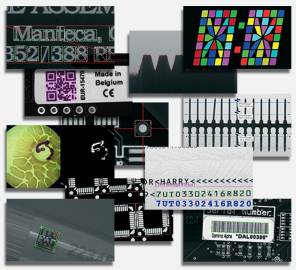
Full Bundle

Bundle of primary Open eVision libraries



At a Glance

- Cost effective bundle of eVision 2D libraries
- Includes EasyImage, EasyGauge, EasyFind, EasyMatch, EasyObject, EasyColor, EasyOCR, EasyOCR2, EasyOCV, EasyBarCode, EasyMatrixCode and EasyQRCode
- Does not include 3D and Deep Learning libraries

Benefits

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's functions. A scripting function 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 can be downloaded to evaluate the performance of Open eVision.

EasyImage Description

- EasyImage includes operations usually performed as pre-processing steps to improve the image quality and obtain a good contrast between the background and the objects to be inspected.
- EasyImage supports gray-level and color images. Selected morphology functions are also optimized for binary (1-bit per pixel) and bi-level images.
- EasyImage includes numerous image processing functions, such as enhancement and restoration by linear or non-linear filtering, arithmetic and logic operations, geometric transformations for image registration, histogram analysis for thresholding, projection, ...

EasyGauge Description

EasyGauge is a cutting-edge measurement and dimension control library for use in gauging and metrology applications.

By relying on proven sub-pixel edge detection and shape fitting algorithms, it allows determining the dimension, position, curvature, size, angle or diameter of manufactured parts with an excellent accuracy.

Robustness is ensured by powerful edge-point selection mechanisms that are intuitive and easy to tune, allowing measurement in cluttered images.

In addition, EasyGauge also supports the automatic measurement of parallel sides, thus providing means of measuring the thickness of flat or bent objects, as well as the precise location of corners.

EasyObject Description

The EasyObject library handles image segmentation, i.e. the decomposition of images into separate objects, also called blobs.

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Once the objects have been constructed, they can be handled as independent entities. Various geometric parameters or features, such as area, width, or ellipse of inertia, can be computed for each object.

Objects of interest can be selected by means of their position or of their computed features.

EasyObject also supports the inspection of holes in defined objects. Holes are managed as the objects themselves, benefiting from the same geometrical features. EasyObject manages the relationship between objects and holes, defining parent objects for holes.

EasyColor Description

EasyColor includes a set of optimized color systems transformation functions and color analysis functions.

The color systems supported are RGB, XYZ, L*a*b*, L*u*v*, YUV, YIQ, ISH, LSH, VSH, LCH and YSH.

EasyColor provides efficient means to convert images between these systems and to transform color images into gray level images and vice versa.

EasyMatch Description

EasyMatch is a gray-level and color pattern matching library. It lets you train the system on a reference pattern and afterwards locate its occurrences in other images.

This tool is very convenient when the position of a given part is unknown in the field of view, or if the presence of parts must be controlled. The library works by using normalized correlation method, i.e. measuring discrepancies between the pattern and the target image.

EasyFind Description

Based on an innovative feature-point technology, EasyFind is designed to rapidly find one or more instances of a reference model in the image.

Compared to normalized correlation, EasyFind features faster processing and improved robustness. It shows excellent performances when handling instances that are highly degraded due to noise, blur, occlusion, missing parts or unstable illumination conditions.

EasyBarCode description

EasybarCode is a library designed to automatically locate and read bar codes. Bar codes encode short character string and are widely used for marking and identifying goods.

EasyBarCode is able to identify and read a wide range of standard commonly-used symbologies as well as special symbologies. EasyBarCode automatically locates the bar code symbol in the image and supports code rotation. Moreover for prototyping or special cases, an advanced manual location mode is also available.

EasyMatrixCode Description

Data Matrix codes are widely used for parcel tracking and part identification in the semiconductor, pharmaceutical and mechanical industries.

EasyMatrixCode is a fully automatic reader of 2D Data Matrix codes. It recognizes symbols of any size, contrast, location and orientation in a single operation. Error detection and correction algorithms are used to provide a reliable reading.

EasyMatrixCode is fully compatible with the ANSI/AIM BC11-1997 standard.

EasyQRCode Description

QR codes are 2D bar codes. They are widely used for their fast readability, high reliability and their large storage capacity compared to ordinary barcodes.

EasyQRCode is a robust QR code reading library for industrial applications such as part identification and product or time tracking. These applications typically require the fast and reliable decoding of variable-content QR codes.

EasyOCR Description

EasyOCR is a font-dependent printed character reader based on a template matching algorithm. It has been designed to read any kind of short text (part numbers, serial numbers, expiry dates, manufacturing dates, lot codes,…) printed on labels or directly on parts.

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.

EasyOCV Description

EasyOCV is an optical character verification tool used for mark inspection. It provides automatic training of the model, adjustable acceptance levels and a robust gray-scale analysis. EasyOCV is suitable for various mark inspection and label printing verification applications. It can detect blurred, misaligned, distorted or double marks, extra or missing ink, missing characters or reversed marks as well as contrast problems.

Choose the most suitable Licensing System

- Open eVision Dongle-based Licenses: Dongle-based Licenses offer the flexibility to be transferred from a PC to another. To purchase a Dongle-based License, select one of the Euresys dongles (USB or Parallel) plus the license(s) to be stored on this dongle. Licenses are delivered as activation codes, which are stored on the dongles.
- Open eVision Software-based Licenses: Software-based licenses do not require any dongle, they are linked to the PC on which they have been activated. Licenses are delivered as activation codes and can be managed online.

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 SSE2 instruction set. • 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) • 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 • The Open eVision installer does not allow installation on virtual machines. • 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 .NET 2003 SP1 (C++) – Microsoft Visual Studio 2005 SP1 (C++, C#, VB .NET, C++/CLI) – 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) • Since Open eVision 2.6, discontinued support of: – Microsoft Visual Studio 6.0 SP6 (C++, Basic) – Borland C++ Builder 6.0 update 4 (C++) – CodeGear C++ Builder 2009 (C++) – CodeGear Delphi 2009 (Object Pascal) – Embarcadero RAD Studio XE4 (C++, Object Pascal) – Embarcadero RAD Studio XE5 (C++, Object Pascal)

Ordering Information

Product code - Description	• 4017 - Full Bundle for USB dongle • 4067 - Full Bundle for PAR dongle • 4117 - Full Bundle for board licensing • 4177 - Open Full Bundle for USB dongle • 4227 - Open Full Bundle for PAR dongle • 4277 - Open Full Bundle for soft-based licensing
Optional accessories	• 6512 - eVision/Open eVision USB Dongle (empty) • 6513 - eVision/Open eVision Parallel Dongle (empty)

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