable ticket now matches all your unique needs.

'One-card-one-vehicle'

With this function, other season parkers can not use the same card to enter before the owner of this card leave parking lot. It ensures safety for season parkers` vehicle and avoids loss of parking fee for owner of parking lot. This function is enable or disable on the management software.

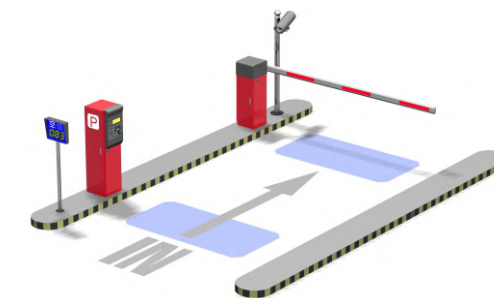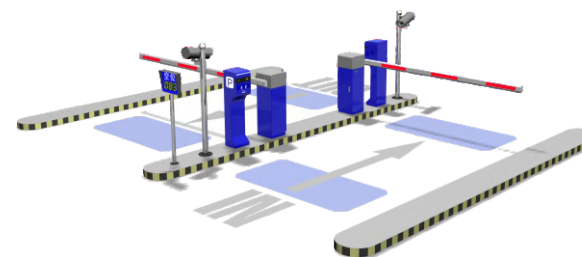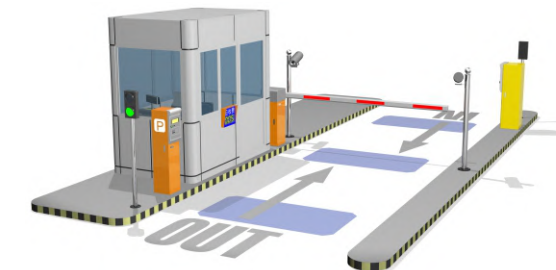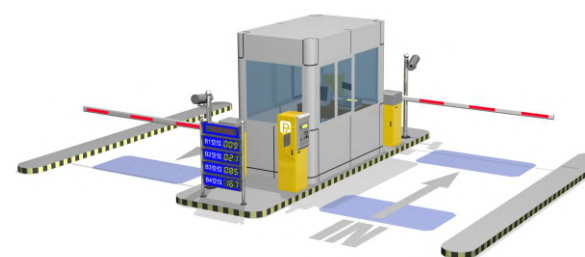## Entry/Exit Station and PC Work Separately

Entry Station and Exit Station separately work fine without connecting to a PC. The data stored in Central Server, Entry Station and Exit Station will be automatically uploaded to a computer if connected.

Automatic Plate Number Recognition (optional)

With plate number recognition, parkers can enter or leave parking lots without stop. In addition, if the plate number captured by exit camera does not match the plate number captured by entry camera, the system will alarm.

Suitable for Various Installing Environment

Modularized configuration structure fits various installing environment, such as double lane, single lane, separated entry & exit, and integrated entry & exit, etc. It is also capable of prompt function with check-in and check-out simultaneously in single lane. See below diagram:

Flexible Management of Parking Spaces (optional)

LED screen displays parking space for either temporary cars or registered cars, and free parking space can be transferred to other cars, all this can be done by parking management software.

System Configuration

• Entry	Entry Station, loop detector, Barrier
• Exit	Exit Station, loop detector, Barrier
• Management Center	Central Server, Web-based Management Software, Charging Software, PC, Receipt Printer, Cash Box
• Optional Devices	Photo Comparison, Voice Prompt, Intercom, Parking Space Display, Parking Fee Display, Middle Distance Card Reader, Long Distance Card Reader, Red & Green Lights, Automatic License Plate Recognition, Heating System etc.

Components Description

Barrier Gate

PAB-BD BEYOND adopts free-maintenance DC brushless torque motor and PWM variable frequency servo controller, fast but smooth moving. Incredible 10 million MTBF and 100% duty cycle makes it continuously work at 7*24 hrs with long life span.Open/close time 0.9~6s adjustable, Max.6m boom. It can be controlled by smart phone via WIFI and by PC via TCP/IP.

Power Supply	AC 85~264V,50~60HZ, Max.0.5A
Motor	50W DC-24V brushless servo torque motor
Controller	80C51 MCU, 20MHz, PWM variable frequency servo controller
Spring	1~3 pcs. spring balance
Loop detector input	Pulse width 100>ms
Infrared detector input	Pulse width 100>ms
Up & Down input	Pulse width 100 > ms
Traffic light output	AC220V output power (passive), current Max. 3A/AC220V
Loop detector Syn. output	Relay NO output, AC 220V/0.5A, or DC 12/1A
Wireless remoter(optional)	Two button remote transmitter, distance > 20m
RS 485 interface	9600bps, ASCII decimal encoded
Arm	45×100mm Aluminum alloy octagonal arm, Max.6m Round arm with foam, Max. 3.5m
Housing	2mm cold-roller sheet, IP 54 level
Housing dimension	329mm×320mm×950mm
Weight	Around 46 KG
Operating temperature	-30℃-55℃
Humidity	10%-95%

Entry Station

Hourly parkers take QR code ticket to gain access to the parking lots. While season parkers get access by self-service swiping their cards close to the reader built-in Entry Station, or enter w/o stop if window shield tag is read by external long range reader. Typically Entry Station is coupled with Barrier Gate, Loop Detector, and optional devices, depending on the site requirements.

Specification

Power Supply	AC 220V±10%, 50/60HZ, Max.1.5A
	AC 110V±10%, 50/60HZ, Max.3.0A
Operating temperature:	-10℃-55℃（w/o heater）
	-40℃-55℃（with heater）
Humidity:	10%～95%
Ticket type:	Barcode, 80g thickness thermal paper
Ticket size:	80mm（W）×70mm（L）
Capacity:	3000 pcs. (80g, diameter150mm) per roll
Ticket Cutter:	high strength, free maintenance
Ticket dispensing time:	<1s
Card reader Interface:	2 nos.Wiegand26 interface
Card Reader type:	EM-ID, Mifare-IC, passive /active long range optional
Reading and verifying time	<1s
Reading range:	EM-ID 10cm; Mifare-IC 5cm
	Passive long range 3-12m
	Active long range 3-15m
LCD Display:	7 inch TFT resolution 480×800 (F style) / LCD Resolution 240×64 (A/C style)
LED Display (optional):	Resolution64×16, active size 256mm×64mm
Intelligent Control Unit:	40MHz Intel 80C51 Microprocessor
	SRAM with holding circuit of losing electricity
	With Real time Calendar Clock
	Multi Rs232 +TCP/IP interface
	Multi 0-5V On-Off input
	Multi Relay output
	DC-DC Electrical Isolation CAN interface, compatible with Peli CAN2.0B
	Lightning protection circuit
Dimension (C style)	400mm（L）×419mm（W）×1250mm（H）
Dimension (F style)	410mm（L）×412mm（W）×1155mm（H）
Dimension (A style)	350mm（L）×419mm（W）×1260mm（H）

C style

F style

A style

Exit Station

With it season parkers can leave by self-service swiping their cards close to the reader built-in Exit Station, or leave w/o stop if window shield tag is read by external long range reader. Typically Exit Station is coupled with Exit Barriers, Loop Detectors, and optional devices, depending on the site requirements.

Specification

Power Supply	AC 220V±10%, 50/60HZ, Max.1.5A
	AC 110V±10%, 50/60HZ, Max.3.0A
Operating temperature:	-10℃-55℃（w/o heater）
	-40℃-55℃（with heater）
Humidity:	10%～95%
Card reader Interface:	2 nos. Wiegand26 interface
Card Reader type:	EM-ID, Mifare-IC, passive /active long range optional
Reading and verifying time	<1s
Reading range:	EM-ID 10cm
	Mifare-IC 5cm
	Passive long range 3-12m
	Active long range 3-15m
LCD Display:	7 inch TFT resolution 480×800 (F style) / LCD Resolution 240×64 (A/C style)
LED Display (optional):	Resolution64×16, active size 256mm×64mm
Intelligent Control Unit:	40MHz Intel 80C51 Microprocessor
	SRAM with holding circuit of losing electricity
	With Real time Calendar Clock
	Multi Rs232 +TCP/IP interface
	Multi 0-5V On-Off input
	Multi Relay output
	DC-DC Electrical Isolation CAN interface, compatible with Peli CAN2.0B
	Lightning protection circuit
Dimension (C Style)	400mm（L）×419mm（W）×1250mm（H）
Dimension (F Style)	410mm（L）×412mm（W）×1155mm（H）
Dimension (A style)	350mm（L）×419mm（W）×1260mm（H）

C style   F style   A style

Loop Detector

Connecting to a ground induction coil with two relays output, loop detector is to detect existence of vehicles.

Specification

Power Supply:	AC 220V / DC 12V，20mA
Dimension:	74(L)×36(W)×85(H)mm (AC 220V)
	27(L)×21(W)×37(H)mm (DC 12V)
Frequency:	29~90KHZ
Sensitivity:	three level sensitivity adjustable by manual
Environment Compensation:	Automatic Drift Compensation technology avoids wrong
	detection caused by environmental temperature change.
Ground induction coil:	80uH-—300uH.
Storage temperature:	-40℃-85℃
Working temperature:	-20℃-55℃
Humidity:	10%～95%

Charging Center (Manual Payment)

When leaving, hourly parkers drive the charging center which is located in the exit, and gives the QR code ticket to the cashier, the cashier scan it by a QR code scanner which is connected to Charging PC, then he pays cash and the cashier open the exit barrier. Charging center is installed with charging PC, Charging Software, QR code scanner, Receipt Printer, Cash Box etc.

QR Code Scanner

Receipt Printer

Cash Box

Charging PC

Central Server (Pre-installed With Management software)

1) It controls vehicle entering and leaving, generates reports etc.
2) It makes the system working seperate when IPC or charging PC is down
3) It consists of below parts:
   Industrial Personal Computer (IPC)
   Pre-installed Parking System Software
   Controller board
   8-port switch
   backup battery
   power supply and fans

  Features of Industrial Personal Computer (IPC) as below:

1) It works as a mini computer with 4G memory & 128G hard disk
2) Linux operating system and Dashou Parking System Software
  have been installed into this, client does not need to install OS
  and Dashou Parking System Software any more
3) Database (Events & reports etc.), photo and logs etc. will be stored into this IPC

Optional Hardware

Photo Comparison, Driver Face Capture, Voice Prompt, Intercom, Parking Space Display, Parking Fee Display, Middle Distance Card Reader, Long Distance Card Reader, Red & Green Lights, Automatic License Plate Recognition, Heating System etc.

Web-based Management Software

The Web-based management software has been pre-installed in the Central Server before delivery, which helps you remotely and centrally manage multi parking lots anywhere and anytime. It provides the operators with idiot proof and user-friendly graphic interface, using it is extremely simple. It provides multi functions, such as managing season parkers and hourly parkers, setting charging standard, real-time surveillance, parking space display, managing events, managing report, registering card etc.

Parking Management System Diagram