

mvIMPACT OCR



The OCR module provides powerful functions for Optical Character Recognition and verification. The module includes image preprocessing, segmentation and classification of characters. The classification allows the assignment of the separated objects to the corresponding ASCII code.

The OCR module contains two different methods for classification. One method is even insensitive to rotations so characters can be read in any position.

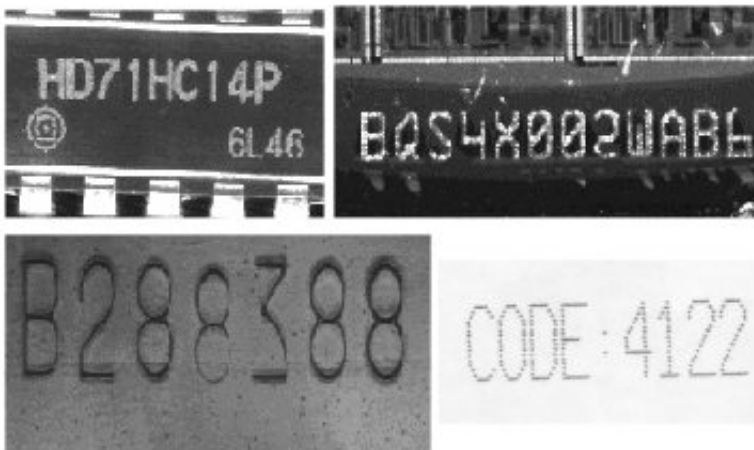
A Windows application is included for tests as well as for training of new fonts.

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- Details
- Downloads

Human readable text is the preferred way to label items for such purposes as part tracking with serial numbers, expiry date notification, type, lot number and/or nominal value description. Optical character recognition turns a marking in a digital image into a string of characters, for reading or contents checking.

Industrial printing devices come use wild variety of technologies, resulting in innumerable appearances and renderings. A robust reader must be able to faithfully process any kind of marking. If needed, the recognition process can be eased by training it with representative samples of the targeted typefaces.



Typical industrial markings

Font learning

When the character set in use is non standard or is printed in an unusual way, it is possible to train the reader on text samples. A complete training workbench is provided to allow storing reference samples of the targeted characters and easy font management.

Pre-trained OCR-A, OCR-B and dot-printed databases:



Pre-trained dot-printed

databases

Character segmentation

Characters need to be isolated before the recognition process. The OCR module has been designed in such a way that any custom pre-processing steps can be applied. Usually, anyway, straight blob analysis suffices. Given that the positions of characters need not be known in advance, text shifting or arbitrary font spacing are dealt with.

Rotation and size invariance

Two recognition methods are supported, for enhanced versatility. One uses size normalization along with gray-level normalization. It fully exploits gray-level information. The other relies on shape representation by means of the so-called "Fourier descriptors". In addition to size invariance, it is also rotation invariant, allowing to read text of an arbitrary orientation.

Print Quality verification

As a complement to the reading capability, the OCR module also allows a readability check: for a given character, a quality score can be computed, telling how closely it matches with the trained sample(s). This way, Optical Character Verification can be carried out.

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

 [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)

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