OPEN 2023

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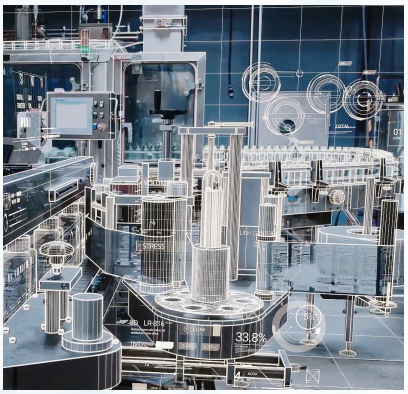
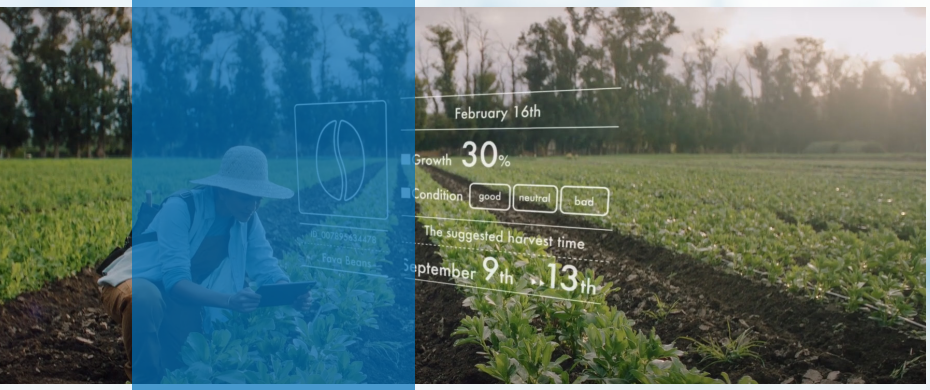
Empowering people through automation





OMRON

why be THERE? 2023

Omron OPEN 2023 features over 20 industry relevant sessions across four locations. Interested in a topic not available at your location? We have you covered. All sessions will be available on-demand

In addition, our Proof of Concept Centers are open throughout the event, featuring interactive demos for a more in-depth look at technologies that span sensing, control, safety, vision, motion and robotics.

We invite you to explore, learn and be inspired. Come share our passion for innovation as we strive to pursue the ideal in automation – where people and machines work together in harmony.

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agenda DETROIT 2023

	Training Room		
9:00 AM	Registration Opens		
9:30AM	Omron Opening Reception | Jeff Hall		
9:45AM	Keynote: Unleashing the Potential of Artificial Intelligence in Industry		
10:30AM	Innovation Session: Mastering Safety Standards: Unraveling Compliance for Collaborative Robots and AMRs		
11:00AM	Break		
11:05AM	Innovation Session: Enabling Machine Vision To Go Beyond Human Programming | Presented by Tad Newman		
11:35 AM	Break		
11:40AM	Innovation Session: Machine, Line & Factory Control - Past, Present, Future | Presented by Thomas Kuckhoff		
12:10PM	Lunch Group B	Guided PoCC Tour Group A	Student Track
1:10PM	Lunch Group A	Guided PoCC Tour Group B	Conference Room
2:10PM	Tech Talk: Seamless Integration: Unleashing Efficiency with Network Connectivity and CIP Safety		Exploring Careers in Automation 2:10 PM
2:40PM	Tech Talk: Unlocking Facility Performance: A Holistic Approach to IIOT and Analytics		PoCC Guided Tours 2:40 PM

Breakout Rooms	Training Room	PoCC
3:10PM	Interactive Tech: Streamlining Vision System Calibration: Automating Precision with Unknown-Size Calibration Targets	Interactive Tech: Shaping Tomorrow's Automation - Robotics
3:40PM	Interactive Tech: Streamlining Vision System Calibration: Automating Precision with Unknown-Size Calibration Targets	Interactive Tech: Shaping Tomorrow's Automation - Robotics
4:10PM	Cocktail Hour	

LOCATION
Omron Detroit Proof of Concept Center
40000 Grand River Ave Suite 304, Novi, MI 48375

REGISTRATION OPENS: 9:00am
Omron Opening Reception: 9:30am

Omron PoCC and Technical experts are **available throughout the event.**

Detailed Agenda
Items Explained

Innovation Session

A thought leadership session from an Omron subject matter expert that is designed to give a glimpse into the future and explore the ever-evolving landscape of the automation industry.

Keynote Session

A keynote session at OmronOPEN is a featured presentation by a renowned expert or industry leader that provides valuable insights into current trends, innovations, and the event's overarching subject matter.

Interactive Tech

An interactive technology session featuring practical real-world examples. Attendees will see a hands-on demonstration and learn from our technical experts.

Student Session

A presentation by Omron Sakura Program employees sharing their unique journey on careers in Automation.

sakura
GRADUATE PROGRAM

Tech Talk

A presentation by an Omron technical expert that focuses on technology-related topics. Designed to cover emerging technologies and innovations to practical applications, best practices and industry trends.

PoCC Guided Tour

A guided group tour of the Omron Proof of Concept Centers, where you'll have the opportunity to interact with technology leaders and experience a diverse range of live demonstrations showcasing our innovations.

PoCC Demos and Technical Experts

Omron PoCC and Technical experts are **available throughout the event.** Visit the live demonstrations at your convenience to learn more about our innovative automation solutions.

Demo	Description
Safety technology and the Sysmac Platform	Omron's comprehensive lineup of machine safety components provides everything you need to protect your team, with full integration for every part of your automation system.
Omron TM collaborative robot	Omron TM cobots boost production and reduce employee fatigue by automating repetitive tasks such as machine tending, loading and unloading, assembly, screw driving, gluing, testing or soldering.
Fixed robot cell for flexible manufacturing	This unique solution simplifies setup and reduces the complexity of rapid product changeovers. It can be integrated and fed by autonomous mobile robots, direct conveyor or manually fed.
Sysmac machine automation controller	Our powerful MAC, built around an Intel chip, controls robotics, safety, big data, connectivity and motion in one single software environment with loads of memory for fast performance.
3D printer for proof of concept	An on-site 3D printer allows our team to concept gripers for robots, brackets and items for applications to make us more efficient and keep costs down on a proof of concept in the prototype stage.
End-to-end traceability solution	Our traceability technologies ensure quality, consistency and compliance. We help track parts with DPMs, labels and RFID and with systems to verify, read and communicate (MVRC) data.
Fiber laser marker system	We also manufacture our own laser marker, unique to the market, so you don't have to have multiple vendors to handle the vision, the control and laser marking. We do it all.
Autonomous mobile robots	We have several autonomous mobile robots at the Detroit POC. AMRs self-navigate throughout dynamic environments designed for moving material in challenging environments.
SCARA Cell Demo	The SCARA robot cell highlights Omron's integrated controller, FH Vision guidance and flexible feeding with the flexible parts feeding solution.

Presentation Abstracts

General Keynote
Unleashing the Potential of Artificial Intelligence in Industry

Speakers: Tom Kelly,Executive Directro & CEO; Dan Stewart, Director of Sales; Pavan Mazumdar, Chief Operating Officer, Automation Alley

Abstract: Join Automation Alley, Michigan's Digital Transformation Insight Center, for an insightful presentation on the dynamic landscape of Artificial Intelligence in Industry. In this session, we'll dive into the challenges and opportunities that arise from the disruptive force of AI and how organizations can harness its transformative power. Our presentation will shed light on specific use cases that are reshaping traditional manufacturing methods across various industries while discussing how you can leverage AI as a powerful tool to enhance our own operations, making them more efficient and effective. Discover the strategies and technologies that are driving AI adoption, the potential pitfalls, and the keys to successful integration. This presentation is your gateway to understanding how AI is shaping the future of industry and how you can be part of this exciting journey.

Interactive Tech
Streamlining Vision System Calibration: Automating Precision with Unknown-Size Calibration Targets

John Griswold, Automation Engineer

Calibration of vision systems has traditionally been a costly and time-consuming endeavor, necessitating recalibration each time precise measurements in real-world units are required. In this hands on demonstration, we delve into an innovative approach that automates the calibration process, demonstrating the feasibility of achieving accurate measurements by employing unknown-sized parts as calibration targets. Our research showcases a promising avenue for enhancing efficiency and cost-effectiveness in vision system calibration, offering valuable insights for industries reliant on precise measurements for your operations.

Tech Talk
Seamless Integration: Unleashing Efficiency with Network Connectivity and CIP Safety

Matt Panek, Field Application Engineer

As manufacturers continue to intertwine standard network communications and safety communications on the same networks, Omron has risen to the challenge with the NX502 family of products. By expanding the number of Ethernet ports that a single CPU can support to 10, and greatly expanding the overall number of network connections, manufacturers are now able to tackle large scale projects including large scale manufacturing lines with a single controller. In this tech talk, we will explore the NX502's networking capabilities, with a focus on CIP safety, including 3rd party CIP Safety connections, and database connectivity

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Tech Talk
Unlocking Facility Performance: A Holistic Approach to IIOT and Analytics

Mark Knight, System Architecture Team

Are you ready to elevate your facility's performance to new heights? Join our System Architecture team and discover our holistic approach to the Industrial Internet of Things (IIOT). In this dynamic landscape, analytics takes center stage as data acquisition systems become essential for boosting productivity and ensuring operational resilience.

Gain insights into deploying industry-proven IIoT solutions that efficiently gather data without disruption or hidden costs. Learn how to capture data at its source without compromising machine performance, securely transmit it to centralized locations, and harness the power of data visualization for informed action.

Innovation Session
Mastering Safety Standards: Unraveling Compliance for Collaborative Robots and AMRs

Mohammad El-Naji, P.Eng, FS Eng (TÜV Rheinland, #21790/ 21, Machinery), Safety and Advanced Services AE Supervisor

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Innovation Session
Enabling Machine Vision To Go Beyond Human Programming

Tad Newman, Product Manager-Machine Vision, RFID and Precision Measurement

Performing quality inspection on products and packaging is crucial for a company's reputation and success. However, defining what constitutes a good-quality product can be challenging, leading to significant time and resource investments for inspection teams. To address this, AI-powered Vision Systems have emerged as a transformative solution.

AI integration in Vision Systems and Smart Cameras streamlines commissioning and reduces the expertise needed for setup and maintenance. These systems surpass human capabilities in defect detection, offering precise validation of good products, even with acceptable variations. The future of AI Vision inspections promises even more capabilities, expanding to include character recognition, 1D and 2D code reading on complex surfaces, facial recognition, and reliable measurements despite lighting and contrast challenges.

Embracing AI-powered Vision Systems revolutionizes quality inspection, making a significant impact on businesses' perception in the marketplace and enhancing overall efficiency

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Innovation Session
Machine, Line & Factory Control - Past, Present, Future

Thomas Kuckhoff, Product Marketing Manager

The difference between a market threat and monetizable opportunity is the ability to adapt intentionally and execute quickly. While adaptation is the price of survival it is also the catalyst for entropy. Industrial automation control is no exception. Shifts from reactionary to proactive to predictive maintenance has been as ubiquitous for operation technology as the shift from vertical integration to contracted emerging market manufacturing to near shoring for operational strategy. Without prioritizing adaptability, these paradigm shifts have strained the ability for production to remain prepared for future disruptions. With COVID-19 now three years behind industrial manufacturing, specific trends have pivoted, persisted, and aggregated to illuminate the potential trajectory of automation control. In this OmronOpen talk, OMRON will provide an insight into automation control design, specifically, how Omron is positioning Automation platform for the future of machine, line, and factory control.