

Vaxtor Systems OCR Engine 2.0

Automatic License Plate Recognition OCR Engine technical specification

Main features

Product	VaxALPR OCR Engine. License Plates Recognition System
Licensing type	Perpetual license per PC. Runtime or SDK both multi-instance
Platforms	Microsoft Windows 32 and 64 bits (Server 20XX, 7,8,10) Debian Linux GNU 1.4 and above Ubuntu 8.04 and above Microsoft Windows Mobile 6.0 and 6.5.3 Microsoft Windows Phone 7.0 and above MIPS processor embedded in AXIS camera
API technology	.NET class library DLL C/C++ static or dynamic library
Minimum requirements	Intel i3 1.8 GHz / 2 GB de RAM
Disk space	Less than 30 MB
Additional hardware	No

License plate and image operating capabilities

Input image format	BMP24 (Windows Bitmap) JPEG YUY2 RGB (raw) Gray8 (raw)
Max. image size	5.0 MB
Min. characters height	14 pixels (recommended 18 pixels)
Max. characters height	70 pixels
Max. rotation X (<i>pitch</i>)	± 35°
Max. rotation Y (<i>yaw</i>)	± 40°
Max. rotation Z (<i>roll</i>)	± 35°

Countries

Countries supported	Country independent engine Accuracy enhancement available through grammar match
Alphabets supported	Latin Hebrew Arabic will be ready in Q2 2017
Plate types	Rectangular Squared (2 and 3 lines) Dangerous goods (ADR) Dark character on light background Light character on dark background

Output results

Max. # plates per image	8
Per plate result	Plate number, ASCII or UNICODE Country origin if grammar constraint defined OCR processing time in milliseconds Plate read global confidence (percentage) Per character read confidence (percentage) Average characters height Number of plate lines (1,2,3) Plate bounding rectangle Isolated plate image in RGB format

OCR Engine versions

On Camera (embedded)	Read maximum 2 plates per second
Basic	Read maximum 1 plate per second, trigger required
Pro	Unlimited reading, trigger required
Free-Flow	Unlimited reading, trigger NOT required
Monster (under development)	CUDA-GPU based, massive parallelism OCR Triggered and Non-Triggered

PC based average performance (all versions except Monster's)

Image 640x480 (VGA)	14 ms.
Image 752x480 (PAL)	22 ms.
Image 1024x768 (0.75 Mpx)	29 ms.
Image 1280x960 (1.2 Mpx)	29 ms. - 33 ms.
Image 1920x1080 (2.0 Mpx)	30 ms. - 50 ms.

Tested on Laptop HP Omen CPU Intel i7-4710GQ 2.50 GHz