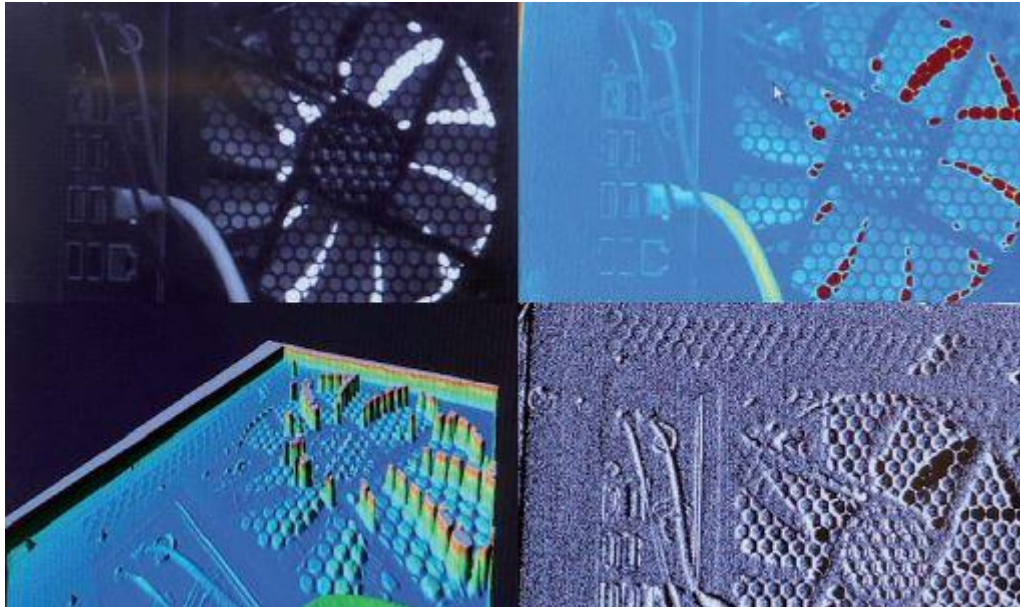


Modern data management for high-speed cameras

New concepts in the interface technology sector



The integration of high-speed cameras presents new challenges to users of slow motion technology, the super time lapse, and in industrial image processing with machine vision. The immensely high data flows of modern image sensors demand intelligent archiving, while at the same time new solutions are required in real-time data processing. Optronis offers new technical concepts and services to meet these requirements.

The CMOS image sensor technologies now available deliver figures that represent a huge leap forward in performance: large-format CMOS sensors with up to 25 million pixels and more, and CMOS sensors trimmed to high refresh rates that offer refresh rates of thousands of images per second. These are technologies that can generate several billion bytes of data every second. For the forward-looking manufacturer, it is a tough challenge to make these data volumes easy for the user to handle. Optronis offers new concepts for simple data management not only for slow motion applications, but also for machine vision.

Machine vision camera data management

As with slow motion, machine vision cameras are used for processes that take place in fractions of a second. The difference, though, is that with machine vision features are extracted from the images in camera real time. That places enormous demands on the processor capacity of the PC. To ease the workload,

data are already prepared in the frame grabber, for instance by using Visual Applets from Silicon Software. Such methods relieve the burden on the main processor of the PC. However, in order to create their image processing solutions, users have to grapple with the hardware requirements and often almost program the hardware. This is where Optronis already takes the strain away from the user in the pre-development phase; with an optional image processing interface, the developer can concentrate fully and entirely on the image processing algorithm. That's because the hardware requirements – on the programming side, too – are covered by the new solution.

EyeMotion interface software

Based on EyeMotion, the new PC-based interface software from SeeFastTechnologies, Optronis customers have the option of a tool that stores image data and offers an interface to image processing libraries such as Adaptive Vision. To adapt to a proprietary image processing algorithm, the software offers plug-ins for C++ and Matlab. These allow the user to test the Optronis camera in advance for their particular image processing task. The advantage of the solution is that it decouples the actual measuring task from the hardware-like programming, right through to characterisation of the measuring system by the customer. Supported by a number of machine vision component manufacturers, this project will initially be launched for the Optronis CP70-1-M/C-1000 machine vision camera. When combined with an AQ8 CoaxPress frame grabber from Silicon Software and the EyeMotion software, it gives customers a user-friendly package for easy integration into their image processing solution.

The user gains greater flexibility with regard to image processing algorithms, through to proprietary image processing tasks or the clarification of issues in research and development.

Contact

Optronis GmbH

Ludwigstr. 2

77694 Kehl

Tel: +49 (0) 78 51/91 26 - 0

Fax: +49 (0) 78 51/91 26 - 10

email: info@optronis.com