# Open eVision™

Image Analysis Software Tools

OPEN eVision 1.2 IS A RICH SUITE OF **RELIABLE, POWERFUL AND FLEXIBLE** SOFTWARE TOOLS DEDICATED TO IMAGE PROCESSING AND ANALYSIS. OPEN eVision CONTAINS A SET OF 64-BIT AND 32-BIT LIBRARIES DESIGNED TO BE INTEGRATED INTO YOUR C++, .NET OR ActiveX APPLICATION. THE GENERAL PURPOSE LIBRARIES, **EASYIMAGE, EASYCOLOR, EASYOBJECT, EASYMATCH, EASYFIND** AND **EASYGAUGE** COVER APPLICATIONS SUCH AS IMAGE FILTERING AND ENHANCEMENT, BLOB ANALYSIS, PATTERN MATCHING, ALIGNMENT AND METROLOGY. THE MARK INSPECTION LIBRARIES, **EASYOCV, EASYOCR, EASYBARCODE** AND **EASYMATRIXCODE**, INCLUDE FUNCTIONS FOR OPTICAL CHARACTER RECOGNITION, CHARACTER PRINTING INSPECTION AND 1D / 2D BARCODE READING.

EasyImage™
Image Processing Library

Convolution and morphology I Geometric transformations I Image statistics I 16-bit accuracy processing I Flexible masks I Interest point detectors
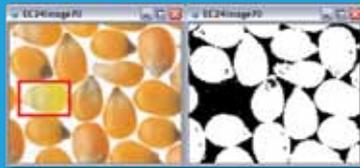
EasyColor™
Color Image Analysis Library

Fast conversion to 11 color spaces I Color segmentation I Color verification

EasyObject™
Image Processing Library

Image segmentation I Object labeling I Geometric feature extraction I High performance, especially for large images and images with numerous objects I Flexible masks

EASY TO LEARN AND USE

ROBUST, FLEXIBLE AND POWERFUL

ACCURATE: SUB-PIXEL MEASUREMENT AND CALIBRATION

THREAD-SAFE

COME WITH OPEN eVision EVAL TO TAKE FIRST STEPS IN OPEN eVision - DIDACTICAL QUICK START TUTORIALS
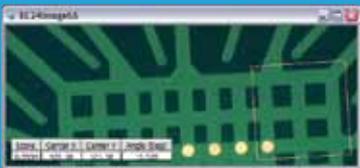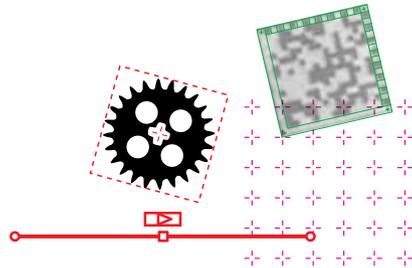
EasyMatch™
Pattern Matching Library

Normalized correlation method I Sub-pixel accuracy I Rotation and scaling support I Multiple pattern occurrences I Gray-level and color images support I Non-square pixels management I Don't care areas
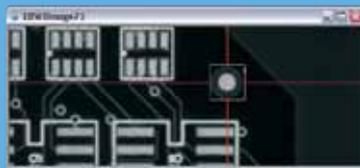
EasyFind™
Geometric Pattern Matching Library

Feature point technology I Fully automatic, fast and robust I Rotation and scaling invariant I High tolerance to pattern degradation I Don't care areas I User-defined pivot point I Fast processing and improved robustness

EasyGauge™
Sub-pixel Measurement and Dimension Control Library

Sub-pixel point location and edge fitting I Highly accurate and robust I Position, orientation, size, curvature, distances I Advanced and automatic calibration I Multiple gauge models I Gauge Grouping I Graphical model edition

EURESYS
Excellence in vision

EasyOCV™
Optical Character Verification Library

Comprehensive automatic training I Gray-scale analysis I Text and character-level inspection: Contrast, position, shape defect detection, Allowed text translation, rotation, character translation, Statistical training,...

EasyOCR™
Character Recognition Library

Teachable system I Reliable and robust recognition I Size invariance I Trained character fonts I Broken character reconstruction I Touching character separation I Pre-defined fonts

EasyBarCode™
Bar Code Reading Library

Automatic bar code detection I Very fast and robust I Full support of numerous symbologies

REGIONS OF INTEREST AND FLEXIBLE MASKS

The processing speed of an image can be accelerated by focusing on a specific region of the image (Region of Interest) avoiding interferences from the remainder of the image. The number of pixels to consider is then reduced. The processing of all Open eVision functions can be restricted to a Region of Interest (ROI). Open eVision supports nested rectangular ROIs, which are organized in a hierarchical way in each image. To add flexibility to the shape of the ROI, Open eVision supports Flexible Masks for selected functions of the EasyObject and EasyImage libraries. A mask represents a two-class segmentation of pixels which separates the associated image in do-care areas (that must be considered) and don't-care areas (that should not be considered). Flexible masks support complex and disconnected shapes.

EasyMatrixCode™
2D Data Matrix Code Reading Library

Impressive robustness to noise, blur and distortion I Automatic code detection I Very fast operation I Error detection and correction I Print quality verification I Rotation and flipping invariant I Contrast invariant I Automatic compensation for illumination changes

Flexible Masks

COMPATIBLE WITH
- Windows® x86 processor architecture
- A wide variety of programming languages and development environments
- eVision 6.7.1 and open eVision 1.0 C++ and ActiveX APIs

Open eVision 1.2 STUDIO

Development and prototyping tool

Code generation: C++, C#, Visual Basic I Graphical user interface I Quick start tutorials I Getting started guide

OPEN TO ALL IMAGE SOURCES

The Open eVision libraries do not rely on any proprietary hardware device to run. They are able to process images available in the host memory, whatever their origin. The images to be processed may come from a frame grabber, a scanner, a file, or IEEE1394 (Firewire), GigE Vision or USB cameras. Color and monochrome images are supported.

OPEN eVision DONGLE-BASED LICENSES ON EURESYS PARALLEL OR USB DONGLES

ORDERING INFORMATION

An Open eVision customer is free to choose among a large choice of products the most suitable and attractive offer for his application. Libraries can be purchased individually, in a bundle or in a SDK. No development license are required!

- **Open eVision Inspection bundle:** EasyImage, EasyColor, EasyObject, EasyMatch and EasyGauge
- **Open eVision Mark Inspection bundle:** EasyOCR, EasyOCV, EasyBarCode and EasyMatrixCode
- **Open eVision SDK**: Open eVision Studio, EasyImage, EasyColor, EasyObject, EasyMatch, EasyFind, EasyGauge, EasyOCR, EasyOCV, EasyBarCode and EasyMatrixCode

Learn more about the licensing and ordering information on Euresys web site.