

Excelitas Technologies to Demonstrate Scientific Cameras, Optical Inspection Lenses and Imaging Systems at VISION 2024

WHO: [Excelitas Technologies® Corp.](#), the leading provider of advanced, life-enriching technologies that make a difference, serving global market leaders in the life sciences, advanced industrial, next-generation semiconductor, aerospace and defense end markets, will feature live demonstrations combining a variety of cutting-edge imaging and sensing technologies at [VISION 2024](#) in Stuttgart, Germany.

WHAT: Expert staff will be available at Excelitas booth #E51 in Hall 10 to discuss and demonstrate the following product innovations:

- Automated food inspection and sorting demonstration featuring the [Optem® FUSION SWIR Micro-Imaging Lens System](#) and [pco.pixelfly® 1.3 SWIR Machine Vision Camera](#): Integrating Excelitas' AI-based software with the new pco.pixelfly 1.3 SWIR (VIS-SWIR, 1280 pixel x 1024 pixel, 72fps), Optem FUSION SWIR and SWIR LED ring light, this demonstration highlights the potential food inspection and sorting solutions using multispectral imaging in the VIS/SWIR range.
- Automated sorting demonstration using the [pco.edge® 26 CLHS sCMOS Camera](#) and [LINOS® inspec.x 5.6/105 VIS-NIR Lens](#): Showcasing the fast, high resolution, pco.edge 26 CLHS (VIS-NIR, 5120 x 5120 pixel, 150 fps), with the new LINOS inspec.x L 5.6/105 VIS-NIR and brilliant illumination from the 9-channel [X-Cite® NOVEN™](#) LED illuminator, this demonstration enables the classification of various parts with different colors, marking them for subsequent sorting processes. The demonstration delivers quick response sorting driven by AI-based image processing, using a NVIDIA Jetson board, in the image data stream.
- High-speed object recognition demonstration featuring the [pco.dimax® 3.6 ST High-Speed Camera](#) and [LINOS d.fine HR-M Series Lens](#): The new pco.dimax 3.6 ST (VIS-NIR, 1984 x 1808 pixel, 2166 fps) allows high-speed frame rates and direct image processing within the data stream for extreme high-speed imaging. NVIDIA Jetson board AI image processing is complimented with Excelitas' award-winning, high-resolution LINOS d.fine HR-M for optimal image quality to recognize and record high-speed occurrences of select alpha numeric sequences in a high-speed airflow.
- Automated industrial OCT imaging demonstration featuring the [1060 nm Axsun Azmyth™ High-Speed, SS-OCT Tunable VCSEL Laser Engine](#): This demonstration includes the Excelitas SS-OCT laser integrated with a scanner, optics, robotic arm and image analysis software for unrivaled tuning bandwidth, output power, scanning speed and coherence length in OCT imaging. Excelitas Swept-Source OCT Lasers provide the underlying technology for cutting edge high-resolution, high-speed, 3D surface and sub-surface imaging on a wide variety of materials. OCT-generated images may be analyzed using off-the-shelf image analysis software for inspection, measurement and defect detection.
- Real-time LiDAR 3D cloud imaging demonstration featuring the [TPG3AD1S09 – 905 nm Generation 3 Pulsed Laser Diodes \(PLD\)](#): Employing Excelitas PLDs in a 16 laser array to illuminate the cloud, this LiDAR point cloud demonstration can



be used for improved robotic guidance, LiDAR mapping and industrial range finding. An integral part of many LiDAR systems, the generation-3 pulsed semiconductor 905 nm PLDs provide higher efficiency (3 W/A) for ranging further distances or reducing power consumption (battery operation). To detect the return signal, Excelitas offers silicon APDs that are well suited to pair with 905 nm pulsed laser diodes. For long-wave LiDAR in 1550 nm, Excelitas has re-engineered its 80µm and 200µm diameter, active-region InGaAs APDs to deliver market-leading noise and dark current performance. This enables greater range from the same laser power or reduced laser power for the same range requirement.

WHEN: October 8 - 10, 2024

WHERE: Messe Stuttgart, Stuttgart, Germany
Hall 10, booth #E51

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About Excelitas Technologies

Excelitas is the leading provider of advanced, life-enriching technologies that make a difference, serving global market leaders in the life sciences, advanced industrial, next-generation semiconductor, aerospace and defense end markets. Headquartered in Pittsburgh, PA, USA, Excelitas is an essential partner in the design, development and manufacture of photonic technologies, offering leading-edge innovation in sensing, detection, imaging, optics and specialty illumination for customers worldwide.

Connect with Excelitas on [LinkedIn](#), [Facebook](#), [X](#) and [Instagram](#), or visit our website at www.excelitas.com for more information.

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Contacts:

Scott Orr
Senior Director of Global Marketing – Commercial
scott.orr@excelitas.com
+1 (781) 996-5925

Cheryl Reinhout or Jill Anderson
On Behalf of Excelitas Technologies Corp.
SVM Public Relations
excelitas@svmmarcom.com
+1 (401) 490-9700