



Velocity Vision License Plate Reader 6.1

Specification Sheet

Key features

Capture

- Compatible with all cameras supported by Hirsch
- Multi-lane detection with a single camera

Recognition

- Scalable server-based recognition engine
- Supports more than 200 countries and states with dedicated optimized recognition algorithms (country modules), including full coverage for European region, US states, and Australian states.
- Generic country modules for selective regions, and generic worldwide module
- Includes an algorithm dedicated to eliminating partial detection of license plates and optimizing recognition with country modules

Match List Management

- Unrestricted number of match lists for correlation of recognized license plates (examples: employees, guests, stolen vehicles, priority customers) or license plate styles (examples could be commercial and/or vehicles. All dependent on country plate style strategy)
- Supports custom data as complement to license plate information, such as owner details, driver name, type of vehicle

Monitor

- Track vehicles by viewing LPR events and related video
- Enable modular camera views where license plate recognition events can be displayed together with corresponding video
- Raise alarms based on match lists matching using the alarm management function in the Velocity Vision Smart Client

Action

- Saves time by automating manual actions
- Events can be generated on actual recognition of plate or plate style, or match with a specific match list
- LPR events can for example control cameras, external peripherals such as parking barriers and gates or generate alarms

Investigate and Report

- The dedicated LPR tab in Velocity Vision Smart Client provides extensive search capability to list recognized license plates events, related video, and possible match list information
- Data drilling functions enables swift analysis of LPR events related to specific camera, vehicle identity, country, or match list (for example stolen vehicles)

- Generate LPR reports with license plate information, video thumbnails of associated video, and a license plate close-up image

Integration options

- Velocity Vision LPR can propagate events to third party applications integrated via the MIP SDK with a wide range of application areas:
- Look-up of vehicles in central registers
- Feeding tracking-, payment- and statistical applications with license plate information

Vehicle properties in searches and LPR match lists

- Users of Velocity Vision LPR in Velocity Vision Smart Client can refine their searches by specifying detailed vehicle properties, such as the car's make, model, and color.
- Users can find and specify which vehicle properties they want to see on Velocity Vision Smart Client's built-in Search tab or the LPR tab.
 - Vehicle Class – Enables operators to charge differently for motorcycles, cars, and buses.
 - Vehicle Color – Helps operators and law enforcement easily locate matching vehicles.
 - Vehicle Model/Make – Further helps agencies and officers identify lost or suspect vehicles.
 - Vehicle Angle – Determines which side of the vehicle is facing the camera, e.g., front or rear, helpful in determining entry and exit points in parking applications.

Detailed Product Features

LPR Monitoring View Item

- A dedicated LPR monitor view item presents a combined camera view and an event list displaying recognized license plate information and plate style. The LPR monitor view item can be used in any Velocity Vision Smart Client view
- The LPR event list provides real-time license plate information for the identified vehicle, including country (if dedicated country modules are used in the system), match with possible match lists, and complementary vehicle information defined as custom data in the match list
- LPR monitor view items can be used in independent playback in line with normal camera view items. In independent playback the event list with license plate information can be reviewed with the possibility to directly jump to a specific vehicle and playback recorded video from the associated camera
- A shortcut makes it possible select any vehicle identified in the LPR Monitor and get a listing of the specific license plate recognition events in the LPR tab

Match List

- Central and instant management of match lists across multiple LPR servers
- Supports an unrestricted number of match lists for correlation of recognized license plates (examples: employees, guests, stolen vehicles, priority customers) or plate style aliases.
- Supports up to five custom data fields per match list as complement to license plate information, which can be used for complementary inflation such as owner details, driver name, type of vehicle
- Match lists may be edited in the VMS or NVR management interface, or from the LPR tab in the Velocity Vision Smart Client
- Import and export possibilities makes it easy to work with centrally managed external or off-line lists

Plate style recognition

- Identification of vehicles in groups based on their plate styles. A plate style is defined by plate color, format, font, and/or descriptions and plate style strategies vary from country to country and state to state.
- Identification is dependent on the detail level of countries/states chosen plate style strategy – i.e. whether a country/state have chosen to create specific plate styles for specific types of vehicles/purposed vehicles
- Plate style aliases makes plate style recognition operator friendly. As a plate style alias bundles similar plate styles of different formats into a unified group, aka Standard, Commercial, Law enforcement etc.
- Aliases are managed through the Management Client
- List of supported countries list can be found on the
- Hirsch Velocity Vision LPR webpage

LPR Tab

- A dedicated LPR tab provides overview of recognized license plates and license plate styles, and provides a link between the identified vehicle and the recorded video
- Extensive filtering functions on specific camera, vehicle identity, country or match list and time, make investigations easy with wide possibilities for analysis and data drilling
- Immediate access to related video, makes it possible to instantly review recorded video related to any identified vehicle
- Detailed and more extensive investigations of specific events can be done by launching a full playback window with time navigation for the given event. This also makes it possible to include additional cameras in the investigation and produce evidence material easily for a given event
- Built in reporting support makes it easy document recognized vehicles based on the data analysis in the LPR event list. The report is generated as a pdf report, and includes license plate and possible match list details, a video thumbnail and a close-up of the recognized license plate
- Smart Client users can manage LPR match lists from the LPR tab

Integration with Velocity Vision Smart Client functions

- Velocity Vision LPR is seamlessly integrated with the Velocity Vision Smart Client, where the availability of the Velocity Vision LPR application tab can be controlled centrally for individual users
- Events from the recognition of an individual license plate, or a match with a match list, can be used can be used to generate alarms in the alarm manager
- In the Velocity Vision Advanced VMS products, the events are available for the rule engine and can hence trigger any action, including control of external peripherals

Recognition

- Scalable server-based recognition engine, where an unrestricted number of LPR servers can be used
- Supports more than 200 countries and states with dedicated optimized recognition algorithms (country modules), including full coverage for European region, US states, and Australian states.
- Generic country modules for selective regions, and generic worldwide module
- Any combination of country modules may be activated in a system, given that the licensed number of concurrent active country modules is not exceeded
- For complete list of supported countries and license plate styles, please refer to Hirsch website: <https://portal.hirschsecure.com/user/login>

Configuration and administration

- Configuration and administration of Velocity Vision LPR is made as an integral part of the management interface of the Velocity Vision VMS system or Hirsch Husky NVR product it is used with
- Intuitive configuration wizard supports the system administrator through all configuration steps and provides recommendations to configuration settings.
- Snapshot driven configuration and optimization of the recognition algorithms for high recognition accuracy and optimal system performance

- Automatic validation of configuration settings against the snapshot series, where the confidence level for each license plate reading is presented and the accuracy can be confirmed by the administrator
- Possibility to import already captured snapshot series
- Access to advanced configuration settings, with the ability to verify any change against the snapshot

System Components

- **LPR Server:** Runs the license plate recognition engine
- **LPR Plugin for Event Server:** Generates of recognition events based on license plate match lists
- **LPR Plugin for Management Client/Application:** Configuration of the Velocity Vision LPR system
- **LPR Plugin for Velocity Vision Smart Client:** Operational presentation layer

Miscellaneous

Velocity Vision LPR 6.1 system requirements

- The LPR 6.1 client plugin is not backward compatible with older versions of the Velocity Vision LPR server. Please ensure that the LPR server is upgraded before the client.
- The minimum system requirements for Velocity Vision LPR servers running the license plate recognition logic follow the requirements for Velocity Vision, which are available on the Hirsch Systems website. As the system requirements for the license plate recognition logic is processor intensive, and varies significantly dependent on the environmental conditions, camera settings and other parameters, Hirsch recommends anyone installing Velocity Vision LPR to study the guidelines in the Administrator's Guide first.

Supported languages

- The operator interface of Velocity Vision LPR is localized to the same languages as Velocity Vision Smart Client. The management interface is localized to the same languages as the Hirsch video management software product that Velocity Vision LPR is being used with. For details on supported languages, please refer to: <https://portal.hirschsecure.com/user/login>

Supported Hirsch products

- Velocity Vision LPR 6.1 is a Velocity Vision add-on product compatible with all Hirsch video management software
- To benefit from the full functionality of Velocity Vision LPR 1, the latest release of the following products should be used:
 - Velocity Vision® Enterprise 6.1
 - Velocity Vision® Pro 6.1
 - Velocity Vision® Advanced 6.1
 - Velocity Vision® Standard 6.1

Licensing Structure

- Velocity Vision LPR is licensed through three different licenses, and follows the same principal licensing scheme as earlier versions of the product:

Velocity Vision LPR Base License

- The Velocity Vision LPR Base License unlocks the full license plate recognition functionality for a single Velocity Vision VMS system, allowing an unrestricted number of Velocity Vision Smart Clients and Velocity Vision LPR servers to be installed on the given VMS or NVR system.

Velocity Vision LPR Camera License

- One Velocity Vision LPR Camera License is needed per camera stream on which the license plate recognition functionality is to be applied. The Velocity Vision LPR Camera License is needed in addition to the device license in the Velocity Vision VMS.

Velocity Vision LPR Country Module License

- The Velocity Vision LPR Country Module License controls how many different recognition modules that can be active in the system simultaneously. Any combination of the more than 200 generic and country optimized modules can be used. The Velocity Vision LPR Base License includes five country modules, and additional country modules can be purchased individually via the Velocity Vision LPR Country Module License.