

Press Release

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Cutting-Edge Camera Technology for the Packaging Industry



IMAGO Technologies' family of VisionCams

For the first time since 2016, IMAGO Technologies is exhibiting at the FachPack in Nuremberg this September. In the year of its 25th anniversary, the company is placing a special emphasis on its camera technologies. Especially for machine manufacturers in the packaging industry, these technologies can provide significant advantages.

The World's First Event-Based Smart Camera

Does a machine change its behavior and can this be detected by vibration monitoring? Fast and complex sequences of machine parts or packaging should be monitored? Do objects need to be tracked or counted quickly? What previously required complex high-speed camera systems is now possible with an intelligent camera, the *VisionCam EB*. The camera processes motion changes and thus only shows what is important.

An Alternative to Complex Sensors

Are sensors too sensitive to product changes or machine behavior? The image processor "sees" the world with different eyes and could solve it better with a vision system. The corresponding, small and reasonably priced hardware is called *VisionSensor PV*! Even in this small sensor, a Linux PC is integrated, which turns a camera into a vision system.

Area vs. Line Scan Cameras

A line scan camera can capture infinitely long images, works like a single-line scanner and simplifies lighting technology. And if the computer is also integrated in the camera, we are speaking of the *VisionCam LM*. The entire image processing hardware and software of a line scan camera-based system are integrated. The software supports an operation via web browser and use of the well-known Halcon image processing library. Embedded in a machine, the advantages become evident.

IO Real-Time Control meets the Operating System

A packaging machine runs fast, so image processing has to keep up! The *VisionBoxes* show how this can work – whether with a Windows or Linux operating system. μ s-fast processing of input signals and clever generation of camera-/lighting and output signals form the framework for image processing in a computer world with no real-time capability.

Applications for the Packaging Industry

In the context of the packaging industry, user-friendly applications can be developed for machine manufacturers. The following examples show how this works:

- *Analyze My Label*: An imprint / label is scanned and analyzed, i.e. barcodes and data matrix codes are read, logos are checked, the expiration date is inspected. Additional individual functions can be integrated. The necessary hardware? 1x VisionCam LM plus line illumination, and that's it.
- *Read My Fast Printed Number or Character*: Long serial numbers are printed fast and need to be read? This works with a VisionDevice, equipped with illumination and an intelligent camera, able to read very fast printed numbers and digits.
- *Count My Pieces*: Products must be counted? Whether with our intelligent line scan or event-based camera, whether in transmitted or reflected light, integrated in the machine – a lot is possible, depending on the specific requirements.
- *Analyze My Machine Vibration*: Whether the product in the machine or the machine parts themselves – changes in vibration allow conclusions and warn against f. ex. a crash or a product jam. Integrated in the machine at the right place, it becomes cleverer and learns to interpret its own behavior.

These are some examples for embedded vision, i.e. we integrate hard- and software embedded and optimized into a series machine. And this often pays off from as little as 25 machines per year.

Visit IMAGO Technologies for a discussion about these latest technologies at the FachPack in Nuremberg (booth 1-103).

Author: Vivien Moeslang, Marketing

IMAGO Technologies GmbH: The company, founded in 1994, offers manufacturers of series systems VisionBoxes specifically optimized for systems of image processing. A technology starter kit includes camera, I/O, LED Controller, Ethernet and as an option fieldbus interfaces. Depending on the processor type (i-Core; ARM; GPGPU), the systems run in real-time mode on RT Linux, Linux or Windows 10 IoT. IMAGO supplies customers in the areas of industrial image processing and traffic engineering as well as device manufacturers, with the focus always lying on optimized image processing functionality.

ODM (original design manufacturer) versions are available upon request.



Embedded-Vision-Architects since 1994

IMAGO Technologies GmbH
Strassheimer Straße 45
61169 Friedberg
+49 6031 684 26 11

Reader's Contact

info@imago-technologies.com

Press Contact

marketing@imago-technologies.com

Website Pressroom

www.imago-technologies.com/press

Website

www.imago-technologies.com