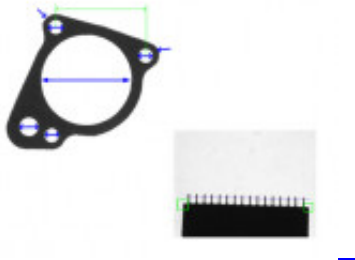


mvIMPACT Measure



The measurement module lets you measure the position and angle of edges within gray scale images. The measurement is performed with subpixel accuracy. Edge measurement is one of the most often used algorithms in machine vision applications. The module includes a flexible edge detection function to locate edges and pairs of edges in an area of interest automatically.

The function searches for all edges or edge pairs in the search window that fulfill the properties given by the parameters

- edge contrast
- edge steepness
- edge polarity

The analysis module then compares these settings with the real values obtained from the edge to be measured and finally calculates a match score, that represents the quality of the match.

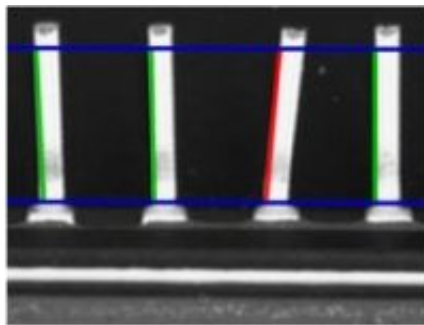
/* */

- Details
- Downloads

To locate manufactured parts or to check their dimensions, such as thickness, radius or angle, gauging tools are used as virtual calipers. The mvIMPACT Measure module supports high accuracy gauging by performing sub-pixel measurements. Maximum precision is achieved by combining gray-level profile analysis and geometric model fitting techniques.

Using mvIMPACT Measure is straightforward: place a search window around the desired object edge. Lines or circles are immediately located and measured. Goodness of the fit can be determined to assess straightness or circularity.

Efficient edge selection mechanisms are provided to handle complex environments where features are close to each other. Edges can also be detected in pairs of opposite polarities.



Part tracking for mark

inspection and pin orientation control

Control parameters

The search window can be horizontal, oblique or vertical for lines, rectangular for circles.

Edge discrimination parameters include polarity, steepness and contrast.

Results

The position of a line is returned as a passing point and a slope. The position of a circle is given by the center and radius.

In addition to these geometric parameters, the following indicators are provided: average polarity, steepness and contrast, as well as a fitting score. The latter allows to assess straightness or circularity.

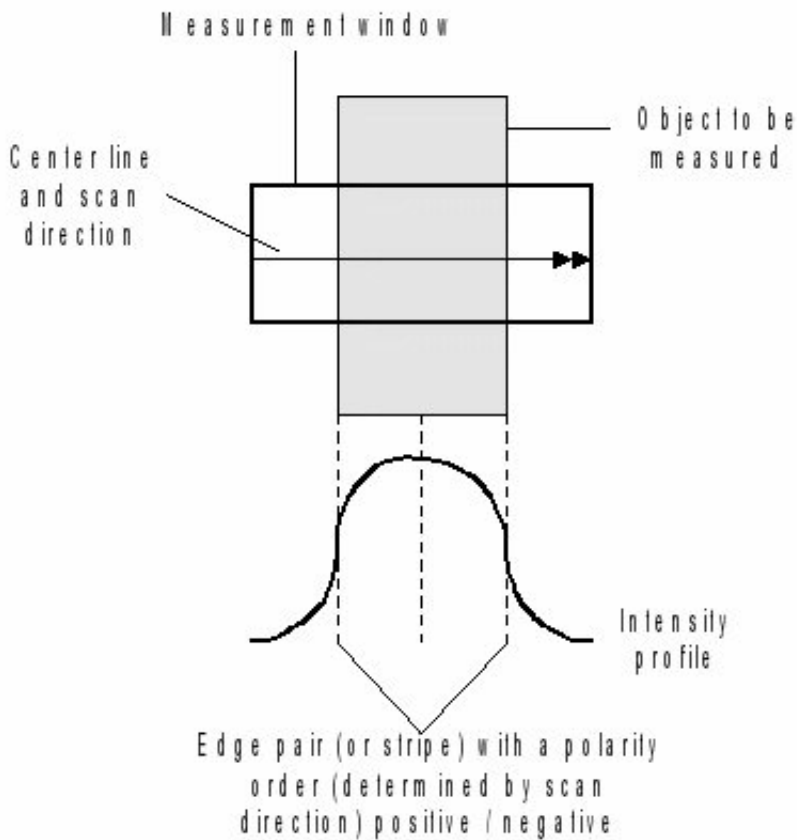
Calibrated coordinates

In addition to standard pixel-based parameter computation, calibrated coordinates can be used. This means that reference axis can be placed anywhere in the image, scale factors and rotation angle specified, to yield real-world measurements.

Working principles

Line measurement

A gray level profile is computed within the range of the measuring window. Sub-pixel peak analysis is then used for edge location.

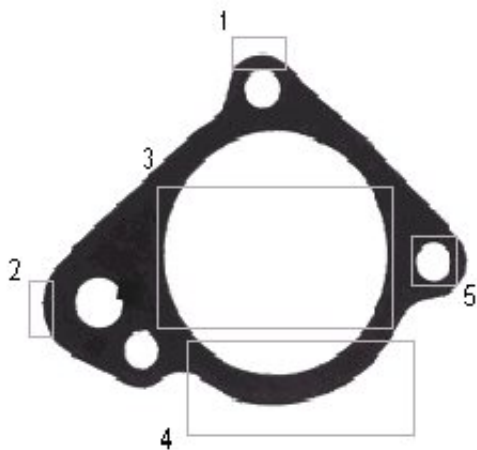


Edge

localization

Circle measurement

Edge pixels are located in the search window. After a filtering pass to remove outliers, the remaining points are fit to a circle by means of a least-squares approach. This guarantees efficient use of the available information, resulting in sub-pixel accuracy.



□ Measurement windows

Circle measurement

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