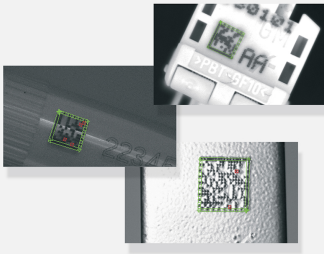# EasyMatrixCode

2D data matrix code reading library

At a Glance

- 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

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 2D 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.

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.

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.

Neo, a New, Flexible Licensing System

- Neo is the new Licensing System of Euresys. It is reliable, state-of-the-art, and is available now under Windows.
- Neo allows you to choose where to activate your license, 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 PC to another.
- Neo Software Containers do not need any dedicated hardware, and instead are linked to the PC 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.

Applications

Machine Vision for the General Manufacturing Industries

- Product identification for traceability
- Code quality verification for label printing machines

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 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 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 2.5.1, 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	• 4007 - EasyMatrixCode for USB dongle
	• 4057 - EasyMatrixCode for PAR dongle
	• 4107 - EasyMatrixCode for board licensing
	• 4157 - Open EasyMatrixCode for USB dongle
	• 4207 - Open EasyMatrixCode for PAR dongle
	• 4257 - Open EasyMatrixCode for soft-based licensing
	• 4307 - Open eVision EasyMatrixCode
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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