6/27/2024

# Datasheet

# ID Bundle

Bundle of Open eVision identification libraries

- Cost effective bundle of eVision's identification libraries
- EasyImage
- EasyOCR
- EasyOCR2
- EasyBarCode
- EasyMatrixCode
- EasyQRCode

# Main benefits

## 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.

## All Open eVision libraries are available for Windows and Linux

- Microsoft Windows 11, 10, 8.1, 7 for x86-64 (64-bit) processor architecture
- Linux for x86-64 (64-bit) and ARMv8-A (64-bit) processor architectures with a glibc version greater or equal to 2.18

# Specifications

## Software

### Host PC Operating System

Open eVision is a set of 64-bit libraries that require an Intel compatible processor with the SSE4 instruction set or an ARMv8-A compatible processor.

**Open eVision can be used on the following operating systems:**

Microsoft Windows 11, 10, 8.1, 7 for x86-64 (64-bit) processor architecture

Linux for x86-64 (64-bit) and ARMv8-A (64-bit) processor architectures with a glibc version greater or equal to 2.18

**Remote connections**

Remote connections are allowed using remote desktop, TeamViewer or any other similar software.

**Virtual machines**

Virtual machines are supported. Microsoft Hyper-V, Oracle VirtualBox and libvirt hypervisors have been successfully tested.

Only the Neo Licensing System is compatible with virtualization.

**Minimum requirements:**

2 GB RAM to run an Open eVision application

8 GB RAM to compile an Open eVision application

Between 100 MB and 2 GB free hard disk space for libraries, depending on selected options.

### APIs

**Supported programming languages:**

The Open eVision libraries and tools support C++, Python and the programming languages compatible with the .NET Framework (C#, VB.NET)

C++ requirements: A compiler compatible with the C++ 11 standard is required to use Open eVision

Python requirements: Python 3.11 or later is required to use the Python bindings for Open eVision

.NET requirements: .NET Framework versions 2.0 to 4.8 are supported

**Supported Integrated Development Environments:**

Microsoft Visual Studio 2017 (C++, C#, VB .NET, C++/CLI)

Microsoft Visual Studio 2019 (C++, C#, VB .NET, C++/CLI)

Microsoft Visual Studio 2022 (C++, C#, VB .NET, C++/CLI)

QtCreator 4.15 with Qt 5.12

## Ordering Information

### Product code - Description

PC4180 Open ID Bundle for USB dongle

PC4230 Open ID Bundle for PAR dongle

PC4330 Open eVision ID Bundle

## Included libraries

EasyBarCode

EasyMatrixCode

EasyOCR

EasyOCR2

EasyQRCode

## Related products

PC6512 eVision/Open eVision USB Dongle (empty)

PC6513 eVision/Open eVision Parallel Dongle (empty)

PC6514 Neo USB Dongle (empty)

# Offices

- Europe, Middle East & Africa
  Euresys SA
  **Contact support : support.europe@euresys.com**

  Sensor to Image GmbH
  **Contact support : support.europe@euresys.com**

- China
  Euresys Shanghai Liaison Office
  **Contact support : support.china@euresys.com**

  Euresys Shenzhen Liaison Office
  **Contact support : support.china@euresys.com**

- Japan
  Euresys Japan K.K.
  **Contact support : support.japan@euresys.com**

- South Korea
  Euresys South Korea Liaison Office
  **Contact support : support.korea@euresys.com**

- Asia (other countries)
  Euresys Pte. Ltd.
  **Contact support : support.asia@euresys.com**

- North, Central & South America
  Euresys Inc.
  **Contact support : support.usa@euresys.com**

  TKH Vision Experience Center
  **Contact support : support.usa@euresys.com**

12/18/2023

# Datasheet

# EasyBarCode

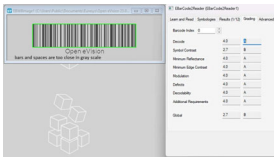
Bar code reading library

- Automatic detection of the barcode in the image
- Automatic detection of the symbology
- Very fast and robust
- Full support of numerous symbologies
- Mail Barcode Reader
- Multiple codes reading
- Grading according to ISO/IEC 15416

# Main benefits

## Supported barcode symbologies

- Codabar, Code 128, Code 25 Interleaved
- Code 39, EAN 128, EAN 13
- MSI, UPC A, UPC E
- Binary Code, Code ABC Anker, Code BC 412, Code 11, Code 25 (DataLogic, Matrix, IATA, Industry, Compressed, Inverted)
- Code 32, Code 39 Extended Reduced, Code 93, Code 93 Extended, Code BCD Matrix, Code CIP, Code STK
- EAN 8, IBM Delta Distance A, Plessey, Telepen
- 4-state Mail Barcode (Japanese and US Mail)
- Pharmacode One Track
- GS1 symbology



## Barcode grading with EasyBarCode2

EasyBarCode2 offers the grading of bar codes according to ISO/IEC 15416 for the Ean13, Code128 and Gs1-128 symbologies. The following standardized criteria are evaluated and rated A to F (or 40 to 0)

- Decode
- Symbol Contrast
- Minimum Reflectance
- Minimum Edge Contrast
- Modulation
- Defects
- Decodability
- Add'l Requirements

And a Global Rating is provided.

## ECodeReader: More codes in one scan

ECodeReader simplifies the process of reading multiple codes and types within the same image by integrating EasyMatrixCode2, EasyBarCode2 and EasyQRCode into a single, simple, and unified interface. In some applications, reading multiple code types is a requirement. Doing so, required until now, the use of multiple Code Readers (i.e. one per code type). ECodeReader simplifies that process by integrating the power of EasyMatrixCode2, EasyBarCode2 and EasyQRCode into a single, simple, and unified interface. With ECodeReader, you can thus read Barcodes, Data Matrix codes and QR codes with a single method call. Note: ECodeReader requires the EasyMatrixCode, EasyBarCode and EasyQRCode licenses.

## 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.

## All Open eVision libraries are available for Windows and Linux

- Microsoft Windows 11, 10, 8.1, 7 for x86-64 (64-bit) processor architecture
- Linux for x86-64 (64-bit) and ARMv8-A (64-bit) processor architectures with a glibc version greater or equal to 2.18

# Specifications

## Software

### Host PC Operating System

Open eVision is a set of 64-bit libraries that require an Intel compatible processor with the SSE4 instruction set or an ARMv8-A compatible processor.

**Open eVision can be used on the following operating systems:**

Microsoft Windows 11, 10, 8.1, 7 for x86-64 (64-bit) processor architecture

Linux for x86-64 (64-bit) and ARMv8-A (64-bit) processor architectures with a glibc version greater or equal to 2.18

**Remote connections**

Remote connections are allowed using remote desktop, TeamViewer or any other similar software.

**Virtual machines**

Virtual machines are supported. Microsoft Hyper-V, Oracle VirtualBox and libvirt hypervisors have been successfully tested.

Only the Neo Licensing System is compatible with virtualization.

**Minimum requirements:**

2 GB RAM to run an Open eVision application

8 GB RAM to compile an Open eVision application

Between 100 MB and 2 GB free hard disk space for libraries, depending on selected options.

### APIs

**Supported programming languages:**

The Open eVision libraries and tools support C++, Python and the programming languages compatible with the .NET Framework (C#, VB.NET)

C++ requirements: A compiler compatible with the C++ 11 standard is required to use Open eVision

Python requirements: Python 3.11 or later is required to use the Python bindings for Open eVision

.NET requirements: .NET Framework versions 2.0 to 4.8 are supported

**Supported Integrated Development Environments:**

Microsoft Visual Studio 2017 (C++, C#, VB .NET, C++/CLI)

Microsoft Visual Studio 2019 (C++, C#, VB .NET, C++/CLI)

Microsoft Visual Studio 2022 (C++, C#, VB .NET, C++/CLI)

QtCreator 4.15 with Qt 5.12

## Ordering Information

### Product code - Description

PC4010 EasyBarCode for USB dongle

PC4060 EasyBarCode for PAR dongle

PC4110 EasyBarCode for board licensing

PC4160 Open EasyBarCode for USB dongle

PC4210 Open EasyBarCode for PAR dongle

PC4310 Open eVision EasyBarCode

## Related products

PC6512 eVision/Open eVision USB Dongle (empty)

PC6513 eVision/Open eVision Parallel Dongle (empty)

PC6514 Neo USB Dongle (empty)

# Offices

- Europe, Middle East & Africa
  Euresys SA
  **Contact support : support.europe@euresys.com**

  Sensor to Image GmbH
  **Contact support : support.europe@euresys.com**

- China
  Euresys Shanghai Liaison Office
  **Contact support : support.china@euresys.com**

  Euresys Shenzhen Liaison Office
  **Contact support : support.china@euresys.com**

- Japan
  Euresys Japan K.K.
  **Contact support : support.japan@euresys.com**

- South Korea
  Euresys South Korea Liaison Office
  **Contact support : support.korea@euresys.com**

- Asia (other countries)
  Euresys Pte. Ltd.
  **Contact support : support.asia@euresys.com**

- North, Central & South America
  Euresys Inc.
  **Contact support : support.usa@euresys.com**

  TKH Vision Experience Center
  **Contact support : support.usa@euresys.com**

12/18/2023

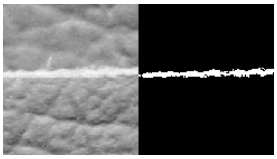
# Datasheet

# EasyImage

Image processing library

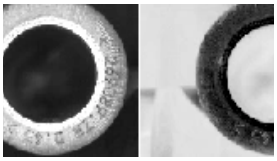
- Set of optimized fundamental image processing and analysis functions
- Convolution and morphology
- Geometric transformations
- Histogram computation and analysis
- Noise estimation and reduction
- HDR (High Dynamic Range) image fusion

# Main benefits



## EasyImage includes the following functions

- **Gain / Offset change**: Normalization, Uniformization, Lookup table mapping
- **Thresholding**: Automatic thresholding, Min residue, max entropy, isodata, Manual thresholding; Single threshold (absolute and relative), Double threshold, Histogram-based threshold
- **Arithmetic operations**: Addition, Subtraction, Multiplication, Division, Copy, Invert, Module, Shift
- HDR (High Dynamic Range) image fusion
- **Logical and bitwise operations**: AND, OR, XOR, NOT
- Pixel comparison, Minimum, maximum
- Histogram equalization
- **Linear filtering**: Edge detection (Laplacian, Gradient, Prewitt, Sobel, Roberts filters), Sharpening, Smoothing (Gaussian and uniform filters). Custom kernel filtering: Kernel creation and management functions.
- **Non-linear filtering**: Morphological operators (Erosion, Dilation, Opening, Closing, Thinning, Thickening, Top-hat filter, Hit-and-miss transform, Morphological distance), Median filter



## Also includes the following functions

- **Geometric transformations**: Image registration (alignment), Horizontal and vertical mirroring, Translation, scaling and rotation with optional interpolation, LUT-based (un)warping
- Vector operations, Projection, Profile sampling (line segment, path, contour) and analysis
- **Statistics**: Measurement of Area, Binary moments, Weighted moments, Gravity center, Pixel count and pixel statistics, Minimum and maximum gray-level value, Average, variance and standard deviation
- Histogram computation and analysis
- Image focusing
- **Noise estimation and reduction**: Spatial noise reduction (Convolution, Median filters), Temporal noise reduction (Recursive average, Moving average, Average), Noise estimation (Root-mean-square noise, Signal-to-noise ratio)
- Elimination of the interlaced images artifacts by rebuilding or re-aligning fields
- **Feature point detectors**: Harris corner detector, Canny edge detector
- Other operations: Overlay, Scalar gradient


## 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.


## All Open eVision libraries are available for Windows and Linux

- Microsoft Windows 11, 10, 8.1, 7 for x86-64 (64-bit) processor architecture
- Linux for x86-64 (64-bit) and ARMv8-A (64-bit) processor architectures with a glibc version greater or equal to 2.18

# Specifications

## Software

### Host PC Operating System

Open eVision is a set of 64-bit libraries that require an Intel compatible processor with the SSE4 instruction set or an ARMv8-A compatible processor.

**Open eVision can be used on the following operating systems:**

Microsoft Windows 11, 10, 8.1, 7 for x86-64 (64-bit) processor architecture

Linux for x86-64 (64-bit) and ARMv8-A (64-bit) processor architectures with a glibc version greater or equal to 2.18

**Remote connections**

Remote connections are allowed using remote desktop, TeamViewer or any other similar software.

**Virtual machines**

Virtual machines are supported. Microsoft Hyper-V, Oracle VirtualBox and libvirt hypervisors have been successfully tested.

Only the Neo Licensing System is compatible with virtualization.

**Minimum requirements:**

2 GB RAM to run an Open eVision application

8 GB RAM to compile an Open eVision application

Between 100 MB and 2 GB free hard disk space for libraries, depending on selected options.

### APIs

**Supported programming languages:**

The Open eVision libraries and tools support C++, Python and the programming languages compatible with the .NET Framework (C#, VB.NET)

C++ requirements: A compiler compatible with the C++ 11 standard is required to use Open eVision

Python requirements: Python 3.11 or later is required to use the Python bindings for Open eVision

.NET requirements: .NET Framework versions 2.0 to 4.8 are supported

**Supported Integrated Development Environments:**

Microsoft Visual Studio 2017 (C++, C#, VB .NET, C++/CLI)

Microsoft Visual Studio 2019 (C++, C#, VB .NET, C++/CLI)

Microsoft Visual Studio 2022 (C++, C#, VB .NET, C++/CLI)

QtCreator 4.15 with Qt 5.12

## Ordering Information

### Product code - Description

PC4001 EasyImage for USB dongle

PC4051 EasyImage for PAR dongle

PC4101 EasyImage for board licensing

PC4151 Open EasyImage for USB dongle

PC4201 Open EasyImage for PAR dongle

PC4301 Open eVision EasyImage

## Related products

PC6512 eVision/Open eVision USB Dongle (empty)

PC6513 eVision/Open eVision Parallel Dongle (empty)

PC6514 Neo USB Dongle (empty)

# Offices

- Europe, Middle East & Africa
  Euresys SA
  **Contact support : support.europe@euresys.com**

  Sensor to Image GmbH
  **Contact support : support.europe@euresys.com**

- China
  Euresys Shanghai Liaison Office
  **Contact support : support.china@euresys.com**

  Euresys Shenzhen Liaison Office
  **Contact support : support.china@euresys.com**

- Japan
  Euresys Japan K.K.
  **Contact support : support.japan@euresys.com**

- South Korea
  Euresys South Korea Liaison Office
  **Contact support : support.korea@euresys.com**

- Asia (other countries)
  Euresys Pte. Ltd.
  **Contact support : support.asia@euresys.com**

- North, Central & South America
  Euresys Inc.
  **Contact support : support.usa@euresys.com**

  TKH Vision Experience Center
  **Contact support : support.usa@euresys.com**

12/18/2023

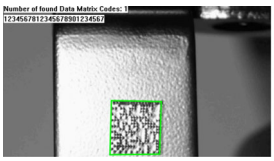
# Datasheet

# EasyMatrixCode

2D Data Matrix code reading library

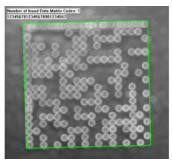
- Automatic detection of the code in the image
- Decodes ECC200, ECC000, ECC050, ECC080, ECC100 and ECC140 codes
- Computes quality indicators as per ANSI/AIM, ISO/IEC 15415, ISO/IEC TR 29158 and SEMI T10-0701 standards
- Very fast operation
- Impressive robustness to noise, blur and distortion
- Support of GS1 Data Matrix codes
- Efficient reading of codes in grid layout
- Multiple codes reading

# Main benefits



## Automatic recognition

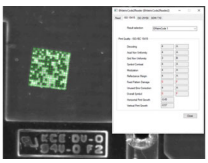
As an automatic library, a learning phase is not required, but it is optional. Some characteristics of the matrix code may be set manually in order to restrict the search and accelerate the process. These characteristics are: the family of the matrix code, the number of cells, the cells color, whether flipping is allowed or not.



## Impressive robustness to noise, blur and distortion

EasyMatrixCode can be used in the most demanding situation. It has been designed to fulfill the most difficult application cases such as:

- Bad illumination conditions: non-uniform contrast, under- or over-exposed images
- Bad images resulting from printing or optical defects: blurred Data Matrix codes, anisotropic and non-uniform scaling, noisy images, skewed images
- Hard-to-detect codes: small-size codes, codes on a textured background, resulting from dot peening, laser marking, ink jet printing or electro-chemical etching on various materials.

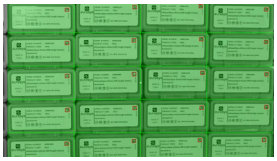


## Print quality verification

EasyMatrixCode inspects the quality of the Data Matrix code and computes the indicators as defined by the ANSI/AIM, ISO/IEC 15415, ISO/IEC TR 29158 and SEMI T10-0701 standards.

## ECodeReader: More codes in one scan

ECodeReader simplifies the process of reading multiple codes and types within the same image by integrating EasyMatrixCode2, EasyBarCode2 and EasyQRCode into a single, simple, and unified interface. In some applications, reading multiple code types is a requirement. Doing so, required until now, the use of multiple Code Readers (i.e. one per code type). ECodeReader simplifies that process by integrating the power of EasyMatrixCode2, EasyBarCode2 and EasyQRCode into a single, simple, and unified interface. With ECodeReader, you can thus read Barcodes, Data Matrix codes and QR codes with a single method call. Note: ECodeReader requires the EasyMatrixCode, EasyBarCode and EasyQRCode licenses.



## Grid reading

EasyMatrixCode2 supports the definition of a grid to improve reading regularly positioned Data Matrix Codes. When possible, using a grid substantially improves both the reliability and reading speed.

## 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.

## All Open eVision libraries are available for Windows and Linux

- Microsoft Windows 11, 10, 8.1, 7 for x86-64 (64-bit) processor architecture
- Linux for x86-64 (64-bit) and ARMv8-A (64-bit) processor architectures with a glibc version greater or equal to 2.18

# Specifications

## Software

### Host PC Operating System

Open eVision is a set of 64-bit libraries that require an Intel compatible processor with the SSE4 instruction set or an ARMv8-A compatible processor.

**Open eVision can be used on the following operating systems:**

Microsoft Windows 11, 10, 8.1, 7 for x86-64 (64-bit) processor architecture

Linux for x86-64 (64-bit) and ARMv8-A (64-bit) processor architectures with a glibc version greater or equal to 2.18

**Remote connections**

Remote connections are allowed using remote desktop, TeamViewer or any other similar software.

**Virtual machines**

Virtual machines are supported. Microsoft Hyper-V, Oracle VirtualBox and libvirt hypervisors have been successfully tested.

Only the Neo Licensing System is compatible with virtualization.

**Minimum requirements:**

2 GB RAM to run an Open eVision application

8 GB RAM to compile an Open eVision application

Between 100 MB and 2 GB free hard disk space for libraries, depending on selected options.

### APIs

**Supported programming languages:**

The Open eVision libraries and tools support C++, Python and the programming languages compatible with the .NET Framework (C#, VB.NET)

C++ requirements: A compiler compatible with the C++ 11 standard is required to use Open eVision

Python requirements: Python 3.11 or later is required to use the Python bindings for Open eVision

.NET requirements: .NET Framework versions 2.0 to 4.8 are supported

**Supported Integrated Development Environments:**

Microsoft Visual Studio 2017 (C++, C#, VB .NET, C++/CLI)

Microsoft Visual Studio 2019 (C++, C#, VB .NET, C++/CLI)

Microsoft Visual Studio 2022 (C++, C#, VB .NET, C++/CLI)

QtCreator 4.15 with Qt 5.12

## Ordering Information

### Product code - Description

PC4007 EasyMatrixCode for USB dongle

PC4057 EasyMatrixCode for PAR dongle

PC4107 EasyMatrixCode for board licensing

PC4157 Open EasyMatrixCode for USB dongle

PC4207 Open EasyMatrixCode for PAR dongle

PC4307 Open eVision EasyMatrixCode

## Related products

PC6512 eVision/Open eVision USB Dongle (empty)

PC6513 eVision/Open eVision Parallel Dongle (empty)

PC6514 Neo USB Dongle (empty)

# Offices

- Europe, Middle East & Africa
  Euresys SA
  **Contact support : support.europe@euresys.com**

  Sensor to Image GmbH
  **Contact support : support.europe@euresys.com**

- China
  Euresys Shanghai Liaison Office
  **Contact support : support.china@euresys.com**

  Euresys Shenzhen Liaison Office
  **Contact support : support.china@euresys.com**

- Japan
  Euresys Japan K.K.
  **Contact support : support.japan@euresys.com**

- South Korea
  Euresys South Korea Liaison Office
  **Contact support : support.korea@euresys.com**

- Asia (other countries)
  Euresys Pte. Ltd.
  **Contact support : support.asia@euresys.com**

- North, Central & South America
  Euresys Inc.
  **Contact support : support.usa@euresys.com**

  TKH Vision Experience Center
  **Contact support : support.usa@euresys.com**

12/18/2023

# Datasheet

# EasyOCR

Optical character recognition library


- Teachable character recognition for the most reliable and fastest recognition
- Invariant to character size
- Tolerant to poorly printed, broken characters
- "Connected" characters separation
- Pre-defined fonts included

# Main benefits


## Training

EasyOCR requires training the font to be recognized. It is able to learn from sample images all possible characters to be read. This makes the recognition extremely flexible, fast and reliable. The training phase involves an interactive application used to show samples of the characters and allow the library to learn and store them in a font file. Moreover, EasyOCR provides the means for you to write your own, custom, font editor. EasyOCR also comes with three standard pre-learnt font files for the standard OCR-A, OCR-B and Semi fonts.

## 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.

## All Open eVision libraries are available for Windows and Linux

- Microsoft Windows 11, 10, 8.1, 7 for x86-64 (64-bit) processor architecture
- Linux for x86-64 (64-bit) and ARMv8-A (64-bit) processor architectures with a glibc version greater or equal to 2.18

# Specifications

## Software

### Host PC Operating System

Open eVision is a set of 64-bit libraries that require an Intel compatible processor with the SSE4 instruction set or an ARMv8-A compatible processor.

**Open eVision can be used on the following operating systems:**

Microsoft Windows 11, 10, 8.1, 7 for x86-64 (64-bit) processor architecture

Linux for x86-64 (64-bit) and ARMv8-A (64-bit) processor architectures with a glibc version greater or equal to 2.18

**Remote connections**

Remote connections are allowed using remote desktop, TeamViewer or any other similar software.

**Virtual machines**

Virtual machines are supported. Microsoft Hyper-V, Oracle VirtualBox and libvirt hypervisors have been successfully tested.

Only the Neo Licensing System is compatible with virtualization.

**Minimum requirements:**

2 GB RAM to run an Open eVision application

8 GB RAM to compile an Open eVision application

Between 100 MB and 2 GB free hard disk space for libraries, depending on selected options.

### APIs

**Supported programming languages:**

The Open eVision libraries and tools support C++, Python and the programming languages compatible with the .NET Framework (C#, VB.NET)

C++ requirements: A compiler compatible with the C++ 11 standard is required to use Open eVision

Python requirements: Python 3.11 or later is required to use the Python bindings for Open eVision

.NET requirements: .NET Framework versions 2.0 to 4.8 are supported

**Supported Integrated Development Environments:**

Microsoft Visual Studio 2017 (C++, C#, VB .NET, C++/CLI)

Microsoft Visual Studio 2019 (C++, C#, VB .NET, C++/CLI)

Microsoft Visual Studio 2022 (C++, C#, VB .NET, C++/CLI)

QtCreator 4.15 with Qt 5.12

## Ordering Information

### Product code - Description

PC4005 EasyOCR for USB dongle

PC4055 EasyOCR for PAR dongle

PC4105 EasyOCR for board licensing

PC4155 Open EasyOCR for USB dongle

PC4205 Open EasyOCR for PAR dongle

PC4305 Open eVision EasyOCR

## Related products

PC6512 eVision/Open eVision USB Dongle (empty)

PC6513 eVision/Open eVision Parallel Dongle (empty)

PC6514 Neo USB Dongle (empty)

# Offices

- Europe, Middle East & Africa
  Euresys SA
  **Contact support : support.europe@euresys.com**

  Sensor to Image GmbH
  **Contact support : support.europe@euresys.com**

- China
  Euresys Shanghai Liaison Office
  **Contact support : support.china@euresys.com**

  Euresys Shenzhen Liaison Office
  **Contact support : support.china@euresys.com**

- Japan
  Euresys Japan K.K.
  **Contact support : support.japan@euresys.com**

- South Korea
  Euresys South Korea Liaison Office
  **Contact support : support.korea@euresys.com**

- Asia (other countries)
  Euresys Pte. Ltd.
  **Contact support : support.asia@euresys.com**

- North, Central & South America
  Euresys Inc.
  **Contact support : support.usa@euresys.com**

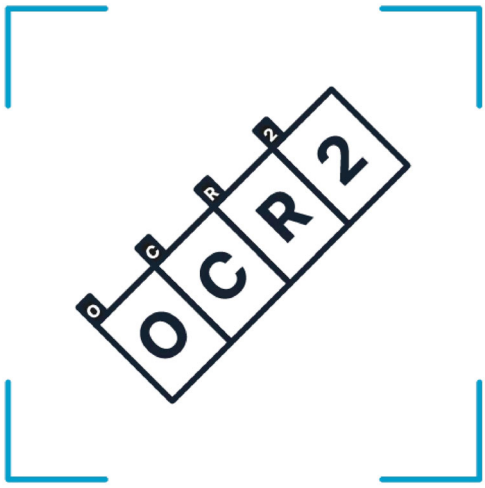
  TKH Vision Experience Center
  **Contact support : support.usa@euresys.com**

12/18/2023

# Datasheet

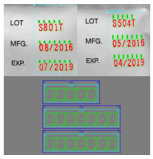
# EasyOCR2

Industrial optical character recognition library



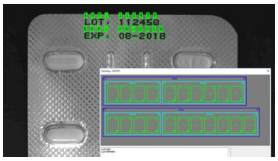

- Optimized for reading short texts such as part numbers, serial numbers, expiry dates, manufacturing dates, lot codes, ...
- Innovative segmentation algorithm to automatically locate texts in the image based on expected character size and text topology
- Full support for text rotation (360 degrees)
- 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

# Main benefits



## 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

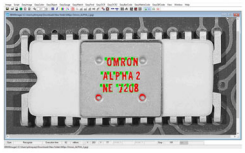
The character type (letter, digit, symbol, ...) of each character can be specified to improve the recognition speed and rate.

## 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.

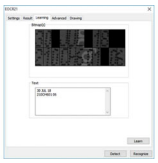
## Text rotation

Full support for text rotation (360 degrees)



## 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.



## 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.

## 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.

## All Open eVision libraries are available for Windows and Linux

- Microsoft Windows 11, 10, 8.1, 7 for x86-64 (64-bit) processor architecture
- Linux for x86-64 (64-bit) and ARMv8-A (64-bit) processor architectures with a glibc version greater or equal to 2.18

# Specifications

## Software

### Host PC Operating System

Open eVision is a set of 64-bit libraries that require an Intel compatible processor with the SSE4 instruction set or an ARMv8-A compatible processor.

**Open eVision can be used on the following operating systems:**

Microsoft Windows 11, 10, 8.1, 7 for x86-64 (64-bit) processor architecture

Linux for x86-64 (64-bit) and ARMv8-A (64-bit) processor architectures with a glibc version greater or equal to 2.18

**Remote connections**

Remote connections are allowed using remote desktop, TeamViewer or any other similar software.

**Virtual machines**

Virtual machines are supported. Microsoft Hyper-V, Oracle VirtualBox and libvirt hypervisors have been successfully tested.

Only the Neo Licensing System is compatible with virtualization.

**Minimum requirements:**

2 GB RAM to run an Open eVision application

8 GB RAM to compile an Open eVision application

Between 100 MB and 2 GB free hard disk space for libraries, depending on selected options.

### APIs

**Supported programming languages:**

The Open eVision libraries and tools support C++, Python and the programming languages compatible with the .NET Framework (C#, VB.NET)

C++ requirements: A compiler compatible with the C++ 11 standard is required to use Open eVision

Python requirements: Python 3.11 or later is required to use the Python bindings for Open eVision

.NET requirements: .NET Framework versions 2.0 to 4.8 are supported

**Supported Integrated Development Environments:**

Microsoft Visual Studio 2017 (C++, C#, VB .NET, C++/CLI)

Microsoft Visual Studio 2019 (C++, C#, VB .NET, C++/CLI)

Microsoft Visual Studio 2022 (C++, C#, VB .NET, C++/CLI)

QtCreator 4.15 with Qt 5.12

## Ordering Information

### Product code - Description

PC4179 Open EasyOCR2 for USB dongle

PC4229 Open EasyOCR2 for PAR dongle

PC4329 Open eVision EasyOCR2

## Related products

PC6512 eVision/Open eVision USB Dongle (empty)

PC6513 eVision/Open eVision Parallel Dongle (empty)

PC6514 Neo USB Dongle (empty)

# Offices

- Europe, Middle East & Africa
  Euresys SA
  **Contact support : support.europe@euresys.com**

  Sensor to Image GmbH
  **Contact support : support.europe@euresys.com**

- China
  Euresys Shanghai Liaison Office
  **Contact support : support.china@euresys.com**

  Euresys Shenzhen Liaison Office
  **Contact support : support.china@euresys.com**

- Japan
  Euresys Japan K.K.
  **Contact support : support.japan@euresys.com**

- South Korea
  Euresys South Korea Liaison Office
  **Contact support : support.korea@euresys.com**

- Asia (other countries)
  Euresys Pte. Ltd.
  **Contact support : support.asia@euresys.com**

- North, Central & South America
  Euresys Inc.
  **Contact support : support.usa@euresys.com**

  TKH Vision Experience Center
  **Contact support : support.usa@euresys.com**

12/18/2023

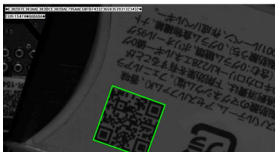
# Datasheet

# EasyQRCode

QR code reading library

- Automatic detection of the code in the image
- Decodes model 1 and model 2 QR codes, all versions, all levels
- Decodes Micro QR codes
- Very fast operation
- Impressive robustness to noise, blur and distortion
- Error detection and correction
- Rotation and flipping invariant
- Print quality verification with grading standards
- Multiple codes reading

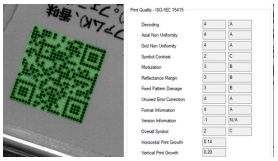
# Main benefits



## Automatic extensive decoding

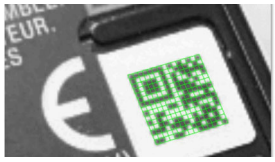
The following code types are supported:

- Data: Kanji, numeric, alphanumeric, byte and mixed FNC1
- Model 1 QR Codes, all versions (1-14), all levels
- Model 2 QR Codes, all versions (1-40), all levels
- GS1 symbology



## Print quality verification

EasyQRCode inspects the quality of the QR code and computes indicators as defined by the ISO/IEC 15415 and ISO/IEC TR 29158 standards.



## Also for Micro QRCodes

Open eVision can also detect and decode Micro QR Codes using its EQRCodeReader class. A more compact version of the regular QR Code, used when less data need to be encoded. Check it with the latest revision of Open eVision Studio & sample programs.


## ECodeReader: More codes in one scan

ECodeReader simplifies the process of reading multiple codes and types within the same image by integrating EasyMatrixCode2, EasyBarCode2 and EasyQRCode into a single, simple, and unified interface. In some applications, reading multiple code types is a requirement. Doing so, required until now, the use of multiple Code Readers (i.e. one per code type). ECodeReader simplifies that process by integrating the power of EasyMatrixCode2, EasyBarCode2 and EasyQRCode into a single, simple, and unified interface. With ECodeReader, you can thus read Barcodes, Data Matrix codes and QR codes with a single method call. Note: ECodeReader requires the EasyMatrixCode, EasyBarCode and EasyQRCode licenses.

## 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.

## All Open eVision libraries are available for Windows and Linux

- Microsoft Windows 11, 10, 8.1, 7 for x86-64 (64-bit) processor architecture
- Linux for x86-64 (64-bit) and ARMv8-A (64-bit) processor architectures with a glibc version greater or equal to 2.18

# Other benefits

## DPM - Direct Part Marks

EasyQRCode algorithms have been specifically optimized to read direct part marks. They support the low contrast and distorted codes resulting from dot peening, laser marking, ink jet printing or electro-chemical etching on various materials.

# Specifications

## Software

### Host PC Operating System

Open eVision is a set of 64-bit libraries that require an Intel compatible processor with the SSE4 instruction set or an ARMv8-A compatible processor.

**Open eVision can be used on the following operating systems:**

Microsoft Windows 11, 10, 8.1, 7 for x86-64 (64-bit) processor architecture

Linux for x86-64 (64-bit) and ARMv8-A (64-bit) processor architectures with a glibc version greater or equal to 2.18

**Remote connections**

Remote connections are allowed using remote desktop, TeamViewer or any other similar software.

**Virtual machines**

Virtual machines are supported. Microsoft Hyper-V, Oracle VirtualBox and libvirt hypervisors have been successfully tested.

Only the Neo Licensing System is compatible with virtualization.

**Minimum requirements:**

2 GB RAM to run an Open eVision application

8 GB RAM to compile an Open eVision application

Between 100 MB and 2 GB free hard disk space for libraries, depending on selected options.

### APIs

**Supported programming languages:**

The Open eVision libraries and tools support C++, Python and the programming languages compatible with the .NET Framework (C#, VB.NET)

C++ requirements: A compiler compatible with the C++ 11 standard is required to use Open eVision

Python requirements: Python 3.11 or later is required to use the Python bindings for Open eVision

.NET requirements: .NET Framework versions 2.0 to 4.8 are supported

**Supported Integrated Development Environments:**

Microsoft Visual Studio 2017 (C++, C#, VB .NET, C++/CLI)

Microsoft Visual Studio 2019 (C++, C#, VB .NET, C++/CLI)

Microsoft Visual Studio 2022 (C++, C#, VB .NET, C++/CLI)

QtCreator 4.15 with Qt 5.12

## Ordering Information

### Product code - Description

PC4175 Open EasyQRCode for USB dongle

PC4225 Open EasyQRCode for PAR dongle

PC4325 Open eVision EasyQRCode

## Related products

PC6512 eVision/Open eVision USB Dongle (empty)

PC6513 eVision/Open eVision Parallel Dongle (empty)

PC6514 Neo USB Dongle (empty)

# Offices

- Europe, Middle East & Africa
  Euresys SA
  **Contact support : support.europe@euresys.com**

  Sensor to Image GmbH
  **Contact support : support.europe@euresys.com**

- China
  Euresys Shanghai Liaison Office
  **Contact support : support.china@euresys.com**

  Euresys Shenzhen Liaison Office
  **Contact support : support.china@euresys.com**

- Japan
  Euresys Japan K.K.
  **Contact support : support.japan@euresys.com**

- South Korea
  Euresys South Korea Liaison Office
  **Contact support : support.korea@euresys.com**

- Asia (other countries)
  Euresys Pte. Ltd.
  **Contact support : support.asia@euresys.com**

- North, Central & South America
  Euresys Inc.
  **Contact support : support.usa@euresys.com**

  TKH Vision Experience Center
  **Contact support : support.usa@euresys.com**

2/26/2024

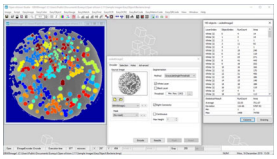
# Datasheet

# Open eVision Studio

Evaluation and prototyping application

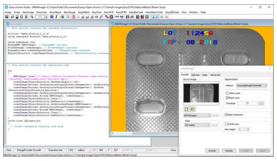
- Intuitive graphical user interface
- Live display of any Open eVision function
- Generate C++, C# and Visual Basic code
- Free of charge

# Main benefits



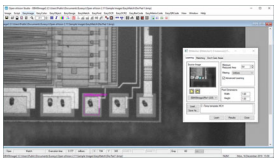
## Open eVision Evaluation

Load your own images into Open eVision Studio and immediately see the result of any Open eVision function. No programming is required.



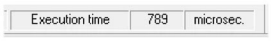
## Code generation

Faster than reading the manuals! Any function called from Open eVision's menus and dialog boxes sees its corresponding C++, C# or Visual Basic code added to the script. Just copy the relevant parts to your application to include the corresponding functionality.



## Template creation

Open eVision Studio includes functions to interactively create templates for EasyMatch and EasyFind, as well as manage EasyOCR and EasyOCR2 font databases.




## Benchmarking

Open eVision Studio measures and displays the real execution time (on your machine) of any Open eVision's function.

# Specifications

## Software

### Host PC Operating System

Microsoft Windows 11, 10, 8.1, 7 for x86-64 (64-bit) processor architecture

**Minimum requirements:**

- 8 GB RAM
- 400 MB free hard disk space

### Related libraries

EasyColor

EasyImage

EasyFind

EasyMatch

EasyGauge

EasyObject

EasyBarCode

EasyQRCode

EasyMatrixCode

EasyOCR

EasyOCR2

# Offices

- Europe, Middle East & Africa
  Euresys SA
  **Contact support : support.europe@euresys.com**

  Sensor to Image GmbH
  **Contact support : support.europe@euresys.com**

- China
  Euresys Shanghai Liaison Office
  **Contact support : support.china@euresys.com**

  Euresys Shenzhen Liaison Office
  **Contact support : support.china@euresys.com**

- Japan
  Euresys Japan K.K.
  **Contact support : support.japan@euresys.com**

- South Korea
  Euresys South Korea Liaison Office
  **Contact support : support.korea@euresys.com**

- Asia (other countries)
  Euresys Pte. Ltd.
  **Contact support : support.asia@euresys.com**

- North, Central & South America
  Euresys Inc.
  **Contact support : support.usa@euresys.com**

  TKH Vision Experience Center
  **Contact support : support.usa@euresys.com**