NEC has developed the automated and advanced entry management system with automatic number plate recognition and matching solution for vehicle identification through Optical Character Recognition (OCR), a technology it has developed over many years of experience. Protecting customers’ security environment through highprecision video surveillance.

How the solution works?  [In the case of License Plate Number Recognition]

Features
- Backed up by a rich deployment experience within Japan and a proven excellence in recognition capability and accuracy.
- Recognizes license plate images taken using the license plate recognition camera.
- An alarm is sounded off when a vehicle having a license plate number not listed in the registered data base is detected.
- License plate numbers detected by the system are recorded in the logs and can be searched and used for later analysis.

We can also create a work application program for customers upon their request.

Application Case 1. Vehicle Behavior Monitoring Solution

- Detection of overspeeding
  Possible through NEC’s advanced image recognition technology
  Measures speed of vehicle and captures over-speeded as “RED REGULAR CAR of #AB1234”

- Recognition from car-mounted cameras and LPR engine
  Mounting the camera and recognition engine in patrol cars enables real-time license plate recognition and matching while on the road.
  Able to capture license plate numbers of fast-moving oncoming vehicles

- And more differentiators
  - Uses object recognition technology to automatically detect suspicious driving, such as zigzag driving and driving in the wrong direction, and entry into restricted zones.
  - Enables identification of vehicles from motorbikes and persons.
Application Case 2. Container Number Recognition Solution

NEC has also realized the recognition of container numbers on container trucks.
Recognizing container numbers in addition to license plate numbers further increases accuracy of vehicle identification.

- Since container numbers are not written on a fixed location on containers, the system first detects the container number on the container.
- If the container number is written on more than one location on the container, the system carries out matching to determine if they are the same or not.
- Matching with a blacklist or a whitelist is also possible depending on customers’ use requirements.

License Plate Recognition technology / Detection, extraction, and character recognition

NEC’s propriety technology enables rapid and accurate character recognition, realizing a very high recognition rate.

![Image Restoration and Correction](blurry_image.png)

![Object Detection](object_detection.png)

![Restoration Results](restoration_results.png)