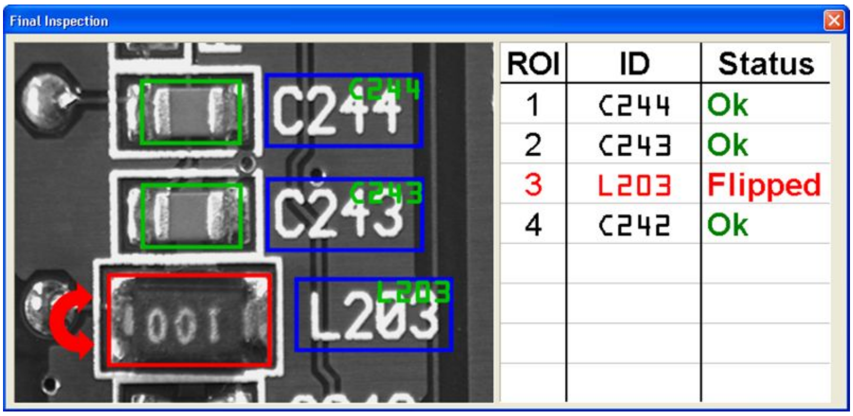
Configuration instead of programming

With the new workbench MATRIX VISION enables - also for beginners - a quick and easy generation of prototypes or complete image processing applications.



Mit dem Softwarepaket mvRapidIMPACT wird durch erstellen bzw. Konfigurieren einer Taskliste ein Prototyp der BV-Applikation erstellt.

Two building blocks of the mvRapidIMPACT software package provide a basis: the so called Tasks and Connectors. Tasks are predefined actions of an arbitrary complexity. They are organized as a list. Using this approach gives us a lot of freedom to define the granularity of the tasks: low-level tasks will correspond to calls of the basic image processing operators such as 'erode image'. High level tasks can be used to achieve a global goal such as 'read DataVision code'. Output parameters of a Task are directed to input parameters of the next, creating data bindings between them.
Connectors can be described as input/output devices to expose parameters and allow modifying them via a user interface.
With the mvRapidIMPACT workbench the development of an image processing application starts with the building ("configuring") of a Task list. Once created, a prototype of the application is available. It can be immediately executed as a whole or step-by-step, with viewing of local data. When an image acquisition device is connected, the prototype can also be run on the live video stream, a powerful way to check robustness of the solution. Next, a drag-and-drop process allows selecting the variables to be used as Connectors. With it an image processing application including user interface is built up in best time and it can be tested under the prototyping bench, or stand-alone.

The popular scripting language Python is used for the internal representation, and scripts can be freely edited by hand. The scripts are portable and can be executed on different target systems like Windows and Linux (e.g. on the intelligent camera mvBlueLYNX).

Last but not least, mvRapidIMPACT can convert the Python code to pure C++ code that can be compiled using your favorite development environment.

For a number of typical problems, built-in wizards will be provided that will further guide the code generation process.

Common strengths – USB 2.0 and Gigabit Ethernet cameras

With MATRIX VISION's mvBlueFOX USB 2.0 cameras it is easy to integrate image processing components. Laptops and desktop systems recognise the cameras per "Plug'n Play" directly and they can install and run in best time. The image quality is excellent by using high quality image sensors while contained in small housing.

USB 2.0 cameras mvBlueFOX from MATRIX VISION.

To achieve longer distances and higher data rates, and based on the proven camera technology of the mvBlueFOX USB 2.0 cameras (such as their features including HRTC), a new Gigabit Ethernet (GigE) camera has been developed.The Gigabit Ethernet is targeted for networks with transfer rates up to one Gigabit/s and distances up to 100 metres. By using optical transmission paths, distances up to ten kilometres can be achieved.

For flexible use and integration into image processing systems

Small and practical are just two catchphrases which simultaneously describe the mvBlueFOX-M module. With a length and width of only 38 mm and a maximum height of 34 mm (version with the lens holder) it is the module's features that make it a real giant.

The mvBlueFOX-M module is available with a multiplicity of sensors: progressive scan CCD sensors as color and monochrome version with the resolutions 640 x 480 pixels up to 1600 x 1200 pixels as well as cost-efficient CMOS color and monochrome sensors with a resolution of 1280 x 1024 pixels.
The choice of the lens demontrates the flexibility of the module. All adapters from C-, CS-, S-mount also customer specific adapters are possible.
Further the module contains 4 digital I/Os which can be used for trigger and flash. With the help of the Hardware Real-Time Controller (HRTC), which is be implemented in the FPGA, the inputs may be polled out and the outputs and image capture may be easily operated in real-time. This allows the HRTC to implement a multitude of applications such as generation of trigger signals, synchronisation of diverse cameras, fast generation of image sequences with different flash and exposure settings etc. Furthermore the single-boards offer a realtime clock (RTC) as well as a downwards compatible USB 2.0 port.

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