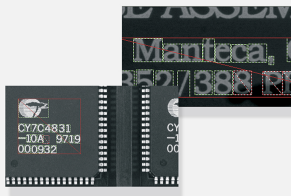




# EasyOCV

Optical character verification library

## At a Glance



- Comprehensive character verification with automatic training
- Grayscale analysis
- Text and character-level inspection
- Contrast, position and shape defect detection

## 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.

### 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.

### Training

EasyOCV first requires training on the particular marking. During this phase, a good-quality template (golden template) is presented to the system. An interactive utility allows defining the structure of the template and related acceptance criteria, in details. The template learnt can be saved for later use.

EasyOCV supports the use of several good-quality templates to help with the determination of the acceptance criteria.

### Inspection

When a template model is ready, the inspection may take place. EasyOCV first locates the marking in the image, allowing it to be translated, rotated and re-scaled or even sheared with respect to the template. After location, grey-level and geometric comparisons are performed and a series of matching scores, called quality indicators, are computed. When these fall outside of given acceptance intervals, a defect warning is reported.

### 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.

## Applications

### Machine Vision for the Electronic Manufacturing Industry

- Mark inspection

### Machine Vision for the Printing Industry

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

## Specifications

### Software

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#### 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.
- The EasyDeepLearning library 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.

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#### 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)
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## Ordering Information

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Product code - Description

- 4006 - EasyOCV for USB dongle
  - 4056 - EasyOCV for PAR dongle
  - 4106 - EasyOCV for board licensing
  - 4156 - Open EasyOCV for USB dongle
  - 4206 - Open EasyOCV for PAR dongle
  - 4256 - Open EasyOCV for soft-based licensing
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Optional accessories

- 6512 - eVision/Open eVision USB Dongle (empty)
  - 6513 - eVision/Open eVision Parallel Dongle (empty)
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