

The NEXPA logo is located in the top left corner of the image. It consists of the word "NEXPA" in a bold, white, sans-serif font, with a red diagonal slash through the letter "X". The background of the entire image is a photograph of a modern shopping mall building with a white and grey facade, large glass windows, and various signs for stores like "UNIQLO" and "GU". In the foreground, there is a parking lot with blue and red traffic cones, a yellow and black speed bump, and a white metal railing. A large purple box on the right side of the image contains the title text.

**NEXPA**

# NEXPA SYSTEM IIAS-Kasugai JAPAN CASE STUDY

PMS : Parking Management System (LPR machine)  
VPGS : Video-based Parking Guidance System  
(Omni directional IP camera, Guidance displays)

# Background NEXPA SYSTEM

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- Founded in 2004, NEXPA has been developing and implementing revolutionary technologies that drive the world of smart parking and public surveillance to the next level.
- At NEXPA, we constantly test and challenge our technology; we strive to offer smart and convenient solutions to our customers. With over 50 patents in video analytics and surveillance systems, we have the expertise and experience to provide solutions tailored to maximize the potential of a parking lot, transforming it into a pivotal asset that supports business growth.
- Together with global partners like Cisco System, Inc., NEXPA looks to continuously develop advanced parking solutions as one of the key pillars of IoT(Internet of Things). As a part of CIM(City Infrastructure Management) of Cisco Systems, Inc., we work towards the vision of a world with smart cities and communities.

# Project overview



## <Introduction of IAS-Kasugai>

IAS-Kasugai is the largest commercial complex in Kasugai City with a total floor area of approximately 81,000 square meters, which will be developed on the site of the commercial facility "The Mall Kasugai Store Part 1". IAS-Kasugai is owned by Daiwa House Industry Co., Ltd. and opened as of October 22nd, 2021. Daiwa House Industry Co., Ltd. selected NEXPA's SMART PARKING SOLUTION for the efficient operation of their outdoor and indoor parking lots, aimed to improve its brand image and loyalty of their customers. NEXPA's solution is easy to run for the parking lot operator and is convenient for the parking lot visitors.

## <Challenges>

The main purpose of this project is;

- ① PMS: Parking Management System (LPR machine)
- ② VPGS: Video-based Parking Guidance System  
(Omni directional IP camera, Guidance displays)

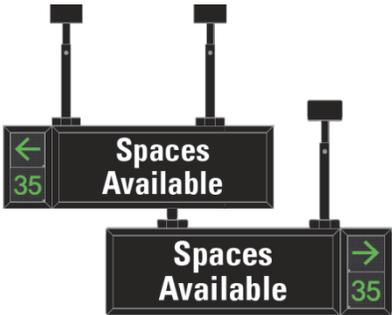
# NEXPA Proposed Solution Major Components



→ **[Single camera LPR machine]**  
Automatically recognizes the front and rear plate numbers with a recognition speed of 0.8 seconds, after detecting a vehicle. It has LED display to show the plate number information and uses infrared high brightness LED lighting to achieve high recognition rates in bright, dark, and harsh environments.



→ **[Omni directional IP camera]**  
Plate numbers can be recognized up to 6 vehicles concurrently, once a car is detected in the coverage area. It is raceway mounted in the middle of the driveway and powered by PoE. For the LED indicator, red and green are typically used, but other colors are also available for special bay indication such as handicapped, VIP etc.



→ **[Guidance displays]**  
Displays available spaces with directional arrow for the current and next floor in the car park.

## [Parking lots status]

The screenshot shows the ijas KASUGAI website interface. At the top, there is a navigation bar with icons for Floor Guide, Shop Search, Shop News, Access/Parking, In-store, News & Events, and a phone icon with the number 0568-27-5133. To the right, there are details for business hours (10:00-20:00) and rest days (11:00-21:00). The main content area features a large yellow and pink graphic for 'Loft' announcing a 'NEW OPEN!' on '3.11 [FRI] OPEN!' at 'イース春日井 2F'. Below the main graphic is a parking status indicator showing a large 'P' and a '空' (Empty) button. A legend explains the status: '空' (Empty) means '駐車場の余裕があります' (There is room in the parking lot), '混' (Mixed) means '車での未帰をお控え下さい' (Please refrain from returning by car), and '満' (Full) means '入庫いただけません' (No entry allowed).

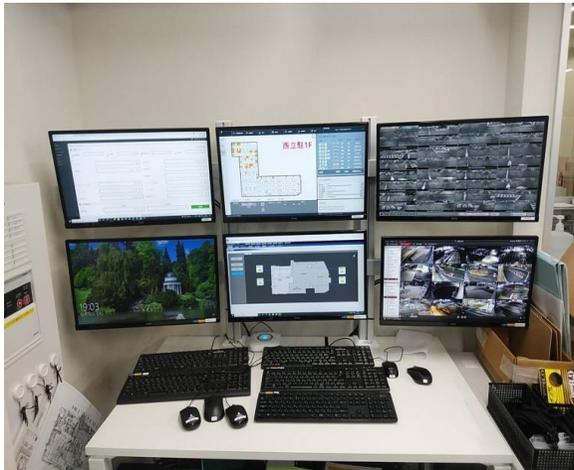
# Site pictures ①



# Site pictures ②



# Site pictures ③



Parking Control Center

# Site pictures ④



Rack & Center equipment



Car count sensor

This sensor can count the number of cars those are coming-in and going out at a parking lot with a great accuracy.

## Conclusion

- This study case has been prepared to introduce a project case NEXPA has successfully completed for a commercial complex called IIAS-Kasugai in Kasugai city, Japan. Daiwa House Industry Co., Ltd wanted to deploy a high-end parking solution using state-of-the-art technology and selected NEXPA's smart parking solution.
- Our system is not only simple for visitors but it is also convenient for operators. In visitors' perspective, they can easily find an available parking space by checking the color of LED indicator and see the entrance/floor/zone guidance signage to decide where to go. In operators' perspective, they enable to operate parking lots efficiently using an automated system. Allows the operator to monitor the parking lots, manage the parking bays, and use statistics. It helps to increase the utilization of the parking lots and reduce the labor costs.
- Based on the IIAS-Kasugai case, the NEXPA smart parking solution is being expanded to the parking management & guidance markets in the Japan.