euresys
Empowering Computer Vision

EasyOCR2

Industrial optical character recognition library

At a Glance

- Optimized for reading short texts such as part numbers, serial numbers, expiry dates, manufacturing dates, lot codes, …
- Innovative segmentation algorithm to automatically locate texts in the image based on expected character size and text topology
- Full support for text rotation (360 degrees)
- Able to read severely degraded characters: support for character fragmentation and uneven lighting
- Learning of character database from one or multiple TrueType Font or by your own sample images
- Assisted learning of character database from sample images
- Character database management: adding characters; saving, loading database
- Pre-trained classifier powered by deep learning technologies suitable for industrial text marking fonts

Benefits

EasyOCR2 Description

EasyOCR2 is a font-dependent printed character reader. It has been designed to read short texts such as part numbers, serial numbers, expiry dates, manufacturing dates, lot codes, … printed on labels or directly on parts.

Segmentation

EasyOCR2 uses an advanced novel algorithm to locate the texts to read in the image. The topology of the text to detect (number of lines, words and characters) can be freely set by the user.

Character type specification

The character type (letter, digit, symbol, …) of each character can be specified to improve the recognition speed and rate.

Full support for text rotation (360 degrees)

Assisted learning

When learning from sample images, an interactive tool available in Open eVision Studio is used to identify samples of each character, allow the library to learn them and save the resulting font file.

Support for TrueType Font (ttf) files

EasyOCR2 requires training the font to be recognized. This can be done either from sample images or from standard .ttf (True Type Font) files. This makes the recognition flexible, fast and reliable.

Pre trained classifiers

EasyOCR2 now supports Optical Character Recognition powered by deep learning technologies. It comes with two pre-trained character classifiers that work out of the box and do not require any training! Read short texts such as part numbers, serial numbers or date codes printed using standard industrial fonts or the OCR-A font. Both classifiers support uppercase letters, numbers and the most common punctuation marks. No GPU is required. The OCR2Demo sample program as well as Open eVision Studio have been updated to support the new functionality.

Neo Licensing System

- Neo is the new Licensing System of Euresys. It is reliable, state-of-the-art, and is now available to store Open eVision and eGrabber licenses.
- Neo allows you to choose where to activate your licenses, either on a Neo Dongle or in a Neo Software Container. You buy a license, you decide later.
- Neo Dongles offer a sturdy hardware and provide the flexibility to be transferred from a computer to another.
- Neo Software Containers do not need any dedicated hardware, and instead are linked to the computer on which they have been activated.
- Neo ships with its own, dedicated, Neo License Manager, which comes in two flavours: an intuitive, easy to use, Graphical User Interface and a Command Line Interface that allows for easy automation of Neo licensing procedures.

Open eVision Studio: Evaluation, prototyping and development tool

Open eVision Studio is the evaluation, prototyping and development tool of Open eVision. Its intuitive graphical user interface allows you to call and immediately see the result of any of eVision's2D image processing functions. A scripting functionality generates the corresponding code, which can then be copied and pasted into your application.

Open eVision Studio is free (when using Open eVision 2.0 and above) and does not require any license.

Just click on DOWNLOAD OPEN EVISION STUDIO and install Open eVision. Sample images, manuals and sample programs are included.

All Open eVision libraries are available for Windows and Linux

- Windows 7 to Windows 10, x86 (32 bits) and x86-64 (64 bits)
- Linux x86-64 (64 bits) with a glibc version 2.18 or newer

Applications

Machine Vision for the General Manufacturing Industries

- Product identification for traceability

Machine Vision for the Printing Industry

- Label and packaging inspection: Inspection of the quality of the printing of characters and codes

Specifications

Software

Host PC Operating System	• Open eVision is a set of 32-bit and 64-bit libraries that require a processor compatible with the SSE4 instruction set. • The Deep Learning Bundle is only available in the 64-bit Open eVision library. • Open eVision can be used on the following operating systems: – Windows 10 (32- and 64-bits) – Windows 8 (32- and 64-bits) – Windows 7 (32- and 64-bits) – Linux 64 bits (x86-64 only) with a glibc version greater or equal to 2.18 • Since Open eVision 2.6, discontinued support of: – Windows Vista 32-bits Service Pack 1 – Windows XP 32-bits Service Pack 3 – Windows Embedded Standard 2009 32-bits • Remote connections – Remote connections are allowed using remote desktop, TeamViewer or any other similar software. • Virtual machines – Linux virtual machines are supported. Microsoft Hyper-V and Oracle VirtualBox hypervisors have been successfully tested. – Windows virtual machines are not supported. • Minimum requirements: – RAM: 8 GB – Display size: 800 x 600. 1280 x 1024 recommended. – Color depth: 16 bits. 32 bits recommended. – Between 100 MB and 2 GB free hard disk space for libraries, depending on selected options.
APIs	• Supported Integrated Development Environments and Programming Languages: – Microsoft Visual Studio 2008 SP1 (C++, C#, VB .NET, C++/CLI) – Microsoft Visual Studio 2010 (C++, C#, VB .NET, C++/CLI) – Microsoft Visual Studio 2012 (C++, C#, VB .NET, C++/CLI) – Microsoft Visual Studio 2013 (C++, C#, VB .NET, C++/CLI) – Microsoft Visual Studio 2015 (C++, C#, VB .NET, C++/CLI) – Microsoft Visual Studio 2017 (C++, C#, VB .NET, C++/CLI) – Microsoft Visual Studio 2019 (C++, C#, VB .NET, C++/CLI) – QtCreator 4.15 with Qt 5.12 • Since Open eVision 2.5.1, discontinued support of: – Borland C++ Builder 6.0 update 4 (C++) – CodeGear Delphi 2009 (Object Pascal) – CodeGear C++ Builder 2009 (C++) – Microsoft Visual Studio 6.0 SP6 (C++, Basic) – ActiveX API • Since Open eVision 2.4.1, discontinued support of: – Embarcadero RAD Studio XE4 and XE5 (C++, Object Pascal, 32 bits only)

Ordering Information

Product code - Description	• 4179 - Open EasyOCR2 for USB dongle • 4229 - Open EasyOCR2 for PAR dongle • 4279 - Open EasyOCR2 for soft-based licensing • 4329 - Open eVision EasyOCR2
Optional accessories	• 6512 - eVision/Open eVision USB Dongle (empty) • 6513 - eVision/Open eVision Parallel Dongle (empty) • 6514 - Neo USB Dongle (empty)

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