SWIR technology

**For an even better view:   
Balluff industrial cameras now available for short-wave infrared range**

**Balluff is expanding its product range of BVS CA industrial cameras by adding new models with SWIR sensors. For the first time, short-wave infrared (SWIR) technology will be available in the tried-and-tested GigE and USB3 camera lines to use the short-wave infrared light range. Areas of application include the semiconductor as well as the packaging and the food and beverage industries.**

“This integration, in addition to our UV cameras and the RadarImager, completes our camera technology product range,” says Ralf Sinnerbrink, Product Manager Industrial Cameras at Balluff. “Our customers benefit from even more possibilities for optical inspection.” With new camera models of the BVS CA-GX0 and BVS CA-SF2 lines, Balluff is expanding the application possibilities to frequency ranges beyond the visible light of 380-780nm. The SWIR sensors use the short-wave infrared range of the light spectrum up to 1700nm, detecting object features and characteristics that are difficult or impossible for conventional cameras or the human eye to see.

Modern Sony SWIR image sensors (IMX990, IMX991, IMX992, and IMX993) guarantee excellent image quality, high sensitivity, and an image resolution of up to 5.3 megapixels. Additionally, the robust cameras feature their own image storage. Image pre-processing and corrections can be done in the camera thanks to an FPGA, a powerful internal circuit.

**Ideal for monitoring tasks**

Balluff industrial cameras with SWIR sensors are primarily used in the semiconductor as well as the packaging and the food and beverage industries. Potential customers include manufacturers of machines for semiconductor production and systems for production and quality control. As silicon appears transparent in SWIR light, the new camera models are used in wafer inspection, for example. Agricultural products, transparent plastics in waste sorting, and fill levels in opaque plastic containers can also be monitored. “As they can still detect objects even in smoke or fog, the SWIR sensors are also ideal for monitoring tasks,” says Ralf Sinnerbrink.

**New features, familiar handling**

Compatibility with GigE Vision, USB3 Vision, and GenICam ensures that the new SWIR models can be easily integrated into existing systems. From the integration to the handling of the cameras, nothing changes compared to previous models. “With this expansion, Balluff is driving the use of the SWIR technology in proven hardware and software components,” says Ralf Sinnerbrink. “We use them within one of the most versatile and flexible camera product ranges — and with individual configurability of the mechanical and electrical properties."

Ein Bild, das Autoteile, Projektor, Licht enthält.

Automatisch generierte Beschreibung***Caption:***  
*Balluff is expanding its product range of BVS CA industrial cameras with new models with SWIR sensors.*

Ein Bild, das Design enthält.

Automatisch generierte Beschreibung ***Caption:***  
*With the new camera models, Balluff is expanding the application possibilities to frequency ranges beyond visible light. Integration into existing camera platforms is still guaranteed.*

**About the company Balluff**Founded in 1921 in Neuhausen a. d. F., Balluff with its 3900 employees worldwide stands for innovative technology, quality and cross-industry experience in industrial automation. As a leading sensor and automation specialist, the fourth-generation family-owned company offers a comprehensive portfolio of high-quality sensor, identification, network and software solutions. In 2022, the Balluff Group recorded sales of around 567 million euros. In addition to its central headquarters in Neuhausen a. d. F., Balluff has sales, production and development locations around the globe and is represented by 38 subsidiaries and other agencies in 61 countries. This guarantees customers fast worldwide availability of products and a high quality of advice and service directly on site.