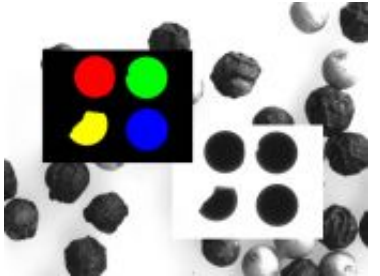


## mvIMPACT Blob



This module provides a set of functions that allow a wide range of measurements on binary image objects. These tools allow sorting out or counting special parts in the image. It can also be used to preprocess the image to find the location and orientation of objects which have to be classified or measured in the next step.

Many object measurement results can be obtained:

- Perimeter
- Area
- Center of gravity
- Roughness
- Position of main axes
- Object histogram
- Feret diameter
- Euler number, etc.

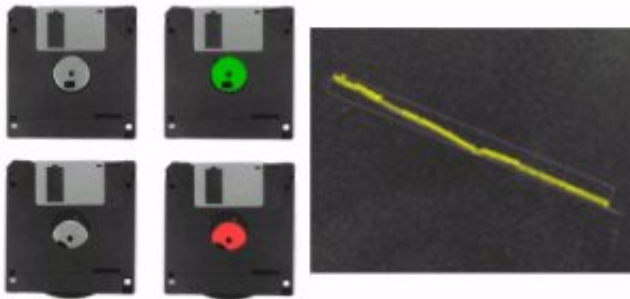
Like the other modules, blob analysis is multidimensional. This enables highly advanced measurements, for example tracking the growth or change of objects over time, or calculating volumes in 3D images.

/\* \*/

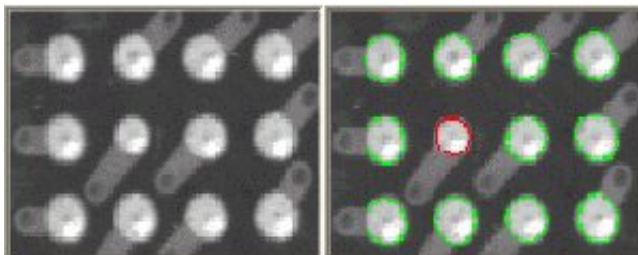
- Details
- Downloads

Blob analysis is a well-known technique to isolate objects and features of an arbitrary kind, analyze their shape or position, and classify them. It combines image binarization and connected component analysis for segmentation.

The innumerable applications of this powerful method relate to item counting, presence/absence check, placement control, part identification, flaw detection, defect characterization, morphometry...



Part placement verification and detection of scratches



Solder ball diameter and roundness check

## Preprocessing

To allow full control on the segmentation process, binarization is kept as an external preprocessing step.

This allows to pre-filter by any means such as morphology in the gray-level or binary domains, using the base module or custom functions.

## Analysis

An extended range of geometric characteristics can be computed, dealing with:

- **Pose:** center of gravity and centroid, Feret and inertia angles
- **Size:** bounding box, ellipse of inertia, Feret diameters, fiber width and length
- **Extent:** surface, convex surface, polar distance, perimeter, convex perimeter
- **Inside:** Euler number, total and average hole surface, perforation
- **Shape:** central moments, roundness, roughness
- **Density:** autocorrelation, contrast, cooccurrence matrix, energy, entropy, histogram, histogram statistics, optical density...

## Selection

When objects have been characterized, further processing can be focused on the relevant ones by checking if the measured values belong to given acceptance ranges. This way, clutter, noise and irrelevant items can be discarded. This selection process can be cascaded to narrow down the search of objects of interest.

## 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.

## 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/](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