mvIMPACT 2D-CodeReader

The 2D-CodeReader is a software module that identifies Data Matrix and QR codes and extracts encoded data. MATRIX VISION's robust and fast algorithms allow to identify symbols captured in a wide range of illumination conditions, symbol sizes, resolution, and symbol quality. Identification and extraction is performed in a completely automated mode: training and presetting are optional. The mvIMPACT 2D-CodeReader module can process both Printed and Direct Part Marking symbols (etching and dot peening) widely used in manufacturing.
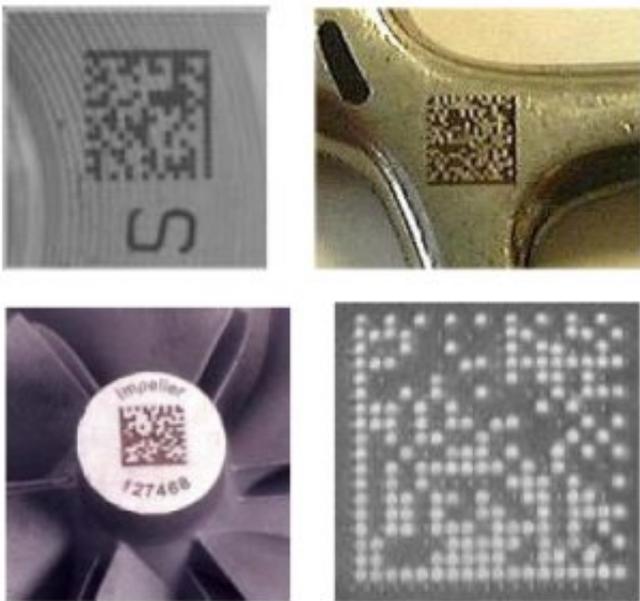
/* */

- Details
- Downloads

Data Matrix codes are a 2D symbology introduced by AIM, Inc. They are becoming commonplace as marking devices in various industries, where they can play the role of barcodes. The major advantages of such codes are increased data density, larger payload capacity and robustness to damage.

Originally from Japan, the Quick Response-Code (QR-Code, ISO/IEC 18004) has grown more and

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more important not only in the automotive industry. Especially in Asia, the QR-Code has largely replaced the Data Matrix code. Wherever it is needed to identify parts and components – even in magazines, for example, to provide more information about an article – the QR-Code are increasingly used.

Writing technologies in use include both printing and direct part marking. In order to handle the variety of possible aspects, image processing-based decoders are required. The 2D-CodeReader module in mvIMPACT provides all versatility, robustness and performance needed and can determine the print quality of the code according to ISO/IEC 15415.

Frame type identification and alignment check

Score-based recognition

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QR-Code

Writing technology support

The Data Matrix module supports two modes of operation. One is suitable for printed symbols, which are usually well contrasted. The other is more appropriate for direct part marking methods such as dot peening or laser etching.

In addition, image preprocessing can be implemented to handle special cases such as textured substrates or unfavorable illumination. An additional utility program eases this task.

Automatic location and identification

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The reader can work in a fully automated way and be ready to decode whatever the symbol size, resolution, orientation, type or contrast. On the other hand, faster decoding can be achieved when necessary by providing a priori information or by restricting the area of interest to be processed.

Symbol deformation, as when the background surface is curved or tilted, is dealt with too.

Error correction

Data Matrix and QR-Code symbols are built with a data redundancy principle that allows checking the correctness of the contents but also correcting erroneous bits of information. This is useful in case of possible damage due to scratches, dirt or misprinting. The 2D-CodeReader transparently handles error detection and correction.

Datasheets

mvIMPACT 3D Display | 46.8 kB

Datenblatt / Datasheet mvIMPACT 3D Display

[mvIMPACT Barcode](#) | 101.8 kB

Datenblatt / Datasheet mvIMPACT Barcode

[mvIMPACT Base](#) | 277.5 kB

Datenblatt / Datasheet mvIMPACT Base

[mvIMPACT Blob](#) | 103.9 kB

Datenblatt / Datasheet mvIMPACT Blob

[mvIMPACT Color](#) | 75.6 kB

Datenblatt / Datasheet mvIMPACT Color

[mvIMPACT Data Matrix](#) | 56.2 kB

Datenblatt / Datasheet mvIMPACT Data Matrix

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[mvIMPACT Focus](#) | 126.4 kB

Datenblatt / Datasheet mvIMPACT Focus

[mvIMPACT GMM](#) | 85.5 kB

Datenblatt / Datasheet mvIMPACT Geometric Model Matcher

[mvIMPACT Match](#) | 145.9 kB

Datenblatt / Datasheet mvIMPACT Match

[mvIMPACT Measure](#) | 60.5 kB

Datenblatt / Datasheet mvIMPACT Measure

[mvIMPACT OCR](#) | 93.2 kB

Datenblatt / Datasheet mvIMPACT OCR

[mvIMPACT e 2012-04 MR](#) | 509.7 kB

Datenblatt / Datasheet mvIMPACT

Manuals

To be able to watch or download the manuals, you have to be registered or logged in.

mvIMPACT Release / Beta for Windows XP, Vista, 7

You can evaluate mvIMPACT SDK for 30 days free of charge once. Afterwards, you will need a licence! If you are using a dongle for licensing mvIMPACT, you have to use the latest USB dongle in combination with the 64bit version!

mvIMPACT-6.8.461.6555-19823-x64 | 136,196.0 kB

mvIMPACT SDK 64 Bit **Release** Windows (XP, Vista, 7 / .NET 4.0 compliant, MSI, SDK Version 6.8.461.6555)

mvIMPACT-6.8.461.6555-19823-x86 | 131,760.0 kB

mvIMPACT SDK 32 Bit **Release** Windows (XP, Vista, 7 / .NET 4.0 compliant, MSI, SDK Version 6.8.461.6555)

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mvIMPACT Nightly Builds for Windows XP, Vista, 7

Nightly builds are tested exemplarily and should be tested by oneself before use!

[mvIMPACT-6.8.1148.7242-20516-x64](#) | 125,276.0 kB

mvIMPACT SDK **Nightly Build** (64 Bit, Build , Windows XP, Vista, 7)

[mvIMPACT-6.8.1148.7242-20516-x86](#) | 121,328.0 kB

mvIMPACT SDK **Nightly Build** (32 Bit, Build , Windows XP, Vista, 7)

mvIMPACT packages for mvBlueLYNX-X

[mvIMPACT-6.8.461.6555-19823-armv7a.tgz](#) | 24,012.6 kB

mvIMPACT (SDK Version 6.8.461.6555)

[mvIMPACT Release Notes](#) | 52.8 kB

Stable feed:

- http://beta.matrix-vision.com/mvblx-feed/stable/ipk/glibc/armv7a/base/

mvIMPACT IPK packages for mvBlueLYNX

- http://beta.matrix-vision.com/nightly_builds/
- Description of the packages

USB Dongle driver for Windows XP, Vista, 7

- HASP driver (new dongle; external link)
- Hardlock driver (old dongle; external link)

Subject to change without notice, Date 11/2011

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