

## Putting Next-Gen Displays to the Test

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# PRODUCT PREVIEW

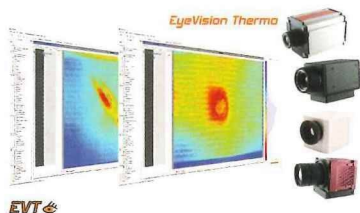


## Two-Axis Deflection Unit

The SUPERSCAN IV-15 WAFER two-axis deflection unit from **RAYLASE GmbH** offers a sophisticated solution for challenging industrial applications. Applications include the structuring of wafers in the solar industry. This special version of the SUPERSCAN IV-15, with ultrahigh speed, is designed to meet the high-performance requirements that apply to the manufacturing of wafers, where the highest possible angular velocity is essential. One application for the SUPERSCAN IV-15 WAFER is the production of photovoltaic wafers using the PERC technique. The SUPERSCAN IV-15 has been optimized specifically for these applications to enable time- and cost-efficient production of powerful PERC photovoltaic wafers. The SUPERSCAN IV-15's model-based, digital control offers extremely high speeds of up to 200 rad/s. Speed and dynamic responses are guaranteed, due to digital control and powerful pulse-width modulation output stages.

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## Thermal Imaging Software



EyeVision Thermo software from **EVT Eye Vision Technology GmbH** offers solutions for thermal imaging applications in fields of active and passive thermal imaging, as well as lock-in thermography. The software has a complex thermal imaging command set that can solve thermography applications quickly and easily. The lock-in thermal imaging allows detection of hidden structures and structure flaws, which are made visible as the heat conductivity deviates from the local heat flow. The

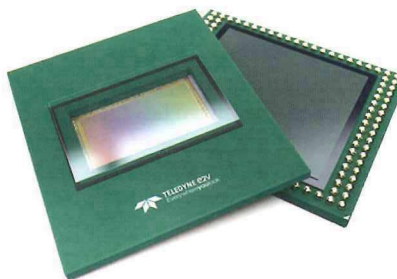
EyeVision Thermo with lock-in thermal command detects structural flaws such as carbon composites, layer thickness of different materials, and boreholes in different materials. The EyeVision Thermo software runs on the EyeCheck Thermo, the first smart thermal imaging camera by EVT. Additionally, the software supports thermal imaging cameras by Optris, Teledyne DALSA, FLIR, and Automation Technology.

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## CMOS Image Sensor

The Snappy 2MP, a CMOS image sensor from **Teledyne e2v**, is designed for barcode reading and other 2D scanning applications. The sensor combines full HD resolution, a 2.8- $\mu\text{m}$  low-noise global shutter, and advanced features for fast and economic decoding, all within a 2/3-in. optical format. From pixel performance to integrated real-time features, the Snappy sensor has been optimized to enable fast and accurate scanning of 1D and 2D barcodes. This optimization enables scanning platforms to offer enhanced productivity and throughput in logistics, sorting, retail point of sale, and many other associated verticals. Snappy's features are also useful in a number of other applications, including unmanned aerial vehicles, embedded imaging, Internet of Things edge devices, intelligent surveillance cameras, and augmented reality/virtual reality.

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## Embedded Vision Camera

The UC-200 camera from **Entner Electronics KG** is a compact camera that allows easy integration into embedded vision systems, including security and surveillance, drones, low-vision, video communication systems, and visualizers. The camera utilizes a Sony 13-MP EXMOR rolling shutter sensor operating at 30 fps, and an integrated F2.2 lens to achieve high sensitivity, low noise, and high-speed image capturing. The proprietary camera readout electronics are optimized for a low latency. The camera supports 1080p/60 HDMI or LVDS output and 13-MP snapshot mode. Other output resolutions are available on request. A high-quality digital zoom option up to 16 $\times$  is available to increase image detail. All interfaces, including HDMI, LVDS, Ethernet, and USB, are available in the camera, taking away the need for additional interfacing electronics.

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## 3D Camera

**Stemmer Imaging AG** has announced the Starform Swift 3D camera from Odos Imaging with a 640- $\times$  480-pixel sensor. With integrated 850-nm LED illumination, the camera can acquire 3D point clouds for imaging at 44 fps from a range up to 6 m. These fast frame rates can be used to track dynamic scenes in 3D or accumulate static scenes for improved precision. Fully factory calibrated, the camera can provide range or depth information, 3D images, measurements, and 2D images. Its versatile imaging capabilities and GigE Vision connectivity make the Starform Swift ideal for a wide range of factory processing, packaging, and logistics applications.

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## Absolute Positioning System

The PXV 2-D absolute positioning system from **Pepperl+Fuchs GmbH** features high reliability and a large reading window. With its large reading window, the system keeps a sufficient number of codes in view, even in relation to track switches and changes to the code tape. Precise positioning is guaranteed at all times. Mounting and commissioning are easier, and plant availability is further improved. The reading window has an increased depth-of-focus range, allowing it to capture even more codes simultaneously and guarantee position detection through multiple redundancies. Unlike other systems available on the market, the PXV requires only a 2D camera, ensuring that irritation relating to track switches is excluded. To prevent this, the cameras in the two-camera systems can receive the relevant differing position signals in these areas.

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