

INDUSTRIAL PHOTONICS VISION



A quarterly newsletter featuring the latest advancements in and applications for industrial vision systems - from sensors to software.

Industrial Vision News

Liquid Lenses Offer Big Gains for Parcel Processing and Package Inspection

Industrial vision cameras are a mainstay in post offices and shipping companies around the world. Gone are the days when the bulk of the items processed at these facilities were letters or postcards. Today's post office is a hub for personal and commercial trade; packages must be processed by size, shape and color. Complicating matters, bar codes are often located on multiple sides of packages that are moving swiftly on a high-speed conveyor belt. Multiple industrial vision cameras are typically required to capture information reliable enough to process packages correctly, segmenting items according to size and shape and then capturing identification information in order to sort for processing.



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New Imaging Technique Reduces Time to Failure in Auto Paint, Cosmetics

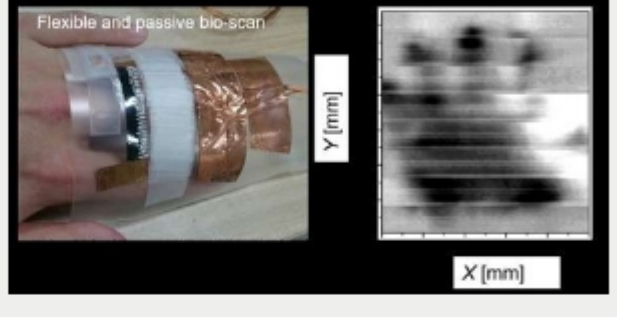
A commonly used method for characterizing surfaces is multispectral imaging (MSI). The challenge: MSI typically does not deliver analytical spectroscopic data. It uses relatively few, often noncontiguous, wavelength data points. Where greater sensitivity and specificity is required, a growing number of industries are turning to hyperspectral imaging microscopy (HSIM).



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Terahertz Scanning Device Developed for Non-Destructive Inspections

Most terahertz imaging systems are very bulky — think body scanners at airports that rotate 360 degrees. But a new portable and wearable terahertz scanning device using arrays of carbon nanotubes (CNT) could make it easier to perform noninvasive inspections — everything from medical and drug delivery equipment inspections to imaging of cancer cells, blood clots, sweat glands and teeth. A team of scientists from the Tokyo Institute of Technology's Laboratory for Future Interdisciplinary Research of Science and Technology made a breakthrough in developing a flexible terahertz scanner by integrating 23 CNTs onto a single array.



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ASTM Test Will Ensure Precise Optical Tracking of Moving Objects

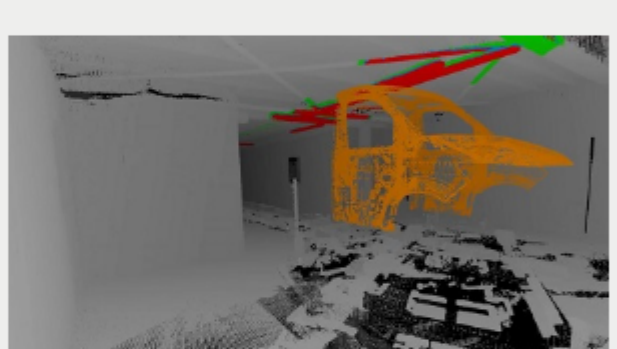
A recently approved American Society for Testing and Materials (ASTM) International standard (ASTM E3064-16) provides a standard test method for evaluating the performance of optical tracking systems that track dynamic as well as static objects. The test can be used to evaluate how well an optical tracking system can define an object's position and orientation, i.e., pose, with six degrees of freedom: up/down, right/left, forward/backward, pitch, yaw and roll.



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3D Scans Help Automotive Industry Evaluate Data

Today's car factories are leaning toward having one production line suitable to manufacture frequent model changes and smaller volumes. This requires increased flexibility in production, more robots and a higher level of digitization.



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Headwall Opens New Facility

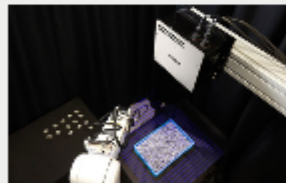
Imaging sensor developer Headwall Photonics Inc. has opened a new facility for its advanced sensor products in Bolton, Mass. The opening is a response to growth across a \$12 billion market for remote sensing, advanced machine vision and new sensor technology advancements in the medical and biotechnology fields.



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Featured Products



Canon 3D Machine Vision for Random Parts Picking

Canon U.S.A. Inc., Industrial Products Div.

The RV-Series is designed to work with Robotic arm systems as an Eye to Capture image of target parts and let robotic system know how to approach and pick up by most reliable position to safely carry and place at commanded position.

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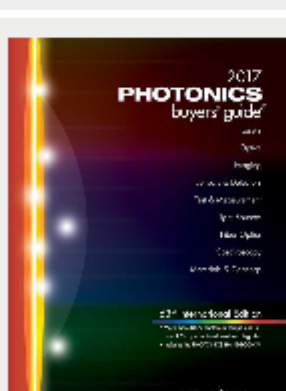
Structured lighting solutions
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SL Microcontroller Laser

Osela Inc.

Osela is proud to introduce the new Microcontroller Option for our Streamline laser! This option allows for digital interfacing with the Streamline laser using RS-232 or RS-485 communication. The MC monitors and reports key parameters as well as allowing users to set operational conditions of the laser.

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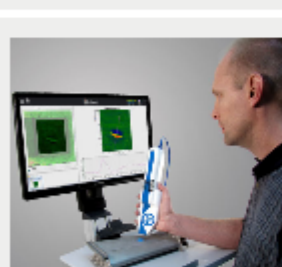


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4D InSpec Surface Gauge

4D Technology Corporation

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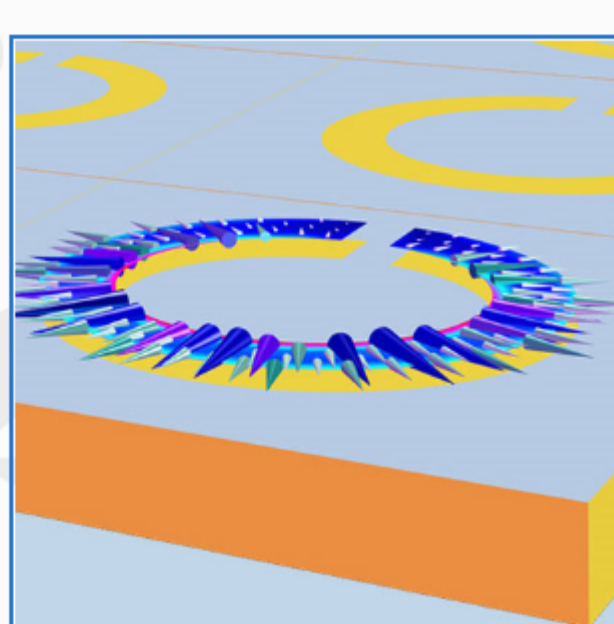
Webinars

Simulating Metamaterials in the Terahertz Regime

Thu, Apr 27, 2017 2:00 PM - 3:00 PM EDT

If you want to learn how to simulate metamaterials in the terahertz regime, then tune into this webinar, presented by COMSOL. You will get a live demonstration of how to simulate a metamaterial using COMSOL Multiphysics. While the presenters will focus on simulating metamaterials in the terahertz regime, the demonstration will be generally applicable to any frequency spectrum. Co-presented by Ulf Olin, a product specialist within the electromagnetics group at COMSOL, and Jiyoun Munn, technical product manager for the RF Module at COMSOL.

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