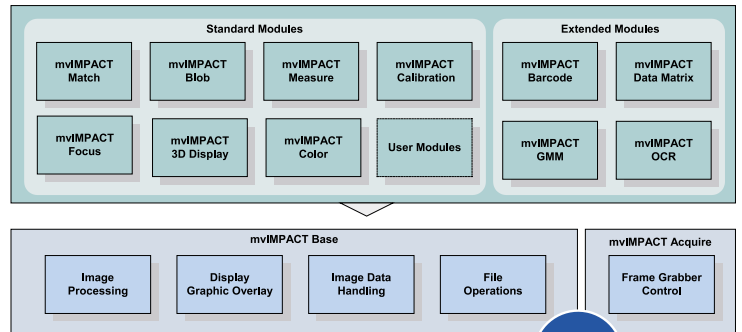


## Easy Soft Tools for Hard Work.



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[www.matrix-vision.com/mvIMPACT](http://www.matrix-vision.com/mvIMPACT)

mvIMPACT is a comprehensive library with high performance algorithms for fast image processing. The library offers a software architecture designed for the future with an object oriented design.

OEMs and system integrators can easily use a huge number of functions for acquisition, processing, enhancement and measurement in their own application. mvIMPACT supports all MATRIX VISION frame grabbers as well as

the intelligent camera mvBlueLYNX and the standard cameras mvBlueFOX and mvBlueCOUGAR in an optimum way.

### Modular Concept

Small and well defined single modules allow an easy integration in already existing programs. Only the actually required modules have to be included. This modular concept allows mvIMPACT running on tiny embedded systems like mvBlueLYNX.

### Licensing

Licenses for mvIMPACT modules are linked to any MATRIX VISION hardware or a dongle. There are single and volume licensing schemes which can be used for own licensings. For this reason, there is no need for own redevelopings.

### mvIMPACT Develop

A one-off purchase of a single mvIMPACT Develop is required to purchase run-time licenses and to get support for all modules.

### mvIMPACT Base

The mvIMPACT Base package is not restricted to an individual frame grabber or dongle. Any access to a MATRIX VISION hardware enables mvIMPACT Base to run free of charge.

### mvIMPACT Toolkit

All standard modules are grouped together to a mvIMPACT Toolkit. A program can be built to handle the general purpose vision requirements with a single package price.

### Extended Modules

The set of extended modules include special application related tools. Typically a program only needs one of these, but they can also be combined with mvIMPACT Toolkit.



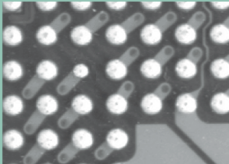



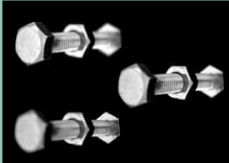
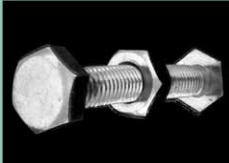
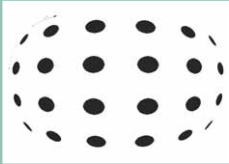
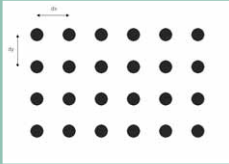

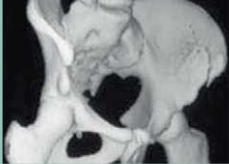
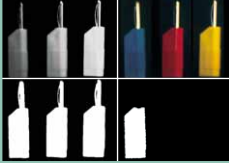

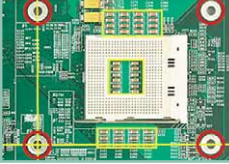
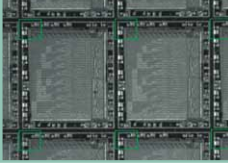
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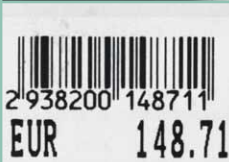
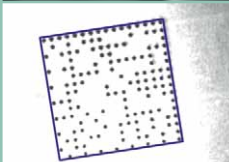
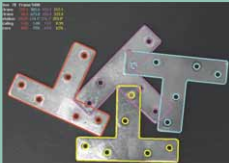
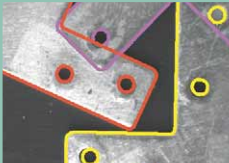
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## STANDARD MODULES

		<b>mvIMPACT Base</b> It includes over 120 functions regarding acquisition, image processing and displaying. Image transformations, filtering and morphological operations allow to prepare	pictures to later ease the analysis. Basic functions like object labelling and contour tracing are also used by the extended mvIMPACT modules internally.
		<b>mvIMPACT Blob</b> The innumerable applications of the mvIMPACT Blob module relate to item counting, presence/absence checking, placement control, part identification,	flaw detection, defect characterization, morphometry ...
		<b>mvIMPACT Measure</b> To locate manufactured parts or to check their dimensions, such as thickness, radius or angle, gauging tools are used as virtual calipers. mvIMPACT Measure supports high	accuracy gauging by performing sub-pixel measurements. Maximum precision is achieved by combining gray-level profile analysis and geometric model fitting techniques.
		<b>mvIMPACT Focus</b> The Focus module serves two purposes. It is able to drive the focusing motor of a lens, by means of a fully automatic sharpness optimization process: autofocus.	It can also reconstruct sharp images from a set of blurred ones: multifocusing. These techniques ensure the best image quality even in cases of deep scenes or low lighting.
		<b>mvIMPACT Calibration</b> Whether unintended or not (e. g. when using a fisheye lens for security applications), distortions are an everyday occurrence in image acquisition and these can lead	to incorrect measurement results. The calibration module equalizes scale, perspective or non-linear distortions easily.
		<b>mvIMPACT 3D Display</b> Reasoning and solving problems on 3D images requires appropriate visualization tools to allow appropriate removal of hidden parts. The advanced 3D Display	module of mvIMPACT is especially powerful in this respect. It supports volume and iso-surface rendering of true spatial data. 3D navigation is built-in.
		<b>mvIMPACT Color</b> Color imaging is specially attractive due to the increased richness of information at the pixel level. Multiple channels of light intensity at different wavelengths create	more opportunities to exploit the contrast between objects. Color analysis allows classifying features impossible to discriminate on a gray-scale image.
		<b>mvIMPACT Match</b> Pattern matching is a general purpose tool to find arbitrary shapes in an image and to measure their position with high accuracy, allowing to adequately move regions of	interest for further visual inspection. Pattern matching is also used for precise robot guidance.

## EXTENDED MODULES

		<b>mvIMPACT OCR</b> 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.
		<b>mvIMPACT Data Matrix &amp; Barcode</b> Both reader modules are able to find a code whatever the size and bar/dot thickness and with arbitrary orientation and angle, even in a complex image. This is a fully automatic	process requiring no training. Contrast reversal is support, too.
		<b>mvIMPACT GMM</b> Searching for objects of a known shape is an essential task in machine vision. To correctly deal with large and irregular variations like scaling, rotation and invisible	parts, one must rely on the shape of objects rather than on the local gray-level intensity.
<b>Custom Modules</b>		The mvIMPACT modules can be easily integrated in every existing software. Additionally, customers may also like to build there own modules with the same	style as mvIMPACT. Given guidelines and sample modules help doing this.