

Areas of Expertise

- Asset Management Systems
- Access & Attendance Management System
- Communication Systems
- CCTV Surveillance & Monitoring Systems
- Consultancy Services
- Detection System
- Gate Automation System
- Global Positioning Systems
- Parking Management Solution
- Wired/ wireless Intrusion Alarm System
- Visitor Management



Electronic Parking Management & Guidance Systems

Integrated System: Central Control

- Efficient management of Parking Space
- Resource Optimization Minimal manual intervention
- Accurate recording of parking time: enables time-based parking charges
- Security
 - Identification of all vehicles
 - Logging of Inward & Outward Security data
- Customer friendly:
 - Push button/RFID/App based ingress module
 - Slots availability guidance
- Minimal Pilferage
 - Biometric logging of POS operator



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Parking Flow



Vehicle Enters Mall

Entry Guide display shows available parking slots





Entry of vehicle at Parking level

- Entry Kiosk: Option of Ticket / QR (App) / RFID reader
- Gate Automation system
- Vehicle Image Capture





Displays on each level

Indicate the number of available slots for ease of parking search and movement



Exit of vehicle from the mall

- Collection Booth
- Gate Automation system
- App based payments
- RFID Exit control
- Vehicle Image Capture



Vehicle Exits the Mall
Transaction Completed

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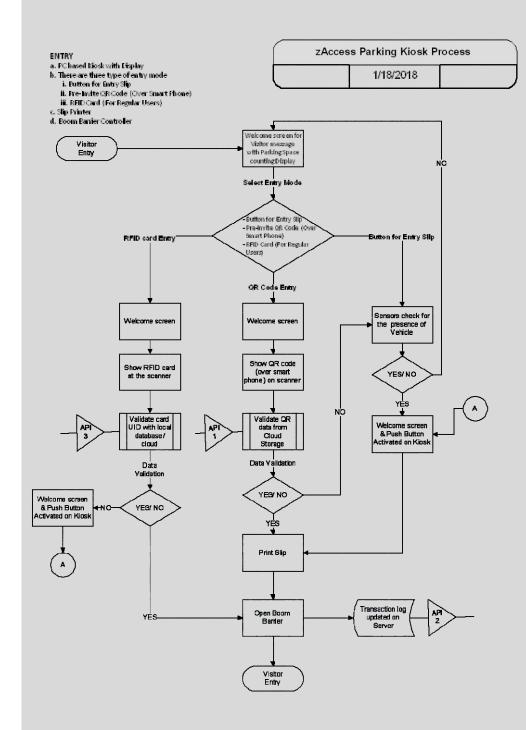
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Sample Process Flow

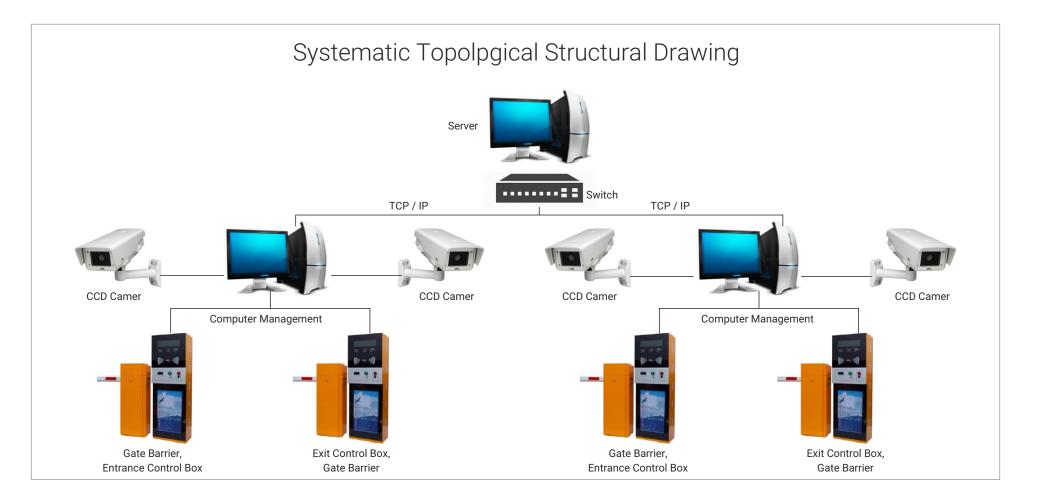
Entry Kiosk: High Level Process

- PC Based kiosk with Display
- Three entry Modes
 - Push Button for entry Slip
 - Pre-Invite QR code. (Over Smart Phone App)
 - RFID Cards (Regular users and members
- Slip Printer
- Boom Barrier Controller
- Vehicle Photograph is logged with entry time stamp



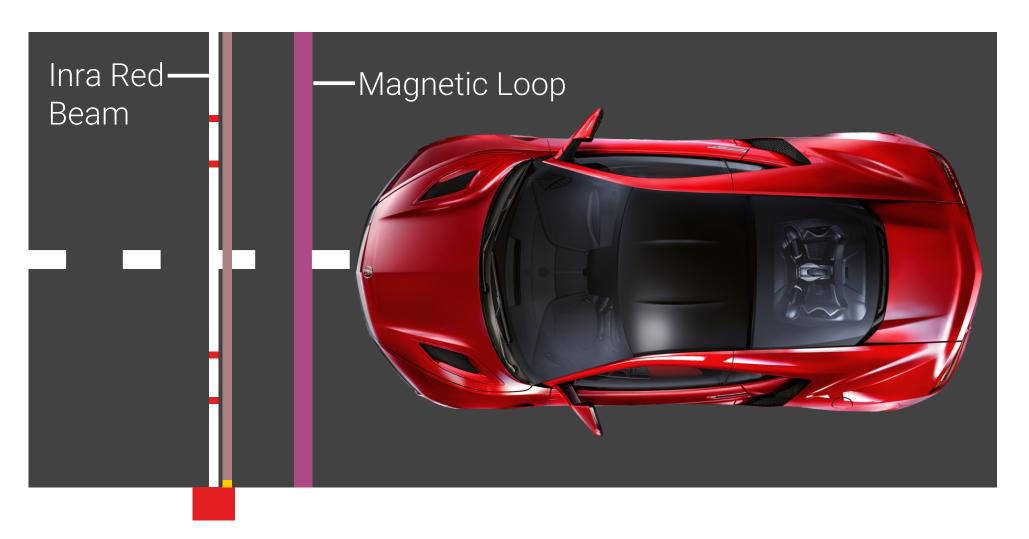
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Network



- Robust Fiber Optic back bone Connectivity for its TCP-IP based network for transmitting real time Data and Video.
- It is more reliable as its signals are immune to any noise and Electro Magnetic interference.
- Easier to maintain
- Power Requirement: Regular, un-interrupted, fluctuation free, stabilized power with earthing (0 to 6 V between Earth and Neutral) should be made available, through an on-line UPS.

Boom Safety

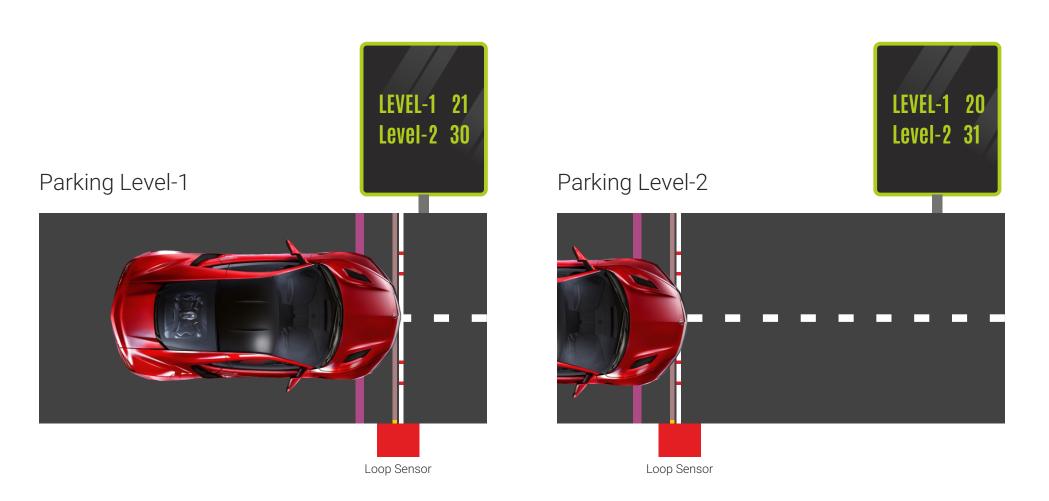


There are 2 safety devices against to prevent boom from crashing onto vehicles:

- Infrared Beam
- Magnetic Loop Detector

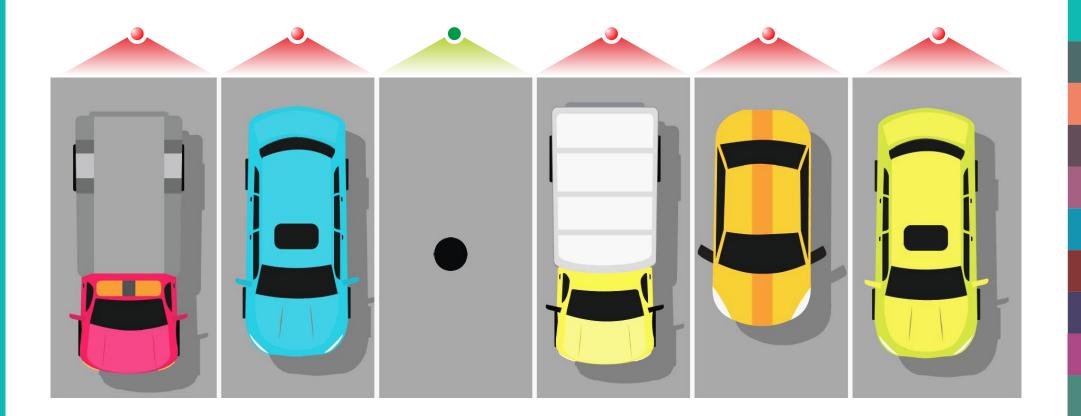
Car movement between level-1 to level-2

The parking level display monitoring using loop sensor, when car move level-1 to level-2. The display board change according to loop sensor output. When car entered level-1 to level-2 the every display board change according to the current status. Parking Level-1 display board decrease and Parking Level-2 increase.



Car Parking Space Ultrasonic Sensor

Ultrasonic sensors register the availability of every single parking space and process the information with a controller/central PC. The car park occupancy data are visualised and indicated on LED displays installed on every car park level and at the main entrance. With this system customers are guided to the nearest available parking space. A benefit that doesn't only save the car drivers valuable time but also reduces the traffic produced by endless searching. Moreover, the optimised parking utilisation decreases ventilation costs. The detection and counting of in- and outbound vehicles in indoor parking garages with MSR-Traffic systems can be realised for whole areas and single levels.



Proposed Boom Branding

Branding Option on the Entry & Exit Booms Barrier

- Back lit LED signage on Boom Barriers
- Display to show current promotions or permanent store branding
- Long Life & maintenance Free
- Additional revenue stream for the Mall
- In line of sight: Guarantees visibility from vehicles
- Minimal Cost



System Components

ENTRY CONSOLES

Ticket Printer with cutter

RFID card reader

Display

Push Button

Controller with TCP/IP

Wake up loop detector

BARRIER SYSTEM

HUB

Boom Arms

Press Buttons

Anti Crash IR+ Loop detector

Warning Light Indicator

Controller

Manual Counter

EXIT BOOTHS

POS System

RFID card reader

Finger Print reader

Display

Barcode Scanner

Controller

Receipt Printer

IP CAMERA

Camera

Power Supply

LOOP DETECTOR

Sensor

Loop

Controller

FIBER OPTIC BACK BONE

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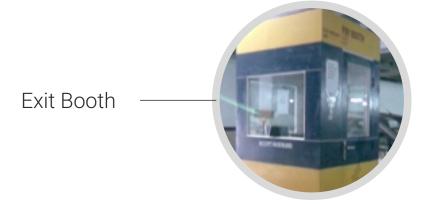
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Vehicle Exit

- At the time of exit the guest presents the barcode ticket to the attendant sitting at the POS machine, who scans it, compares the entry and exit photographs, collects the money, issue a receipt upon which the exit barrier opens and the guest exits. OR the App is used for exiting.
- On scanning of ticket the 2 wheeler, 4 wheeler & heavy motor vehicle collection option is reflected by the software automatically.
- If the guest has an RFID Member Tag, then on approach towards the exit barrier opens and the guest exits smoothly.
- USP of the system is that only after verification of the car entry and exit photograph and after the payment has been collected the boom opens.







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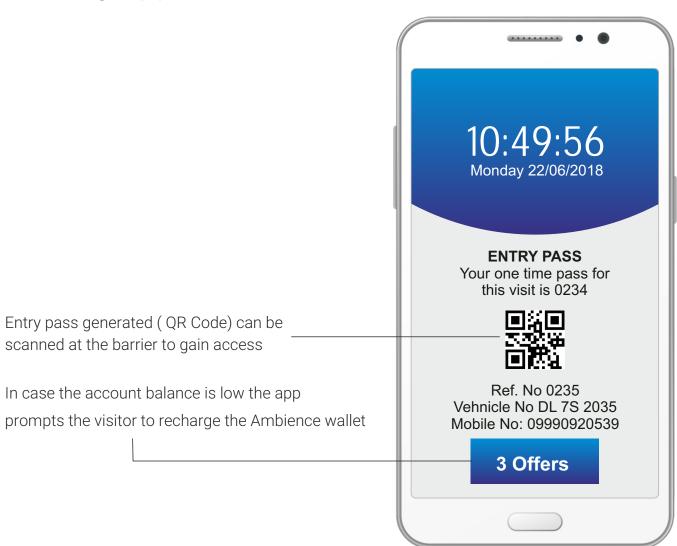
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Parking App

- All the Ambience Group Properties of the affiliated properties can be listed on the landing screen.
- User selects the property he intends to visit.



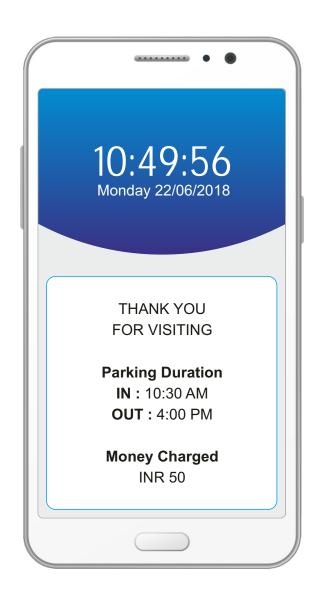
Parking App





Parking App

- The same entry pass is flashed at the time of exit.
- The visitor will be exited and a acknowledgment message is sent.



Control Room







- Since the entire system is on network, the complete data of all the entry / exit points is immediately transferred to the Control Room. In the Control Room the Parking Management software on-line updates the status; Updates the availability of each level; Amount Collected; etc.
- Online visual monitoring of all the Entry and Exit point is done.
- All IP addresses of all devices is monitored at all times to ensure 100% up-time. Other computers at the Control Room are used to maintain and calculate daily collections and generate MIS Reports.
- Server Data through LAN can be viewed live from multiple points as desired. OR by static IP the same can be viewed from any remote location simultaneously by 2 more points.

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Advantages

- PIntegration of all components into a robust system
- Use of latest state of the art hardware.
- Development of bespoke software as per requirement.
- Fully integrated App
- Safety features
- System built with proliferation prevention measures.
- Log of all vehicles is maintained for verification at a later time, if required.
- Integration of Loyalty programs through App.
- Use of finger print access at Cash Collection Booth records the log of person on duty with time schedule.

Additional Requirements

PARKING PERIPHERALS

- Porta Cabin / Booth
- Signage
- Road stubs
- Que-managers
- Indicators
- Direction & Under search Mirrors

PERSONNEL

- Computer Operators
- Supervisors
- System Administrators
- Traffic Attendants

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