

# ATAPY Automatic Number Plate Recognition (ANPR) SDK

ATAPY ANPR SDK is a specialized software development kit featuring Automatic car Number Plate Recognition (ANPR) technology. It is designed **for system integrators** and **software application developers** who wish to incorporate Automatic Number Plate Recognition technology into their software applications. It is a flexible solution capable of working with most Windows-based external software systems and image capture devices (cameras) and can be tailored to meet specific customer requirements.

## Features and Advantages

- **High recognition accuracy.** The SDK is powered by one of the industry's most precise OCR products - an OCR engine by ABBYY Software House;
- **International number plate reading capability:** guaranteed performance on German, Swedish, Dutch, Russian, and Austrian (selected types) number plates.



- **Quickly extendable to support new number plate types;**
- **Automatic geometric skew/tilt correction** (up to 30°);
- **A Mobile Version of the SDK is available.** This provides recognition on mobile devices.

## Areas of Use

ATAPY ANPR SDK is based on the latest version of the ABBYY FineReader Engine and is most suitable for operating at vehicle control points where **cars are moving at 20 km/h or less**. This version of the SDK can be used to build a variety of applications such as:

### Access control applications:

- Controlled and automatic vehicle entry to and exit from controlled/restricted areas;
- Parking lot management systems;
- Toll road monitoring and surveillance systems (control points).

### Security and maintenance systems:

- Public transport enforcement systems;
- Border security;
- Vehicle weight enforcement systems;
- Fleet management/inventory management systems;
- Petrol Station security.



## ATAPY ANPR SDK Input

ATAPY ANPR SDK can accept input images from any digital camera, monochrome or color, as long as they meet the following requirements:

- Format: BMP, JPEG, JPEG 2000, GIF, PNG (photo), DivX, Motion JPEG (video);
- Image resolution: *not lower than 96 dpi*;
- No blur, pixelation, optical and perspective distortions, shadows, over or underexposed spots;
- The number plate width is *no smaller than 100 px*;

The image capture point must meet the following conditions:

- Sufficient illumination (at least 300 lucas) and all parts of the number plate are equally illuminated;
- Skew/tilt of the license plate is not more than 30 degrees;
- Vehicle speed is no more than 20 km/h;
- Distance between vehicles is at least 5 meters.



## ATAPY ANPR SDK Output

The output of the SDK is the recognized number as a text string of letters and digits, the source image, the extracted image of the number plate, and a set of additional data including the coordinates of characters, plate borders, recognition confidence level (in percent), and other possible recognition versions for uncertain OCR'd characters with their estimated confidence level.



The OCR results can be matched against a database later to find out if the vehicle is stolen, on the white/black list, etc. depending on the goals of the external application. The SDK can be tailored to meet the requirements of any business process.

## ATAPY ANPR SDK: Mobile Version

The Mobile Version of ATAPY ANPR SDK is based on ABBYY Mobile SDK and requires only a mobile device with an autofocus camera running Windows Mobile 6 or higher. It has a small footprint and allows recognition on the device itself.

### Areas of Use



- Street and car park audits;
- Mobile vehicle assessments for insurance claims, auction, sales, etc.;
- Police Enforcement, parking ticket;
- Fleet management and inventory control systems;
- Parking lot monitoring.

## Technical Specifications

Supported Operating Systems	Regular version	Windows Server 2003, 2008 (32/64 bit); Windows 2003, XP, Vista, Windows 7 (32/64 bit)
	Mobile version	Windows Mobile 6 or higher
Interfaces		.NET library, COM, C++
Types of Plates		German, Swedish, Dutch, Russian (~90% OCR rate); Austrian (selected subtypes)
System Requirements	Regular version	Processor: PC with Intel®/AMD processor, 1 Ghz RAM: 1 GB ABBYY FineReader Engine 7.1 or later; .NET Framework 3.5 or higher
	Mobile version	Mobile device equipped with a camera (autofocus required); ABBYY Mobile OCR Engine 3.0 or later; .NET Compact Framework 3.0 or higher

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