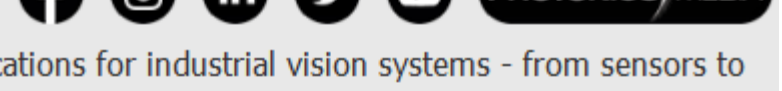


# INDUSTRIAL PHOTONICS VISION



A quarterly newsletter featuring the latest advancements in and applications for industrial vision systems - from sensors to software. Manage your Photonics Media membership at [Photonics.com/subscribe](http://Photonics.com/subscribe).

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## Industrial Vision News

### Mastering Machine Vision

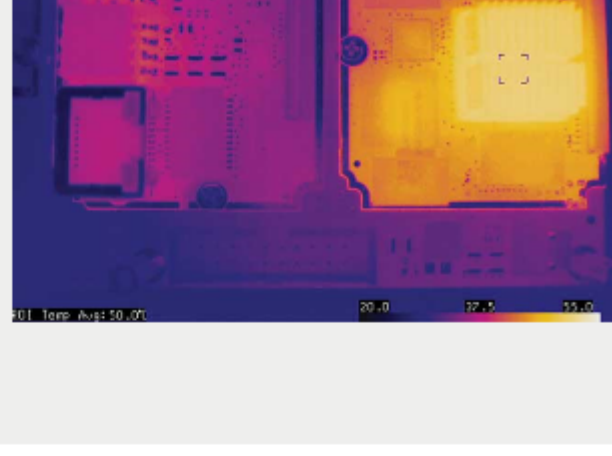
Machine vision systems provide an automated and repeatable way of performing the quality control and verification tasks needed to save time, cut costs, increase throughput and automatically document quality. Machine vision systems were once considered a costly addition, but there are now methods to automate manufacturing more affordably so even the smallest of companies can acquire the right vision solutions.



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### Thermal Imaging Spurs New Applications

Long-wave infrared (LWIR) imaging, also known as thermal imaging, has played a critical role in the defense and security market for decades because of its ability to detect warm (or live) objects independent of ambient lighting. Recently, advances in detector fabrication and lower costs have made LWIR imaging more accessible for consumer and industrial markets.



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## Featured Products



### HexaViz V1.1 Hexapod Simulator

**Newport Corporation**  
HexaViz V1.1 hexapod Simulator is the latest version of our tool that is available to current and future users of Newport HXP hexapods. HexaViz allows the simulation of loads, travels and now collision with objects in and around the HXP or between objects on the HXP and surroundings.

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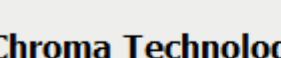


### Ensenso X: 3D Vision Now With 5 MP

**IDS Imaging Development Systems GmbH**  
The application fields of Ensenso X range from robotic parts handling in factory automation (e.g. bin picking) to pallet commissioning in warehouse and logistics automation.

The 3D camera system is now even more flexible and powerful thanks to new the latest developments: both new 5 MP cameras featuring the IMX264 CMOS Sony sensor and an updated software development kit are now available.

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### High Performance Filters for Machine Vision

**Chroma Technology Corp.**

ContrastMax filters from Chroma feature sputtered interference coatings engineered for automated vision applications like machine vision and robotic guidance. These optical filters offer superior levels of contrast and blocking of unwanted light, while also performing well at wide viewing angles.

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### Coaxlink Octo: 8-connection CXP-6 Frame Grabber

**Euresys s.a.**

The camera data transfer rate of the Coaxlink Octo is 5 GByte/s. It comes with a PCIe Gen 3 x 8 bus offering a peak delivery bandwidth of 7.8 GByte/s. The effective delivery bandwidth is 6.7 GByte/s. It is also compatible with the Memento Event Logging Tool.

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VISION IN THE 3<sup>RD</sup> DIMENSION  
Ensenso X 3D cameras with 5 MP sensors

**IDS** [www.ids-imaging.us](http://www.ids-imaging.us)

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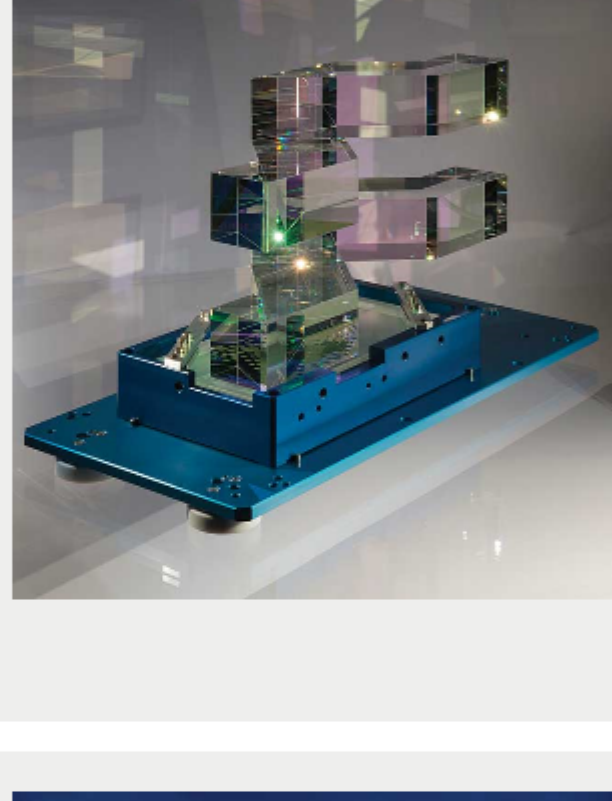
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## More News

### Innovations in Lens Measurement

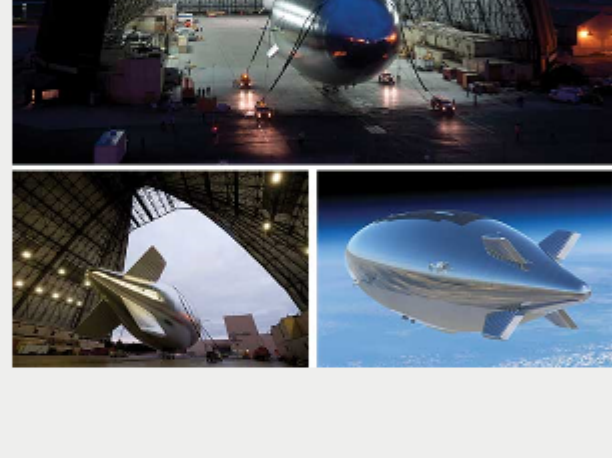
Automobile cameras, telescopes, head-mounted displays, laser-focusing heads and other modern photonic devices incorporate high-grade optics that can perform under extreme environmental conditions. The demand for such lenses means they must be reproduced with the utmost accuracy, placing stringent requirements on lens measurement.



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### Imaging UAVs Move to the Forefront of Surveillance and Reconnaissance

From advances in sensor technology to intelligent software and more powerful processing, imaging applications are establishing their place in the modern defense and security landscape. A key trend is the availability of increasingly compact sensors, which is enabling imaging systems to take to the skies.



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### Holographic Waveguide HUD Has Larger Eye Box for Enhanced Display

Researchers demonstrated a functional prototype head-up display (HUD) that uses optical holographic elements to achieve an eye box substantially larger than what is available without the holographic component. Current head-up displays have a small eye box, which can cause the displayed information to partially or wholly disappear from view if users shift their gaze.



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### Image-Based Barcode Reading Fulfills its Promise

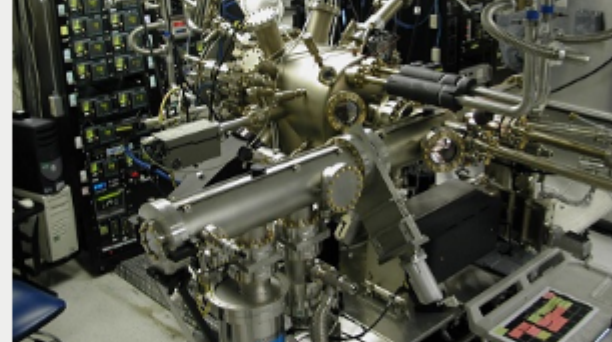
Traditionally, 1D barcodes have been read by laser scanners that project a beam across the barcode and use reflected light to generate an electrical signal for decoding. Although these scanners are mature and effective, a number of inherent disadvantages have motivated a switch to image-based readers using 2D sensors.



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### Army Research Lab, Stony Brook Develop Nighttime Imaging Material

The U.S. Army Research Laboratory (ARL) and New York's Stony Brook University have developed a new synthesis process for low-cost fabrication of a material previously discounted in literature for high-sensitivity IR cameras, opening new possibilities for future military nighttime operations.



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## Webinars

### Fundamentals of Helium Leak Detection

Tue, Apr 17, 2018 1:00 PM - 2:00 PM EDT  
From LEDs to medical devices to microelectronics to fiber optics — everything leaks! This 40-minute webinar, presented by Agilent Technologies, will describe the challenges of locating and measuring leaks, the importance of leak rate specification and various methods of leak detection. You will learn the different methods of locating leaks and determining leak rate, and which method to employ for your product or system.

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### Selecting the Best Sensor for Your Machine Vision System

Tue, Apr 24, 2018 1:00 PM - 2:00 PM EDT  
You will learn how to "do the math" in order to make sure your sensor has the resolution you need to find defects of a certain size; what to look for in sensor quality; what a sensor can do for you (and, just as importantly, what it cannot do). The webinar will also discuss the importance of other components, including the lens, camera and lighting.

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