PRESS RELEASE

IMAGO Technologies Introduces the Vision Sensor PV4: High-Performance, Modular AI Vision for Adaptive Industrial Applications

Friedberg, February 18, 2026 – IMAGO Technologies expands its Embedded Vision portfolio with the Vision Sensor PV4, a modular, freely programmable AI vision sensor designed for demanding industrial inspection tasks. The system is strategically positioned between traditional vision sensors and complex high-end AI cameras, addressing applications where requirements, products, and inspection criteria change frequently.

ON-DEVICE PROCESSING FOR AI AND CLASSICAL MACHINE VISION

The Vision Sensor PV4 combines classical machine vision and AI inference directly on the device. A powerful multicore ARM architecture paired with an integrated Neural Processing Unit enables the execution of advanced image processing and deep learning algorithms entirely on-device.

By processing data locally, additional computing units are no longer required, reducing latency and enabling compact, real-time system architectures. With integrated memory and a Linux-based environment, the sensor can be integrated into existing machine concepts like a compact industrial computer.

MODULAR HARDWARE DESIGN FOR FLEXIBLE INTEGRATION

A key feature of the Vision Sensor PV4 is its modular hardware architecture. Different sensor modules can be integrated without fundamental system modifications, ensuring long-term flexibility as requirements evolve.

Optional components such as software-controlled lighting modules or liquid lenses with autofocus further support adaptation to varying working distances, object sizes, and environmental conditions. For higher-level system integration, industrial interfaces such as GigE Vision, OPC UA, and interface expansion modules are available.

VERSATILE APPLICATIONS IN DYNAMIC PRODUCTION ENVIRONMENTS

Typical applications are found wherever products, formats, or surfaces vary significantly. In logistics, for example, the system enables robust code and plain-text reading across a wide range of packaging sizes and conditions, as well as AI-based evaluation of label quality and positioning.

In the food and beverage industry, the sensor supports flexible inspection of changing container shapes, fill levels, and visually challenging surfaces. Reliable identification and quality inspections can also be implemented in pharmaceutical, retail, and general packaging applications.

Christoph Siemon, Vice President Sales & R&D at IMAGO Technologies, emphasizes the strategic importance:

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“With the Vision Sensor PV4, we are creating a platform for applications that require more flexibility and computing power than traditional vision sensors can provide, while deliberately avoiding the system complexity of large AI computing platforms. Users receive a freely programmable, industrial-grade system that adapts to changing processes.”

The Vision Sensor PV4 is designed for seamless integration into industrial environments and supports a wide range of standard machine and system interfaces. Its compact design simplifies retrofitting in existing production lines as well as integration into new machine concepts.

Images:

Vision Sensor PV4.png
The Vision Sensor PV4 enables modular, AI-based image processing directly on the device.
Image source: IMAGO Technologies

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ABOUT IMAGO TECHNOLOGIES

IMAGO Technologies is a leading manufacturer of intelligent, freely programmable cameras and vision sensors as well as special computers for automated image processing. IMAGO develops, manufactures and markets image processing components at the Friedberg site in Germany for worldwide customers in the field of industrial inspection, pharmaceuticals, mechanical engineering and ... soon also your application? For more than 3 decades, IMAGO has been offering forward-looking solutions with a view to the needs of series product developers with great innovative strength. The product portfolio includes CPU/GPU equipped line scan, area scan and Event-based cameras complemented by Deep Learning im-age processing computers as well as i-Core Box PC / Panel PC each with Windows or Linux operating sys-tem, the latter with real-time optimization. The portfolio is complemented by two solutions that can be used directly in the application: AI-based image processing and predictive maintenance. In the roadmap, current and future new developments are always prepared for AI applications. Already today, customers develop AI solutions completely integrated in the format of a camera up to space and power saving com-puters with latest embedded CPU/GPUs. In addition, IMAGO supports its customers with engineering and software development services. For more information, please visit www.imago-technologies.com.