

# Smart Parking System

**Smart Parking System is a parking management and matching technology that connects drivers with vacant parking spaces, enabling efficient use of parking lots.**

This system addresses parking shortages by maximizing the use of existing parking spaces rather than constructing new ones. It creates revenue opportunities for parking space providers and ensures the continuous availability of parking spaces through effective sharing.



▲ Drivers can check parking space availability in real-time.

## Issues to Tackle

- ☑ Limited availability of physical parking spaces to address parking shortages in cities and residential areas.
- ☑ Need to resolve inconveniences caused by searching for parking in areas with insufficient parking lots, such as vehicle idling and long-distance walking after parking.

## Expected Benefits ☒

- ☑ Improves parking efficiency by sharing private parking lots, prioritizing public and resident-only parking spaces during off-peak hours.
  - \* Reduces average vehicle idling time by 10 minutes, illegal parking by 13%, and CO<sub>2</sub> emissions.
- ☑ Enhances parking turnover rates by 17%, increasing revenue potential.

## 💡 Key Services

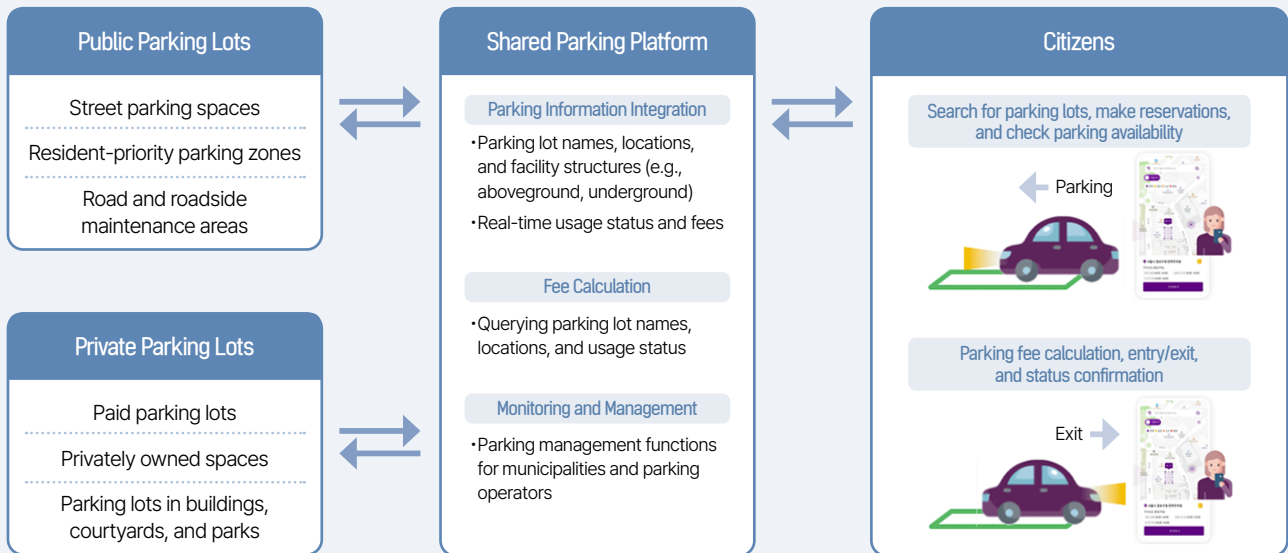
- Provides information about available parking locations, spaces, and fees via a smartphone app.
- Automatically calculates fees and processes payments when entering/exiting parking lots using vehicle number recognition.
- For locations with limited parking infrastructure or private parking lots, shared parking can be implemented using ultra-precise satellite-based augmentation systems (SBAS) and smartphone apps.

## ⚙️ Use Cases

- Nationwide integration of public, private, and personal parking systems with shared parking platforms to enable real-time parking lot search and reservation.
- In Jeju City, connected municipal and private parking lots within 300m to address parking shortages through shared parking.
- In Seoul Gangnam District, Seongnam City and Uijeongbu City, implemented app-based shared parking services that do not require additional hardware installation.

## Key Components

## Configuration



## Key Technologies

## 1. IoT Sensors and CCTV for Parking Space Monitoring

- IoT sensors embedded in parking lot floors detect vehicle occupancy, while installed CCTV monitors parking areas and captures any violations.

**POINT** Applicable to parking lots with more than 30 spaces using existing CCTV systems.

## 2. Parking Space Information Sharing Devices

- Provides real-time information about parking spaces in public and private facilities using IoT and CCTV-based equipment.

## 3. Applications for Users (Drivers) and Parking Providers

- Offers integrated services such as parking search, reservation, and payment for drivers. Provides real-time settlement and revenue monitoring services for parking providers.

## 4. Management System for Shared Parking Operators

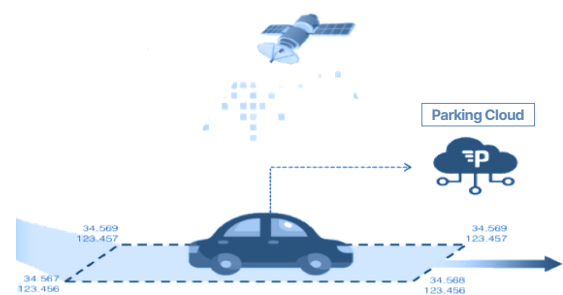
- Dashboards for municipalities and parking operators enable web-based monitoring and management of parking lot operations.



## App-Based Shared Parking Platform Without Sensors in Parking Spaces

- Utilizes digital conversion technology to transform unused spaces like on-street parking or vacant land into parking lots, regardless of their layout or form.

**POINT** Ensures 1-2m accuracy using ultra-precise SBAS (Satellite-Based Augmentation System) technology to correct GPS errors.



## Technology Companies

**DONGSUNG ITEC**  
www.flexparking.co.kr

**KAKAO MOBILITY**  
www.kakaomobility.com

**MDS MOBILITY**  
www.hmobility.co.kr

**MOBILE PARKING**  
www.mobileparking.co.kr

**MODU PARKING**  
www.moduparking.com

**ZOOMANSA**  
www.zoomansa.com

