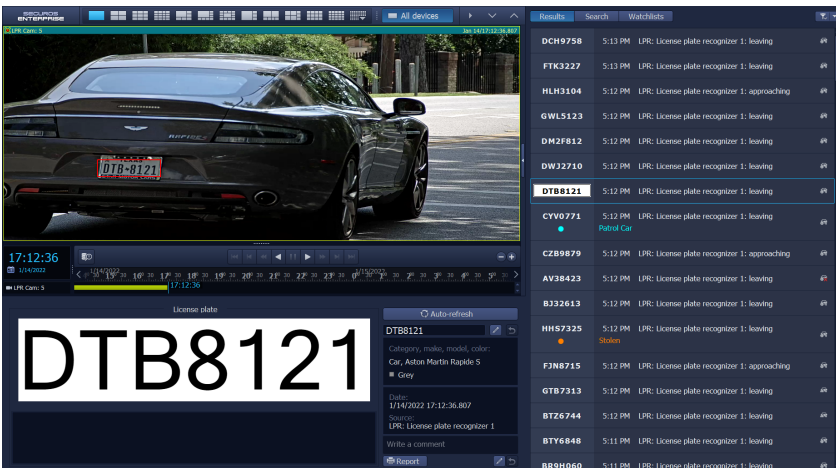# SECUROS AUTO
License Plate Recognition (LPR/ANPR)

SecurOS™ Auto is an intelligent video analytics module for the SecurOS™ Premium and Enterprise video management platforms, which provides license plate recognition and comparative analysis for all types of vehicles. SecurOS™ Auto works in a wide range of internal/external conditions and delivers industry leading recognition accuracy for US and international plates.

SecurOS™ Auto provides a number of unprecedented advantages for users, including the ability to accurately capture license plate information up to 155 mph (250 km/h) and in all kinds of weather conditions, including, yet not limited to, light fog, rain, and snow. The advanced algorithms involved in the technology result in the type of pinpoint accuracy that distinguishes letters from numbers, for example, an "8" is not mistaken for a "B." This is a crucial advantage, particularly in emergency situations when one has only milliseconds to get it right.

SecurOS™ Auto integrates easily with third-party parking management or smart roadway systems, as well as legacy security equipment and external databases.

Compatible with ISS SecurOS Premium and Enterprise

SECUROS PREMIUM   SECUROS ENTERPRISE

Technology Overview

Hardware-agnostic System
No specialized cameras or other hardware is required. System is hardware-agnostic.

Software Based Vehicle Detection
Built-in vehicle detection algorithms so sensors are not required to detect license plates.

Multiple Speed Options
Stop&Go, Low, and High-speed options available for greater flexibility.

Multi-lane Support
System can detect plates from multiple lanes with just one camera.

Advanced Recognition Engine
Neural Network and Template-based algorithms result in more accurate recognition.

International Plates Support
Recognizes license plates from US and over 100 other countries.

Fixed / Mobile Versions
Fixed (on stationary structures) and Mobile (on/in vehicles) versions available.

Integrated with SecurOS VMS
Seamlessly works with SecurOS™ VMS as well as other SecurOS Analytics modules.

Applications

- Law enforcement
- Automation of parking installations
- Parking enforcement
- Education / campus security
- Casino security
- Border customs control
- Safe-City surveillance
- Stolen / unregistered vehicles

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License Plate Recognition (LPR/ANPR)

Key Features

Class, Color, Make, Model
Detection of vehicle class, color, make, and model at high accuracy.

High Speed Recognition
Capable of recognition at up to 155 mph (250 km/h).

Smart Search
Partial / full plate / wildcard search against watchlist / external databases.

Convoy Search
Allows to search for vehicle co-occurrences. You can detect one or more unknown vehicles traveling in convoy with known target vehicles.

Watchlists
Add plates to local watchlists (black, white, info), and set custom alarms for matches against the watchlists.

External DB Connectivity
Seamless connection to external databases.

System Automation
Provides advanced reaction capabilities and automatic operator notification based on LPR and/or comparison with information from a database/watchlist.

Reporting Tools
Reports include result snapshot (cropped plate/ cropped vehicle/full frame), camera name, result timestamp, location, direction of vehicle pass, vehicle class, color, make, model, and more.

Advanced Features
Vehicle travel direction detection, vehicle speed, no plate detection, and more.

Third-party Equipment Integration
Integrates with most third-party equipment and devices such as barriers, gates, and radar equipment.

API Support
API available for integration with third-party applications.

Specifications

ISS Platform Support

Operating Systems	Windows 10 / 11 Pro Windows Server 2016 / 2019 / 2022
SecurOS VMS Edition	SecurOS Premium, Enterprise
Supported Compute Platforms (when using SecurOS Auto NN Localizer/Recognizer)	**Intel® OpenVINO™ *** Intel® Core™ 6th Gen. CPUs and above (Performance boost on 11th Gen. CPUs and above) Intel® Xeon® Scalable processors Intel® Movidius™ Myriad™ X VPU accelerator cards **NVIDIA® CUDA** Accelerator cards with compute capability 6.1, 7.5, or 8.6

Maximum Vehicle Speed

Low-Speed Version	25 mph (40 km/h)
High-Speed Version	155 mph (250 km/h)

Supported Video Formats

Codec	MJPEG, MPEG4, H.264, H.265, MxPEG

Additional Technical Data

Recommended Camera Resolution	1920x1080 (pixel density requirements may vary depending on region)
Software Integration Capabilities	RESTful Web Service Microsoft ODBC
System Output	Camera name / ID Recognition result Class / Color / Make / Model Quality of recognition result License plate country / state Vehicle direction License plate location in image Internal / External watchlist match Vehicle speed Lane info Result Snapshot

Ordering Information

SecurOS™ Auto Part Numbers	**IF-LPR-L:** SecurOS™ Auto - Vehicle License Plate Number Recognition - Low Speed (per camera). **IF-LPR-H:** SecurOS™ Auto - Vehicle License Plate Number Recognition - High Speed (per camera). **IF-LPR-CMM:** SecurOS™ Auto - Class / Color / Make / Model Add-on (per camera).

Best performance of NN engine is reached via CPUs that support Intel® AVX-512 VNNI instruction set. For Intel® Core™ CPUs 12th Gen or higher, VNNI will be supported via AVX-2.