

Vision spectra

www.Vision-Spectra.com

Quarterly newsletter from Photonics Media featuring the latest advancements in and applications for vision systems – from sensors to software. Manage your Photonics Media membership at Photonics.com/subscribe.



AI Takes Vision-Guided Robotics to the Next Level

Vision-guided robotics is one of the largest-growing sectors in both the robotics and machine vision markets. While industrial robots are used in a variety of industries, the ability to guide a robot based on information from a machine vision system is enabling industrial robots to be used in many more applications and industries.

[Read Article](#)

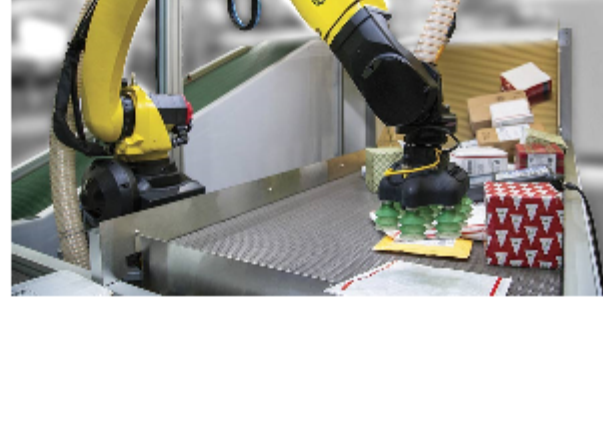


Image Sensor Innovations Drive Automation Advancements

There's arguably never been a more exciting time for the development of image sensors, with notable achievements in 3D imaging, event-based sensing, and nonvisible imaging. Recent innovations have focused on pixel architecture and sensor circuitry, while other advancements have involved the use of new materials, greater data processing within the sensor itself, and improvements in manufacturing that increase performance and cut cost.

[Read Article](#)



Hyperspectral Imaging Boosts Yields in Vertical Farming

Vertical farming, also known as sky farming, is the practice of growing food crops in vertically stacked layers in controlled indoor spaces using soilless hydroponic or aeroponic growing methods. Vertical farming does not replace conventional farming or greenhouse production, but it can provide a significant niche for food production, especially for large cities. It does so by relying on technology to monitor various parameters and to minimize energy consumption, water usage, fertilizers, and pesticides.

[Read Article](#)



Save the date and register now!

Welcome to the **Innovation Dialog!**

SENSOR+TEST
THE MEASUREMENT FAIR
Nuremberg
9 – 11 May 2023

www.sensor-test.com

emergent VISION TECHNOLOGIES **10GigE, 25GigE, and 100GigE Line Scan Camera Models**

4Kx2 to 16Kx16 Resolution, Speeds up to 608KHz

Upgrade Your Machine Vision System Today!

PACE ACCEL PINNACLE

.: Featured Products & Services

SPECTRA Light Engine

Lumencor Inc.

Does your test and measurement equipment, inspection microscope, or industrial metrology hardware warrant best-in-class illumination, in terms of both brightness and stability? Do traditional lamps and lasers give you the optical power and consistency your application demands? Lumencor's SPECTRA Light Engine demonstrates best-in-class performance...

[Visit Website](#) [Request Info](#)

10, 25, and 100 GigE Line Scan Cameras

Emergent Vision Technologies Inc.

Targeting today's toughest machine vision applications, Pace 10 GigE cameras range from 4 Kx2 to 9 K 256 TDI, with rates up to 172 kHz, while our Accel 25 GigE cameras range from 8 Kx4 to 16 Kx16, with rates up to 300 kHz. Our Pinnacle 100 GigE cameras include 9 K 256 TDI and 16 Kx16 models, with rates up to 608 kHz.

[Visit Website](#) [Request Info](#)

High-Speed Line Scan Cameras

Chromasens GmbH

GET YOUR HIGH-SPEED INSPECTION JOBS DONE with allPIXA evo line scan camera series from Chromasens! Feat. CMOS sensors with 8192 x 4, 10240 x 3, 15360 x 3 resolution, TDI options for color/mono and line rates up to 100 kHz with cost-efficient Dual10GIGE or CoaxPress interfaces. Short delivery times!

[Visit Website](#) [Request Info](#)

Smart Cameras for AI Applications – Baumer AX Series

Baumer USA

Whether you are trying to find a better way to analyze motions in sports, control stored quantities in your warehouse, or support quick and efficient pick and places processes, AX Smart cameras from Baumer with integrated AI core can help you. This revolutionary industrial camera series combines image acquisition and image processing in one unit.

[Visit Website](#) [Request Info](#)

Perfect LED Lighting Uniformity

LEDiL Inc.

Illuminating optics refine any machine vision solution. Adjust LED light distributions to fit your camera's and scanning equipment's field of view: ensuring uniform illumination for precise and efficient imaging. Fulfill your vision – infinite optical solutions for any application.

[Visit Website](#) [Request Info](#)

High Intensity Back-lit Backlights

Advanced illumination (Ai)

Advanced illumination is announcing the release of their BL2 High Intensity Back-lit Backlights, a new and improved take on Ai's original backlight design. The BL2 Backlights are highly customizable and provide improvements in brightness, uniformity, structural rigidity, and efficiency.

[Visit Website](#) [Request Info](#)

Intel® 12th-Gen Edge AI Computer

Neosys Technology America Inc.

Nuvo-9160GC is a ruggedized AI inference platform supporting Intel's 12th-Gen CPU and 130 W NVIDIA RTX™ GPU card. It features rich GbE PoE+/USB camera connectivity and function expansion for 3D machine vision, robotic guidance, autonomous mobile robot, or outdoor intelligent video analytics.

[Visit Website](#) [Request Info](#)

IDENT Sensor for Optical Identification of 1D, 2D, and DMS Codes

Balluff Inc.

Balluff's new IDENT sensor is the first code reader on the market to offer IO-Link, allowing users to integrate code reading without separate Ethernet drops and IP addresses for every reader. This stationary sensor was designed to precisely read barcodes, 2D codes, and Direct part marked codes.

[Visit Website](#) [Request Info](#)

C-Mount Lenses

Schneider Optics Inc., Industrial Optics

This JADE family of C-Mount Lenses covers a 1.2-in. format (19.3-mm image circle) with a broadband antireflection coating that allows transmission from 400 to 1000 nm.

[Visit Website](#) [Request Info](#)

Peak Performance for Embedded Vision Applications

MATRIX VISION GmbH

With the new series mvBlueNAOS4, MATRIX VISION complements the embedded vision portfolio with models that are especially designed for the fast sensors of the Sony Pregius S series. These sensors achieve both high image quality with small pixel size and high transfer rates. The mvBlueNAOS4 uses the direct way for image transfer: PCI Express.

[Visit Website](#) [Request Info](#)

embedded VISION SUMMIT
2023 | MAY 22-24

Don't miss the premier conference for innovators incorporating computer vision and perceptual AI in products.

EmbeddedVisionSummit.com
Use promo code SUMMIT23-PHOTONICS

21st European Machine Vision Business Conference

4 – 6 May 2023
Seville, Spain

Where machine vision business leaders meet.

emva
european machine vision association
www.business-conference-emva.org

.: More Vision News

Tunable Photomemristor Streamlines Neuromorphic Vision Processing

Researchers at Hangzhou Institute for Advanced Study, State Key Laboratory of Infrared Physics, and Shanghai Institute of Technical Physics have created a two-terminal, nonvolatile photomemristor with a simple architecture and tunable photoresponsivity. The advancement represents a more efficient approach to processing data and reducing power usage than that commonly found in conventional artificial intelligence machine vision technology, where the frequent movement of large amounts of data between sensors, processors, and memory can result in high power consumption and latency.

[Read Article](#)



Cognex Announces Changes to Board

Cognex appointed Angelos Papadimitriou to its board of directors. Additionally, directors Theodor Krantz and Patrick Alias will retire from the board, effective May 3 upon completion of their current terms. Alias will remain as an employee of the company in an advisory role.

[Read Article](#)

Panasonic Boosts Hyperspectral Sensitivity with Compressed Sensing

Researchers from Panasonic have developed hyperspectral imaging technology by applying compressed sensing — a method that enables differentiation of slight color differences and enables the improvement of image analysis and recognition accuracy. With the development, the company has achieved what it said is the world's highest sensitivity in hyperspectral imaging technology.

[Read Article](#)

THE LEADING LIGHT
GET YOUR TICKET NOW

JUNE 27-30, 2023, MESSE MÜNCHEN

WORLD OF **LASER PHOTONICS**

35th Control
International trade fair for quality assurance

09.-12. May 2023
Stuttgart

next level quality assurance

.: Next Issue:

Features
Line Scan Cameras, Bin-Picking, AI & Inspection for Pharmaceuticals, and more...

Photonics Media is currently seeking technical feature articles on a variety of topics for publication in our magazine *Vision Spectra*. Please submit an informal 100-word abstract to visionspectra@photonics.com, or use our online submission form www.photonics.com/submitfeature.aspx.

Vision spectra

Robotic Automation Meets AI

Vision Spectra is a global resource geared for the vision community, with real-world case studies of vision in action, comprehensive feature articles, and columns from experts in the field examining the trends that enable Industry 4.0.

Visit Photonics.com/subscribe to manage your Photonics Media membership.

[View Digital Edition](#) [Manage Membership](#)



We respect your time and privacy. You are receiving this email because you are a Photonics Media subscriber, and/or a member of our website, Photonics.com. You may use the links below to manage your subscriptions or contact us.

Questions: info@photonics.com

[Unsubscribe](#) | [Subscribe](#) | [Subscriptions](#) | [Privacy Policy](#) | [Terms and Conditions of Use](#)