

Fast and comprehensive vehicle identification

HPE IDOL for vehicle make and model recognition and automatic number/license plate recognition

Typical applications include roadway and parking lot video surveillance, access control, monitoring activity at gas stations, security for in-car payments at drive-through outlets and toll booths, border controls, and managing logistics depots.

With increasing automobile-related safety and security issues, it is critical to leverage all relevant data to quickly and accurately identify vehicles of concern. Criminals can no longer get away with swapping license/number plates to avoid discovery. HPE IDOL, a Big Data analytics platform, enables a holistic vehicle identification approach by providing complementary capabilities of automatic number/license plate recognition and vehicle make/model recognition.

HPE IDOL addresses every aspect of vehicle recognition and tracking, together with advanced recording, retrieval, and analytical capabilities.

Automatic number/license plate recognition

With support for 48 countries worldwide and the 50 states in United States, a broad range of alphanumeric and non-alphanumeric plates can be recognized (see appendix for list).

HPE IDOL identifies plates on vehicle travelling at speeds exceeding 100 MPH automatically from single images or video streams and is compatible with existing CCTV systems. As part of the IDOL platform, it automatically correlates and cross-references identified license plates with other data, making associations between recorded plates and other pieces of intelligence such as law enforcement records.

Vehicle make and model recognition

The newest generation of IP-based video surveillance technologies is replacing analog CCTV systems to deliver superior definition, using high-megapixel cameras and high-quality lenses to produce full-motion, real-time video streaming. These capabilities work in close concert with the vehicle make and model image recognition function to detect the make of the car, the name of the company that manufactures it, and the model of the car (its specific name) by capturing images of the front and back of vehicles and checking them against a pre-trained database.

Solution brief

Better together

While the two functions can work independently, they can seamlessly work together to deliver a comprehensive vehicle identification solution.

Here is how they work together:

- **Step 1:** Automatic number/license plate recognition identifies the location of a number plate (essentially as a zone with high contrast as plates are dark-light-dark-light).
- **Step 2:** Automatic number/license plate recognition analyzes the plate region to record OCR (optical character recognition) plate boundaries.
- **Step 3:** Automatic number/license plate recognition selects a region of the image around the number plate.

- **Step 4:** Automatic number/license plate recognition passes the region to vehicle make and model recognition, which runs an object detection algorithm on the zone to find a match to a known vehicle model.

With built-in digital and network recording capabilities and the ability to integrate with multiple repositories, such as law enforcement databases, vehicle registration, and traffic records, HPE IDOL can be easily deployed for a wide range of vehicle video surveillance or traffic safety operations. It is well suited for use with cameras that are fixed in the same area of the traffic flow, where lots of traffic can be used to quickly build a database (e.g., bridges, overpasses, freeways, tunnels, parking entrances).

With this holistic approach, you can:

- Prevent false claims by using the rich media analytics solution at red lights to capture traffic violations on camera.
- Support ticket accountability with license plate and vehicle data.
- Corroborate tickets with license plate and vehicle make and model data.
- Create indisputable, court-admissible evidence.
- Help simplify database management by automatic population of source to table.
- Enable covert and overt operations when a license plate is just not enough.
- Vehicle make information provides accountability when a license plate has not yet been assigned.

Appendix

Americas		Europe, Middle East, and Africa		Asia Pacific
Argentina, Brazil, Columbia, Mexico, Peru, Venezuela				
United States – Alabama	United States – Maine	United States – Oklahoma	Albania	Nigeria
United States – Alaska	United States – Maryland	United States – Oregon	Algeria	Norway
United States – Arizona	United States – Massachusetts	United States – Pennsylvania	Austria	Oman
United States – Arkansas	United States – Michigan	United States – Rhode Island	Bahrain	Poland
United States – California	United States – Minnesota	United States – South Carolina	Belgium	Portugal
United States – Colorado	United States – Mississippi	United States – South Dakota	Czech Republic	Qatar
United States – Connecticut	United States – Missouri	United States – Tennessee	Denmark	Russia
United States – Delaware	United States – Montana	United States – Texas	Finland	Serbia
United States – Florida	United States – Nebraska	United States – Utah	France	Slovenia
United States – Georgia	United States – Nevada	United States – Vermont	Germany	South Africa
United States – Hawaii	United States – New Hampshire	United States – Virginia	Greece	Spain
United States – Idaho	United States – New Jersey	United States – Washington	Ireland	Sweden
United States – Illinois	United States – New Mexico	United States – West Virginia	Israel	Switzerland
United States – Indiana	United States – New York	United States – Wisconsin	Italy	Turkey
United States – Iowa	United States – North Carolina	United States – Wyoming	Kingdom of	Ukraine
United States – Kansas	United States – North Dakota		Saudi Arabia	United Arab Emirates
United States – Kentucky	United States – Ohio		Kuwait	United Kingdom
United States – Louisiana			Netherlands	
				Australia – NSW
				Australia – Queensland
				Australia – South Australia
				Australia – Victoria
				Australia – Western Australia
				India
				Indonesia
				Japan
				New Zealand
				Philippines
				Thailand

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