

CARMEN® FreeFlow Software

NUMBER PLATE RECOGNITION SOFTWARE LIBRARY & SDK



ANPR RESULTS:

| | |
|--|------------------------|
|  ARH 001 | |
| • NUMBER PLATE: | ARH 001 |
| • VEHICLE TYPE: | MERCEDES BENZ |
| • NATIONALITY: | EU-HUNGARY |
| • SPEED: | 108 MPH / 174 KMH |
| • BLACKLIST: | --- NO --- |
| • COLOR: | BLUE METAL |
| • OWNER: | ZSOLT VANYI |
| • RECOGNITION TIME: | 2013-01-12T19:20+00:00 |

THE ULTIMATE RECOGNITION ENGINE FOR INTELLIGENT TRAFFIC APPLICATIONS

The CARMEN® FreeFlow software is the flagship of the CARMEN® Recognition Software family. CARMEN® FreeFlow is designed to read number plates of automobiles. Number plates are the most common and easily identifiable means of motor vehicles worldwide. Traffic monitoring and security, toll and congestion charging systems, speed and journey time measurement, access control, parking management, bus lane enforcement, border control or gas station monitoring, among many other systems can all benefit from the fast and exact automatic identification and recognition capabilities.

CARMEN® FreeFlow reads number plates from many image sources very fast and with the highest recognition accuracy. It offers country-independent recognition as well as recognition of number plates written not only in Latin characters but also in Arabic, Cyrillic, Chinese, Korean, Thai and many more.

KEY FEATURES

- Automatic recognition of number plates from vehicles in free flowing traffic
- Fast, easy and straightforward use
- Hardware independence: compatible with any image source (analog / digital / still images / MJPEG video streams)
- Country, state or province and plate type recognition

MAIN BENEFITS

- Saving time and energy in data entry, automating number plate reading
- Decreasing data entry errors with high accuracy and recognition rates
- Increasing security and safety of highways and access control areas
- Raising fidelity by withstanding various plate sizes, syntaxes and distorted plate images
- Allowing smooth and problem-free 24/7 operation

Special ANPR/LPR cameras are available for higher quality images and recognitions rates.

CARMEN®



TRAFFIC MONITORING



TOLL COLLECTION



JOURNEY TIME MEASUREMENT



ACCESS CONTROL



BUS LANE AND RED LIGHT ENFORCEMENT



TRAFFIC SECURITY MONITORING



VIDEO ANALYTICS



BORDER CONTROL



GAS STATION

SPECIFICATIONS

CARMEN® FreeFlow Software

GENERAL INFORMATION

| | |
|------------------------------|---|
| Purpose | Automatic recognition of vehicle number plates – a number plate recognition software for various intelligent traffic systems, security and any access control environments. |
| Supported operating systems | Windows (32/64 bit) Linux (32/64 bit) |
| Supported Platforms | x86_32 x86_64 ARMv7 PPC |
| Minimum System requirements | 1 GHz CPU 512 MB RAM 1 GB HDD free slot for NNC |
| Licensing | One license per application thread, multiple license/controller is available |
| Available Neural Controllers | PCI 2.1 video capture card (FXVD4) PCI 2.1 card (FXMC) PCIe card (x1) USB 2.0 (internal is also available) Express card 34 (54 compatible) PC 104+ card |

INTERFACE

| | |
|---------|--|
| Input | Still image from file or memory in any image format (BMP PNG JPEG JPEG2K RAW) Live analog video input (PAL or NTSC) Live digital camera input |
| Output | OCR data Number plate number in ASCII/UNICODE text Position of the plate Confidence level in percentage Confidence level for each character List of further suggestions for each character Individual result for each plate on an image Color of plate (optional) Country ID (optional) Location of each plate on one image |
| Trigger | Can be integrated with any trigger device (recommended when recognizing from live image stream) Software motion detection module is included |

DEVELOPMENT TOOLS FOR EASY INTEGRATION

| | |
|---|--|
| Supported programming languages under Windows | C/C++, C# Delphi Visual Basic .NET Java |
| Supported programming languages under Linux | C/C++, Java |
| In The Box | Development libraries: .dll, .so files ActiveX components/OCX files Demo application, sample codes for each programming language Neural network controller Comprehensive digital documentation on CD |



Technical specifications are subject to change without prior notice. This document does not constitute an offer.