

# I-Cube FreeFlow ANPR Software

The I-Cube Freeflow Number Plate Recognition Engine possesses all the features a high quality license plate recognition system requires. It is highly accurate, fail safe and stable, fast and intelligent.

Meanwhile it provides the highest technological performance amongst today's license plate readers, I-Cube FreeFlow offers great flexibility for all uses of car plate recognition systems.

It can be integrated into practically any camera to produce an automatic number plate recognition system which needs automatic vehicle recognition.

There is no compromise. The I-Cube FreeFlow's Software makes integration of optical plate recognition extremely easy, fast and cost effective. And the resulted image processing system will have the highest performance - both in terms of recognition accuracy and speed - of optical license plate recognition.

## Features of I-Cube FreeFlow

The I-Cube Freeflow offers general-purpose license plate reading from digital pictures of any type of sources. Whether it is a megapixel-size, 12bits/pixel high dynamic range, high resolution digital image or a 384x288 size colour CCTV video picture provided as input, (either from file or memory) I-Cube provides balanced reading of car plates.

While there is a vast space for different configurations - you can freely set the working parameters of CARMEN<sup>®</sup> to best fit your actual system's requirements - you do not need to become a master of tuning parameters: I-Cube LPR is intelligent enough to provide high quality car plate recognition for very different type of images and plates with even the default settings.

There are automatic number plate recognition systems powered by I-Cube with over 98.5% recognition rate (correct reading/total number of input) working 24h/day, 7days/week. I-Cube is a proven product - and a living automatic vehicle recognition technology.

The I-Cube Freeflow ANPR Engine is a PC based solution supporting today's PC operating systems.

## TECHNICAL SPECIFICATIONS OF I-CUBE FREEFLOW ENGINE

<b>Supported Operating Systems</b>	<ul style="list-style-type: none"> <li>· Windows 7, XP, 2003, 2000</li> </ul>
<b>Type of Plates</b>	<ul style="list-style-type: none"> <li>· Recognition is country and font independent: any Latin, Arabic, Chinese, Korean and Cyrillic characters can be recognized</li> <li>· State/country region recognition (optional)</li> </ul>
<b>Image Input</b>	<ul style="list-style-type: none"> <li>· Still image from memory or file (BMP, JPEG, JPEG2000)</li> <li>· Live analogue video input (PAL or NTSC)</li> <li>· IP Camera</li> </ul>
<b>Trigger</b>	<ul style="list-style-type: none"> <li>· Trigger is not mandatory</li> </ul>
<b>Processing time dependences</b>	<ul style="list-style-type: none"> <li>· Image quality (complexity, noise level)</li> <li>· Image size</li> <li>· Processing power (CPU speed)</li> <li>· Parameter settings</li> </ul>
<b>Output</b>	<ul style="list-style-type: none"> <li>· Plate number in ASCII/UNICODE</li> <li>· Position of plate</li> <li>· Positions of characters</li> <li>· Tip list for each character</li> <li>· Confidence levels for each tip</li> </ul>
<b>Documentation</b>	<ul style="list-style-type: none"> <li>· Reference manual in electronic format</li> </ul>
<b>System Requirements</b>	<ul style="list-style-type: none"> <li>· Intel, PIII 1 GHz or higher Intel CPU</li> </ul>

	(128 MB RAM) · Free PCIe / PCI (2.1) / PC104+ slot or USB 2.0 port
<b>Licensing</b>	· 1 licence required per CPU

*Technical specifications are subject to change without prior notice*

## Applications of I-Cube FreeFlow

While I-Cube Freeflow is suitable for any automatic license plate recognition system, it is mainly used in Intelligent Transportation Systems (ITS), security systems and law enforcement systems.

The main applications are: motorway toll collection (highway toll collection), traffic analysis, weight in motion, police law enforcement, state border control, enforcement of traffic regulations, vehicle theft prevention, assets protection, automation and simplification of airport, harbour and warehouse logistics, security monitoring of roads and checkpoints, vehicle surveillance, etc...

As car plate recognition is the most natural way of automatic car identification, car license plate recognition can be used anywhere, where automatic, computerised vehicle identification is needed.