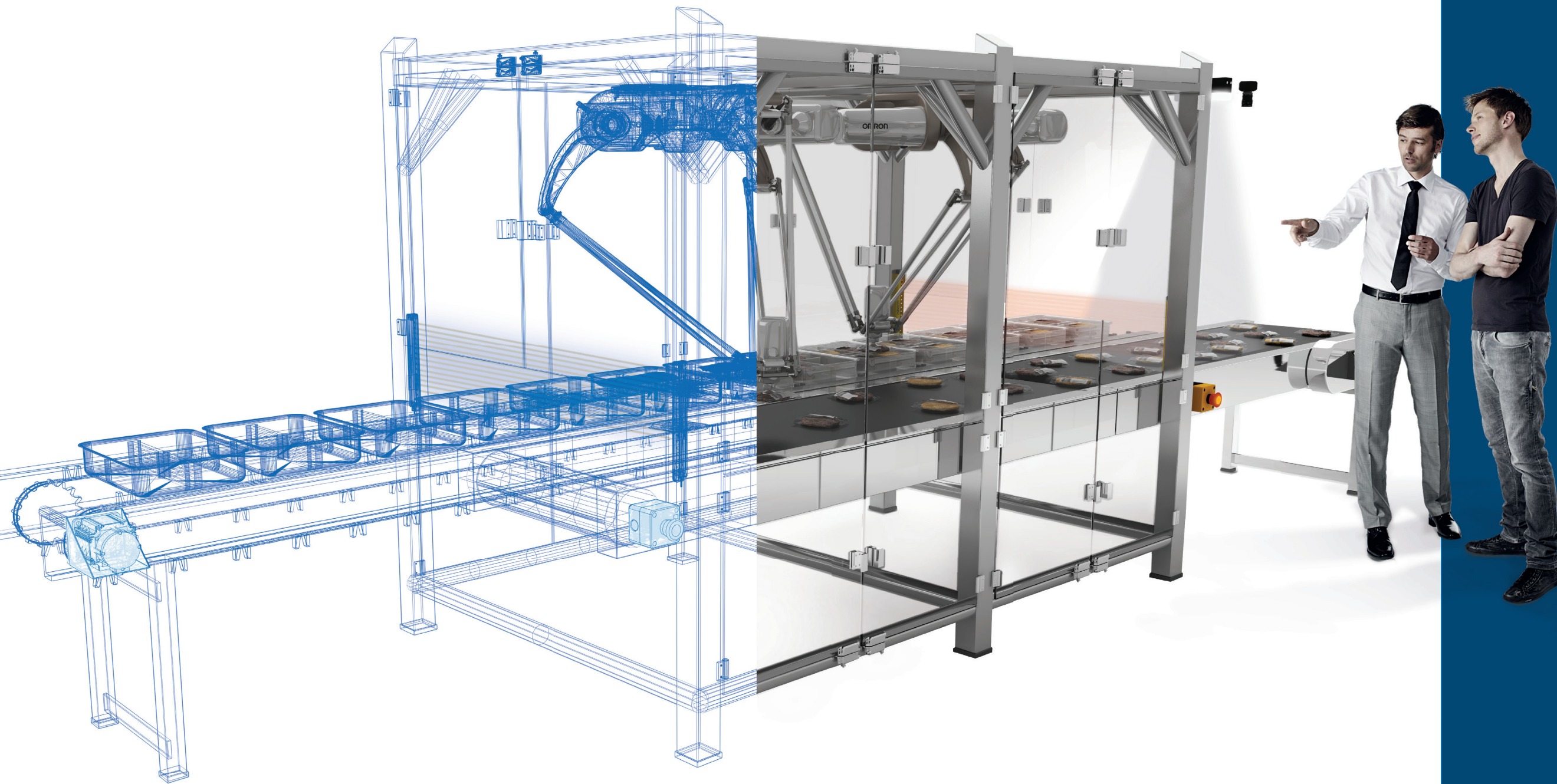# Smart Packaging Solutions

OMRON

The packaging industry requires innovative and flexible solutions that take full advantage of today's automation technologies. Omron's portfolio ranges from turnkey solutions to comprehensive, end-to-end systems that can be customized for your unique requirements. We are your trusted partner for bridging your current operations with your vision of the future.

Megatrends

The packaging industry is undergoing changes that are transforming the market. We help you navigate the industry's megatrends with smart solutions built for the factory of the future.

Flexibility

The packaging industry depends on the flexibility of machines and operations. Manufacturers must produce a variety of products using the same machines and produce the same products on different machines. Omron's solutions are flexible with the latest smart technologies and communication protocols. We enable manufacturers to construct intelligent and connected machines, production lines and factories that can adapt to the changing needs of consumers.

Customization

An increasing amount of product variations means that packaging manufacturers must have flexible machines and real-time operational insights to accommodate on-demand orders. Omron's solutions offer intelligent, dynamic control combined with seamless data exchange to facilitate shorter production runs. Added flexibility in handling format changes drives productivity and offers scalability in manufacturing.

Traceability

Manufacturers need to invest in robust solutions to track products throughout the supply chain and ensure non-conforming products do not reach the market. To ensure this, traceability systems are required to mark, verify, read and communicate (MVRC). With high-resolution laser marking, an extensive barcode reading and verification portfolio and RFID systems combined with machine vision, Omron offers complete traceability solutions.

Globalization

Today's packaging environment is more connected. Manufacturers need to keep up with competitive pressures as well as the evolving demands of consumers globally. The distance and time between countries and consumers is compressed and a manufacturer's ability to adapt to these factors is critical. Operating in 117 countries, Omron provides the latest technologies for sharing data and tracking products that connect manufacturers to their stakeholders.

Megatrends mold the packaging landscape. The key to success is managing them by capitalizing on advanced automation technologies purposefully joined into smart solutions that solve common to complex applications.

Omron's smart solutions will transform your business to ensure you remain competitive. From package or product inspection to machine safety, we offer a range of end-to-end solutions that will align with your business strategy.

Transform the way you manufacture

Adapt to changing environments with an integrated robotic solution.

Package sortation and placement

Packaging companies are looking for speed and accuracy in their machines. This often means investing in robotics, which increase the speed, functionality and precision of operations. Robotic systems are commonly found in industrial automation processes and are used for putting individual items into a tray or carton for ready meals, beverages, consumer packaged goods, confectionery, cosmetics, pharmaceuticals, and much more.

• Perform repetitive tasks with virtually no downtime

• Handle differences in item size and change-overs

• Ensure items are placed in the proper compartments

• Keep food safe from pathogens during direct contact

Safeguard your most valuable assets
Allow people and machinery to collaborate safely through assessments, remediation and training services.

Predictive maintenance

Predictive maintenance (PdM) evaluates the stability of machines and components by performing periodic or continuous condition monitoring. PdM uses real-time data to predict potential failures so manufacturers can avoid downtime, reduce costs and minimize operational risk.

- Predict where, when and why component failures are likely to occur
- Identify primary variables as part of a root-cause analysis
- Monitor data trends for decision making at critical control points
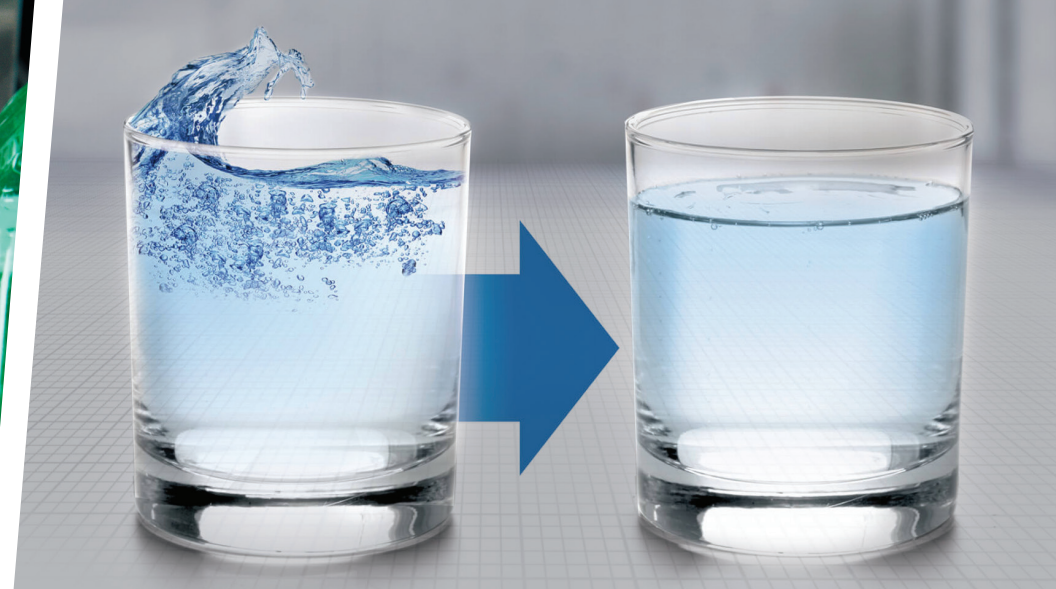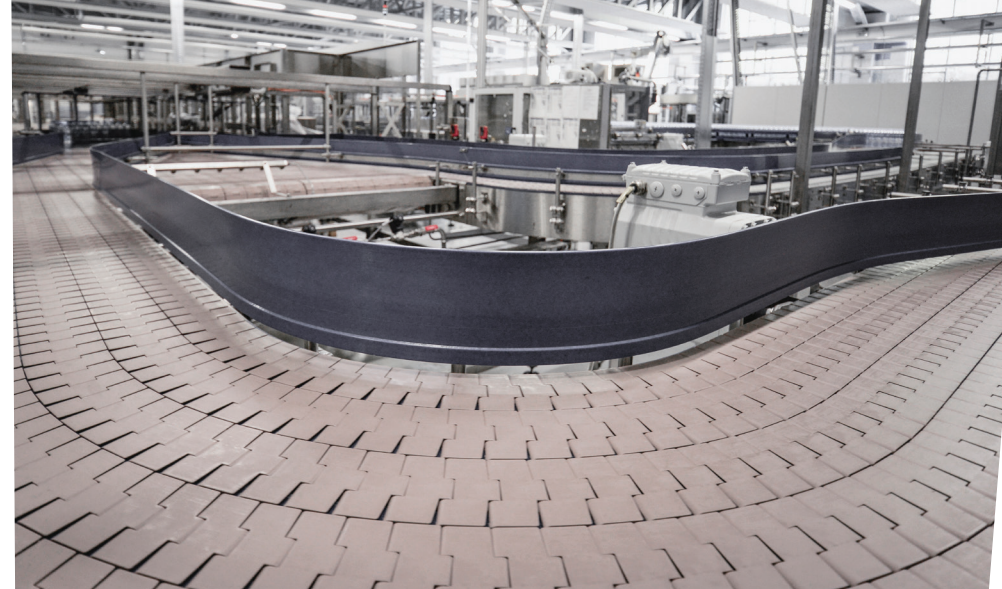
Packaging machine safety

Safety is critical to automation and manufacturers need balance between effective ways to protect workers while extending the life of the machine and maintaining stable operations. Proper safety components and practices protect operators, but also improve uptime and productivity.

- Warn operators of safety hazards caused by wear on machines
- Save on fines, legal fees and increased inspections due to incidents
- Increase productivity by reducing downtime

Advanced safety services

Advanced safety services is comprised of three main categories: safety education, machine assessment and remediation services. TÜV-certified experts specialize in safeguarding machines and consult on applicable regulations, directives and standards.

- Build a foundation for a safer, more productive manufacturing operation
- Document a risk reduction strategy
- Ensure machines are compliant with applicable standards

Invest in your future productivity today

With the widest range of smart solutions in the industry,
we can help you address any application or uncertainty that may arise.

Automated line change-over

Growth in the number of product variants in the market is driving the need for efficient change-overs. Automation eliminates the risk of incorrect adjustments and start-up waste and jams while enhancing productivity.

• Automate machine settings and sequences

• Minimize downtime between product changes

• Decrease time before payback

High-speed temperature control

Accurately achieving and maintaining the proper temperature is a part of proper package or product formation. Temperature slippage above or below limits for a given processing or production stage can be harmful. Improperly adhered coatings, a weakened base material and failure to maintain the temperature chain all contribute to compromised output.

• Control temperature in both continuous and intermittent flow operations

• Stop machine shut downs by keeping temperature within limits

• Minimize waste from improper sealing

Scrap and waste reduction

Inefficient production processes affect manufacturers and its impact is always the same - wasted time and cost as well as damaged brand reputation. Reduce scrap and waste by documenting machine data and the way processes are reviewed and manufacturing changes are communicated throughout the supply chain.

• Eliminate the cost of carrying extra inventory

• Keep production from backing up due to re-works

• Ensure the correct parts are in place for a production run
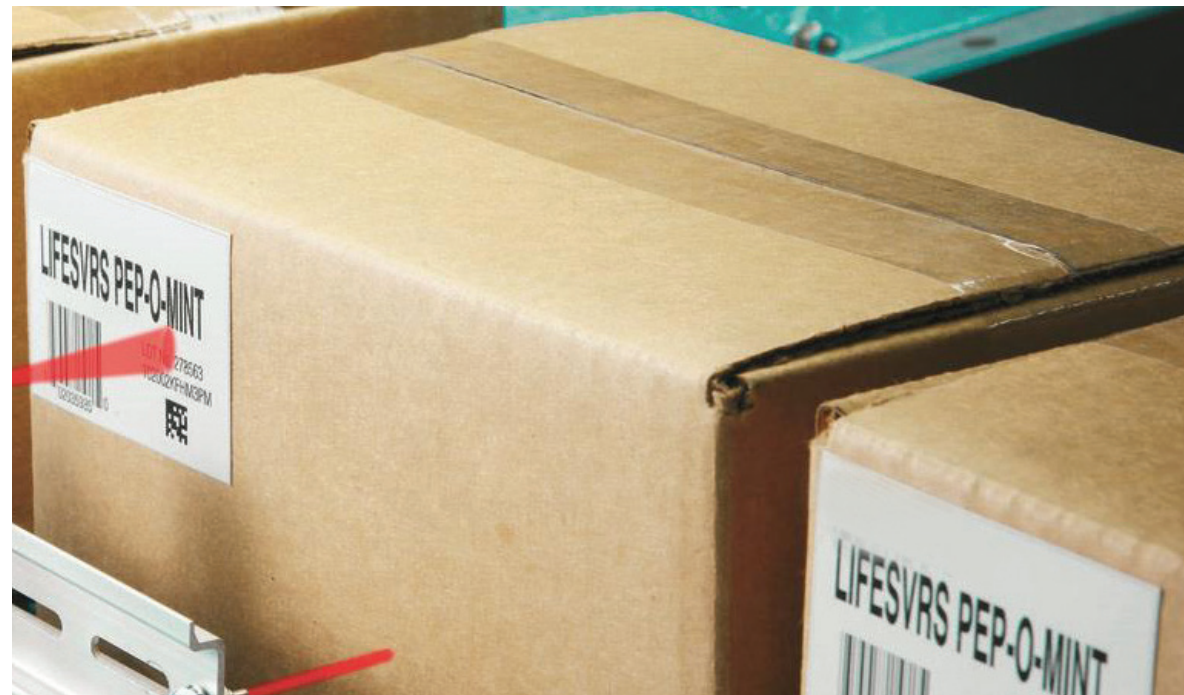
Vibration suppression

Vibration suppression can prevent items from shaking, fluid from sloshing or spilling and fragile materials from falling over and breaking. New technology optimizes the flow of products, reduces waste and improves movement control to optimize transportation speed.

• Shorten product handling time

• Reduce waste caused by spilling

• Increase the accuracy of the weighing process

Protect your brand and your market share

Identify non-conforming packaging or labeling with the most comprehensive suite of inspection solutions in the industry.

Track-and-trace

Driven by regulations, traceability links products to data. Trace history, application or location of products by means of recorded identification and share data within the supply chain. Protocols minimize product recalls, which can cause a loss of future sales and brand damage.

- Provide compliance with regulations, preventing government action
- Protect brands by identifying compromised products before they reach market
- Provide information on composition, origin and handling of products

Quality control for labels and markings

Mark and read products during manufacturing or for final use. This solution serves applications ranging from acquisition, inventory and manufacturing to distribution, supply and repair.

- Define requirements for identifying items
- Inspect both labels and direct part marking
- Ensure adherence to label standards

Package or product inspection

Identify non-conforming packages or products by detecting defects at the earliest point. This solution helps companies improve productivity, reduce defect rates, re-work and waste.

- Reduce end-of-line defects
- Ensure the quality of products during production
- Increase retailer confidence

SKU control

SKU control enables companies to track an inventoried item that is in their warehouse or other outlet and verifies SKU information matches the item contents.

- Enhance track-and-trace capabilities
- Catch mislabeled items prior to shipment, avoiding a recall
- Manage inventory more efficiently

Production optimization through data: OEE

Optimize production by leveraging real-time machine and line data and turning it into key performance indicators (KPIs) and overall equipment effectiveness (OEE) information. This results in prolonged machine life and improved productivity and product quality.

• Minimize production downtime; reduce losses and bottlenecks

• Implement on-demand decision making

Machine-to-machine communications: PackML

PackML, or Packaging Machine Language, (ISA-TR88.00.02) is a standard for machine programming. PackML brings a common look and feel as well as operational consistency to machines that make up a packaging line, regardless of the automation platform.

• Standardize data in and out of a machine

• Allow for integration of machines from multiple vendors

• Support productivity-enhancing initiatives such as OEE

Complete portfolio for packaging machine automation

Your global, collaborative network

We evaluate your most demanding packaging applications. Sensing, control, safety, vision, motion and robotic functions can be simulated and tested in our proof-of-concept and automation centers that support you worldwide.

Sensing

Built upon decades of experience, Omron's state-of-the-art sensing solutions encompass every need for positioning, durability and more.

Control

From controllers to power supplies, Omron has the necessary control components for a complete automation solution.

Safety

With Omron's safety solutions, manufacturers can protect their team from operational hazards while maximizing throughput.

Vision

Omron's advanced vision solutions provide an excellent all-in-one solution for inspection, traceability and more.

Motion

Omron's intelligent motion solutions help manufacturers enhance the performance of their production lines.
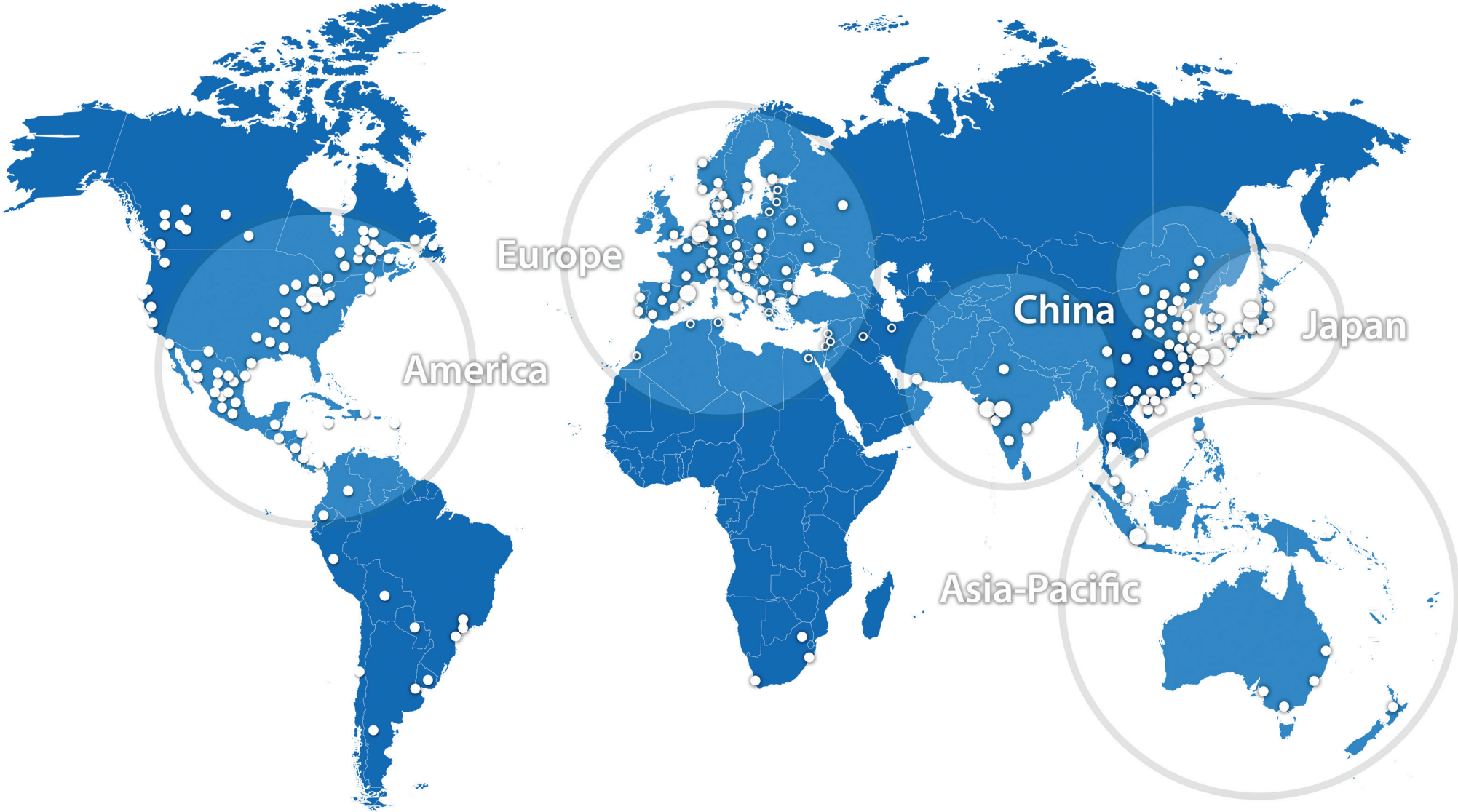
Robotics

Whether standalone, collaborative or mobile, Omron's robotic solutions help manufacturers excel in operations.

Europe

America

China

Japan

Asia-Pacific

OMRON

Controllers and I/O
Machine Automation Controllers (MAC)
Motion Controllers | Programmable Logic
Controllers (PLC) | Temperature Controllers
Remote I/O

Robotics
Industrial Robots | Mobile Robots

Operator Interfaces
Human Machine Interface (HMI)

Motion and Drives
Machine Automation Controllers (MAC)
Motion Controllers | Servo Systems
Frequency Inverters

Vision, Measurement and Identification
Vision Sensors and Systems | Measurement
Sensors | Auto Identification Systems

Sensing
Photoelectric Sensors | Fiber-Optic Sensors
Proximity Sensors | Rotary Encoders
Ultrasonic Sensors

Safety
Light Curtains | Laser Scanners
Programmable Safety Systems | Safety Mats
and Edges | Door Switches Emergency Stop
Devices | Safety Switches and Operator
Controls | Safety Monitoring/Force-guided
Relays

Control Components
Power Supplies | Timers | Counters
Programmable Relays | Digital Panel Meters
Monitoring Products

Switches and Relays
Limit Switches | Pushbutton Switches
Electromechanical Relays | Solid State Relays

Software
Programming and Configuration | Runtime

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