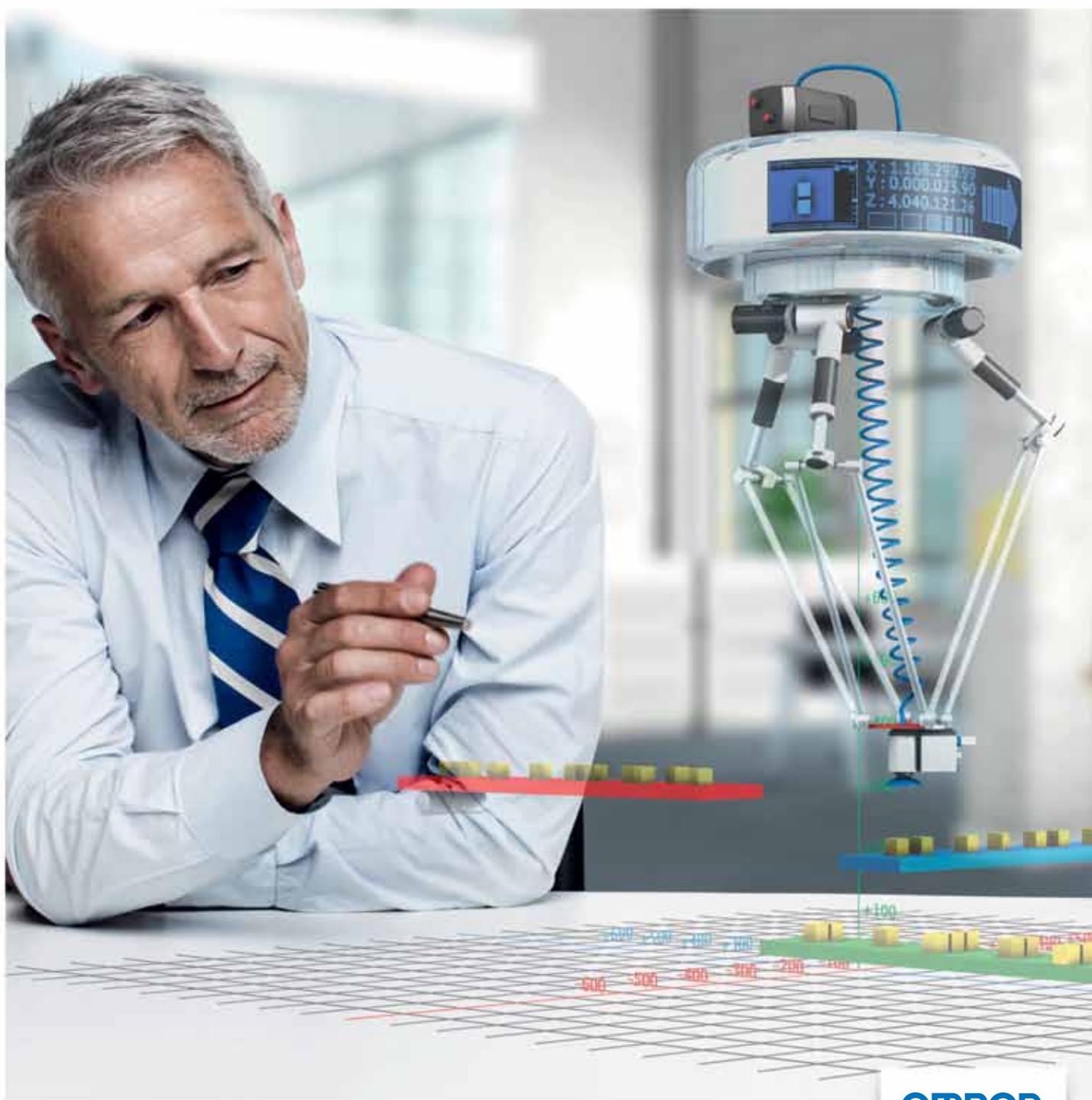


Omron & Future proof

Technology & Trends

- P04. Don't just evolve - create!
- P10. Next release on the Sysmac platform
- P20. Turnkey packaging line



Omron & Future proof

The cover shows an artist's impression of a concept for a robot, developed at a workshop for customers. The result: a delta robot with OLED instant messaging, adaptive positioning, holistic 3D-simulation and floor-activated communication. Will it be realistic? The future will tell.

By listening, wondering, exploring and learning, we gain insights that lead to cutting-edge solutions for the next generation of machines.

We do things differently.



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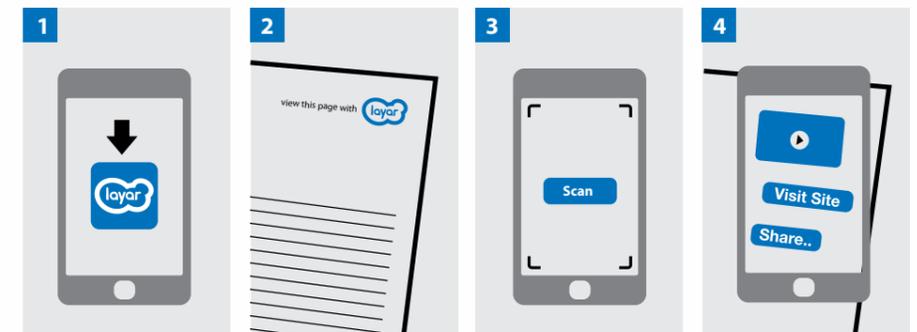
Single-controller in a turnkey packaging line

Mecapack, a specialist manufacturer of primary and secondary packaging.



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Hiroyuki Usui, Omron Europe as Chief Executive Officer

DON'T JUST EVOLVE – CREATE. TAKE IT TO THE NEXT LEVEL.



Hiroyuki Usui, who joined Omron Europe as Chief Executive Officer in April this year, says his ambition is to bring next generation technology into the European market, putting Omron's know-how, experience and systems within reach of European machine-builders. We spoke with him about his vision and ideas for achieving these ambitions.

What did you ask yourself when you became CEO?

My main interest is in helping European machine-builders to stay strong in a changing world, because every customer I have spoken to sees the challenges ahead. We must help them to keep innovating and reducing costs. That way they can seize the opportunities in developing markets like China – where our long-standing presence is going to help them – while defending their local business.

How can next-generation technology help machine-builders?

It all springs from the ideas of the machine-builders them-selves. Sysmac, for example, was based on customer demands for a platform that's scalable and flexible, and that enables the creation of fast, efficient machines. Our vision is to help our customers' engineers to turn their ideas into reality – the smart way.

Could you explain what you mean by "turning ideas smartly into reality – the smart way?"

Machine automation is all about input-logic-output technology so we make connectivity as simple, fast and reliable as possible. Machine-builders only need to focus on the creative idea, mixing and matching components without worrying about hierarchy or other communication issues. We're unique in offering this seamless input-logic-output combinations. Of course, if everything comes from Omron it will be the fastest combination available on the market.

What are Omron's other focus points?

We aim to provide the most reliable support in the business, and deliver it faster and more precisely than anyone else. We can do this by removing all unnecessary waste, taking out elements that don't add value for our customers and their customers. As a logical consequence, this will improve the speed of our response and bring the cost down - these are all benefits that can be directly transferred to our customers and help make them more competitive.

If you were an Omron customer or potential customer, how would you interact with us?

It's an interesting question, because we must always think from the customer's perspective. The first point is to realize how easy it is to get access to our automation expertise. On every level, Omron is the most open automation partner in Europe. If I were a customer I would definitely bring Omron in at the start of a project, right at the concept stage, because I know our engineers can help customers to create solutions to specific challenges. They are in the field every day in all kinds of industries. So, for example, know-how gained on an automotive plant in Sweden might be exactly what's needed for a packaging machine in France. Machine-builders can use this experience to sharpen their ideas for tomorrow's machines: it will help to make equipment that's future-proof, and that delivers the competitive advantage in today's globalized world.

Mespics all-in-one solution...

Mespics, with headquarters in northeast Italy, has worked with Omron to develop innovative all-in-one packaging solutions that end-users now demand, and that successful machine makers strive to provide. A recent example is this end-of-line plant for secondary and final packaging of tea.

Flexibility and versatility are the two main drivers for the evolution of packaging machinery. In particular, the need to change formats quickly, or to handle different products on the same line, has led more innovative manufacturers to develop new solutions in terms of machinery layout, materials and technologies.

Italian manufacturer Mespics is just such a company. Specializing in the design and construction of integrated end-of-line packaging machinery, Mespics looked at what the market was demanding, and established partnerships with specialist suppliers to meet those demands. In particular, it has investigated new materials and innovative technologies that enable it to offer solutions that are more efficient in terms of productivity and energy saving.

Sort, pack, box, code: the end-of-the-line for tea

One of Mespics's most recent advances is the development of an end-of-line secondary and final packaging solution for packs of tea. This is a dedicated line which incorporates transport of the packs, aggregating different product types and formats, and automatically placing them in different packing cases.

The key issue is that the packs containing different flavours of tea – each coming from a different production line – must be properly

and accurately placed into separate cases for despatch. So when the different teas arrive at the Mespics end-of-line plant, they are first scanned by an Omron FQ vision system, which identifies the different product types. The data is sent via an Ethernet link to the pick-and-place system, which takes the packs of tea and puts them into different cases. The open cases are first marked with a Data Matrix code, and then automatically sealed: finally, a second Omron FQ-CR vision system reads the code printed on the case, to identify the contents and ensure accurate despatch.

Developed in collaboration with Omron, the end-of-line plant benefits from the know-how and product philosophies of both companies. One of Mespics's core strengths is its ability to offer not only standalone machines but also complete lines. These "all-in-one" systems, born out of the need to run multiple processes within the same area, are designed in co-operation with the customer to take into account the specific packaging and the space limitations. The Mespics machines make use of innovative materials such as carbon fibre and have fewer moving parts. This makes them lighter, which in turn enables the use of smaller motors to reduce component costs as well as saving energy up to 60% compared with traditional machines.



"All-in-one" solution - showing the input section, storage and forming of the cases, the loading and control area, and the printing/closing areas

Pick-and-place - The loading section, where the pick-and-place module takes the packs of tea and places them inside the case

Controlled by our NJ controller - 4 carbon fiber pick & place systems, 2 for case erecting, 1 for grouping, 1 for case packing

... Versatile and flexible

Ideal partner

Mespics has found an ideal partner in Omron, which shares its customer-focused ideals. Francesca Gaetani, Packaging Project Leader at Omron Electronics Italy, explains that "Our automation philosophy was to provide a solution based on the new NJ controller on an EtherCAT network. This architecture allows us to take a unique approach in meeting differing requirements in terms of complexity, while ensuring cost saving. We achieved this because the NJ machine controller - scaled in different sizes - handles the logic I/O as well as the machine movements. The EtherCAT network - on which the entire Sysmac platform is based - provides the speed of data exchange necessary to ensure application flexibility."

In the case of the tea-packaging solution, the NJ501 machine controller manages the conveyors carrying the packs of tea, as well as servo drives that operate the casing machine, the pick-and-place module, and the aggregation of the different packs. Mespics's case-packing systems are all top-loading, and use a Cartesian-axis gantry with both

motors fixed, to reduce weight – and therefore wear - on the moving parts.

Extensive and continuous collaboration from Omron has provided the flexibility and versatility with which Mespics has been able to meet the specific and complex needs of each customer. The technology has delivered several customer benefits, including:

- a method of consistent communication
- the same remote control unit operating a large number of axes, vision systems, and delta robot I/O modules
- Accurax G5 servo motors used for the pick-and-place module, also controlled by the NJ motion controller
- Omron technical assistance during development and after installation

Most importantly, the collaboration between Mespics and Omron has enabled the deployment of new technologies to meet new objectives, and to open up new and increasingly competitive markets.



In short



Wepan refuses to compromise on quality

Wepan, from De Lier in the south of Holland, is a medium-sized business employing eighteen personnel, involved in electrotechnical installation and panel building

Gert van Wensen, director of Wepan in De Lier, is an idiosyncratic business man with a very outspoken opinion on the running of a company and how to deal with employees and clients. As a fitter and panel builder, he knows that flexibility and speed are important for many clients, but he refuses to compromise on quality.

omron.me/TT_Wepan



Lean, Aqualetra ahead of competition

With a turnover of about 17 million euro and a staff of 145 employees, Aqualetra is one of the largest panel builders in the Benelux and probably in Europe

I would be lying if I said the market for panel builders was booming at the moment, but we are still managing to hold our heads above water", says Tom Stringer, general director of Aqualetra in Heerhugowaard. Stringer is a keen advocate of 'lean manufacturing', which enables panels to be produced as efficiently as possible. He believes this is the only way to stay ahead of the competition.

omron.me/TT_Aqualetra



Omron your safe solution

No one doubts the importance of functional safety in modern automation systems.

Safety is a responsibility that all plant operators take seriously because of the potential impact on personnel, systems and the environment if "something goes wrong". A system failure or mal-function that is not detected immediately can have dire consequences. The challenge is to find a way for plant operation and functional safety to become more intimately connected. Omron's philosophy as a vendor of "automation solutions" is that integrated safety presents a new opportunity to deliver a "seamless offer" that spans inputs, logic and outputs to build on the advantages of networked systems

omron.me/TT_safety

Sysmac: One Machine Controller, One Connection and One Software

Sysmac, 1st anniversary

It's exactly one year since the Sysmac control platform was launched. Fully integrated under the simple concept of 'One Control, One Connection and One Software' it met with instant success. It was Sysmac's simplicity and reliability that users appreciated most and, thanks to them, we are on target to achieve over 5000 CPU sales. Last year we also said that this was the first step in a ten years journey... We are pleased and thrilled to share with you the second step. When we say it works IT WORKS! And when we say we do WE DELIVER!

The CPU family is growing in performance and scalability

The first release - NJ5 CPU - targeted 16, 32 and 64 axes machines. Within six months speed had been doubled and 64 axes control could be achieved in 1 ms instead of 2 ms. We also released a new CPU family - NJ3 line - covering 4 and 8 axes with the same functionality, but with slightly lowered performance. The NJ3 CPU is well positioned to meet 80% of applications in terms of performance and cost.

Kinematics meets PLC, motion and vision

In July we launched the NJ Robotics line. This integrates motion, PLC, vision and the kinematic algorithms required for delta robots. Continuous pick & place systems comprising 8 robots and a dual conveyor line can now be controlled in less than 2ms cycle times, with up to 200 picking cycles per minute.

Safety with one software and one connection concept

Sysmac platform now includes smart safety function thanks to the new integrated safety solution. The latter consists of a new safety network controller and a new safety I/O (NX I/O). One connection concept is realised through the use of Safety over Ethercat (FSOE) layer, controller and I/Os are physically mounted on the distributed I/O rack. Hence safe and non safe I/Os can be mixed on the same I/O block. The ONE software concept is achieved by using Sysmac Studio for configuration and programming. Needless to say that it fully complies with IEC-61131-3 standard. The safety controller achieves the highest safety and meets Category 4 and Performance level (PLe) according to the ISO-13849-1 and SIL3 according to IEC-61508.

Distributed NX I/O: sub-microsecond accuracy

Based on a backplane bus running in synchronous and asynchronous modes and using time stamping, our NX I/O distributed IO range can read an input or set an output with sub-microsecond accuracy. NX I/O is available with over 70 models of I/O units. Further models will become available over the coming year.

And the future?

Sysmac is and will remain a fully integrated platform, with the focus on speed and performance for flexible machine automation. Our development teams are continually improving current systems and are also busy with new application libraries.

Enjoy Automation ... with Sysmac





Sysmac NX-series I/O

THE SYSMAC MACHINE CONTROLLER GETS THE I/O'S IT DESERVES...

One year ago, Omron introduced the Sysmac NJ-series controller, as the basis of a new generation of Machine Control Systems.

A new generation of I/O's

Not just speed in program execution, but also speed of application development, with a fully integrated programming, simulation and troubleshooting environment. Direct access to all variables and functions for sequence control, motion control and machine vision from Sysmac Studio helps you. Simplify your engineering work, reducing the chance of errors and improving modularity and maintainability.

In modern machine control, achieving a high execution speed means nothing without accuracy and repeatability. Using the distributed clock function of the EtherCAT machine network, the timing of Sysmac's motion control is accurate and predictable to within a microsecond. The same deterministic behaviour is now also supported by the new Sysmac NX-series I/O system.

Timing is key

Sysmac NX-series I/O has been developed to meet requirements that at first may seem contradicting; to provide a competitive modular I/O system to connect to

Omron controllers and various open networks, yet offering superior real-time behaviour and ease of use. Additionally, the system needs to support the integration of safety functions, and be open for future additions.

To assure the required performance level, Omron developed a new inter-connection bus, which outperforms any currently available industrial network. Besides having a high data transfer rate, this bus will propagate the distributed clock of EtherCAT down to individual I/O units. The distributed clock allows any I/O unit to synchronise with the Sysmac machine controller's primary task cycle with less than 1 µs jitter. Additionally, input units with timestamp function can be used to accurately determine sequence of events with nanosecond resolution. Complementary timestamped output units will let you control the precise timing of digital output sequences,

with the same nanosecond resolution. Used together, the total accuracy of timing from in- to outputs is only limited by the ON- and OFF-delays of the signals, i.e. well within a microsecond.

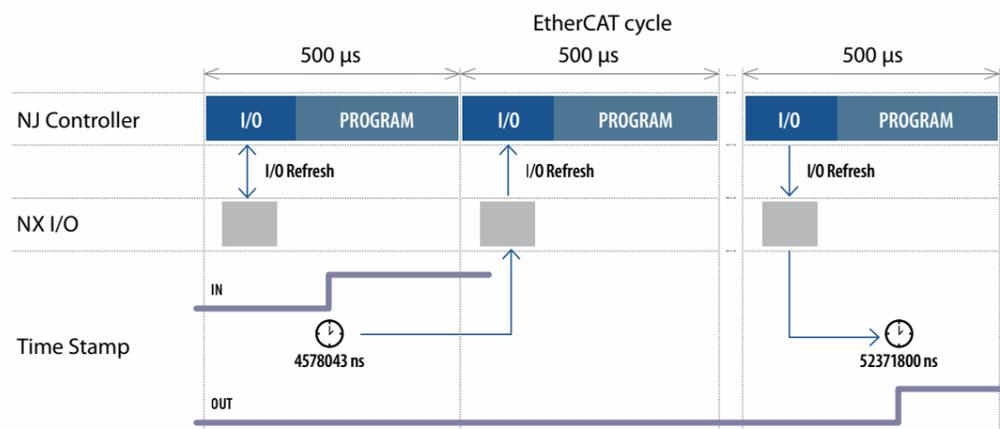
Choice in I/O units

The digital I/O units in the Sysmac NX-series are offered in several variations, allowing the user to make a trade-off between I/O density and ease of installation, or performance and cost. Every model is available in sinking- and sourcing version so you can always meet local market needs when you export your machines globally.

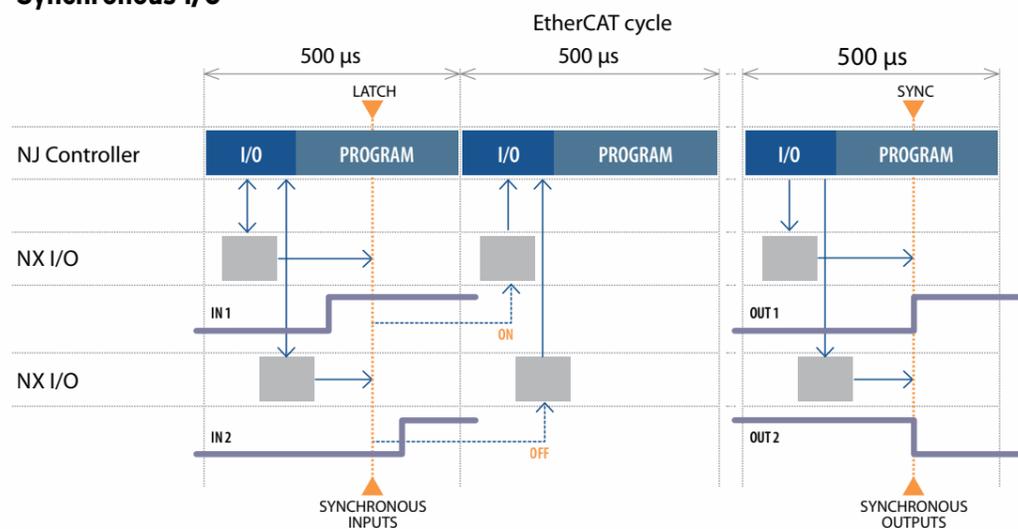
Standard digital I/O units are available as 4-point modules which accept direct connection of 3-wire signals, providing 24V power supply to the sensor. These 4-point units are also



Time Stamp sequence example



Synchronous I/O



available as high-speed. Standard-performance units also come in higher densities: 8-point I/O units can be used for 2-wire signals, typically dry contact switches. 16-point units achieve the highest I/O density in 12 mm width, in case the sensors are supplied with power from an external source.

Safety I/O's are available as 4-point input units, while safety outputs units have 4 output points in just 12 mm width, or 2 points with a 2 A rating.

A full range of analog I/Os is available, from two to eight signals per unit, for current, voltage, thermocouple or RTD signals. High-performance models are available, offering 10 µs conversion time per channel and 1:30000 resolution.

To support the motion control functions of the Sysmac series, I/O units for encoder inputs and pulse outputs are included in the range. These can be assigned to motion axes in the controller configuration.

Safety integrated

Safety functions are fully integrated in the Sysmac NX-series I/O. The programmable safety control unit and its safe in- and output units can be inserted anywhere in the I/O system. No other special hardware is needed. The safety communication is passed on transparently through the EtherCAT interfaces of the Sysmac control network, making it easy to add safety functions to any control system. Standard control and safety control are both programmed in Sysmac Studio, providing

easy monitoring and referencing of safety status information in the normal control programs.

Design

All Sysmac I/O units have the same height and depth (100x71 mm) while the standard unit width is 12mm, or 24mm for some specific units. All I/O units have a detachable front connector with push-in type screwless terminals. I/O wiring looms can be prepared and installed separately, signals can easily be disconnected for testing and commissioning, and units can be replaced without re-wiring. User-defined labeling and keying of the I/O connectors are provided to prevent installation errors.

At the initial market release in Q1 2013, the Sysmac NX-series I/O will consist of approximately 70 types of I/O units and system modules like power feeds and ground terminals, a safety IO controller, and the network interface unit for EtherCAT. Bus interfaces for other networks, and the described high-performance I/O units will be released throughout 2013. From there on, there will be a steady expansion of the Sysmac NX-series model range.

» sysmac.eu

Sysmac Integrated Safety

Omron Electronics is in one of the leading global companies in automation safety. Our broad product and services portfolio includes all necessary safety equipment and services, from electronic safety relays like the G9SX series up to DeviceNet network controllers like the NE1A series.

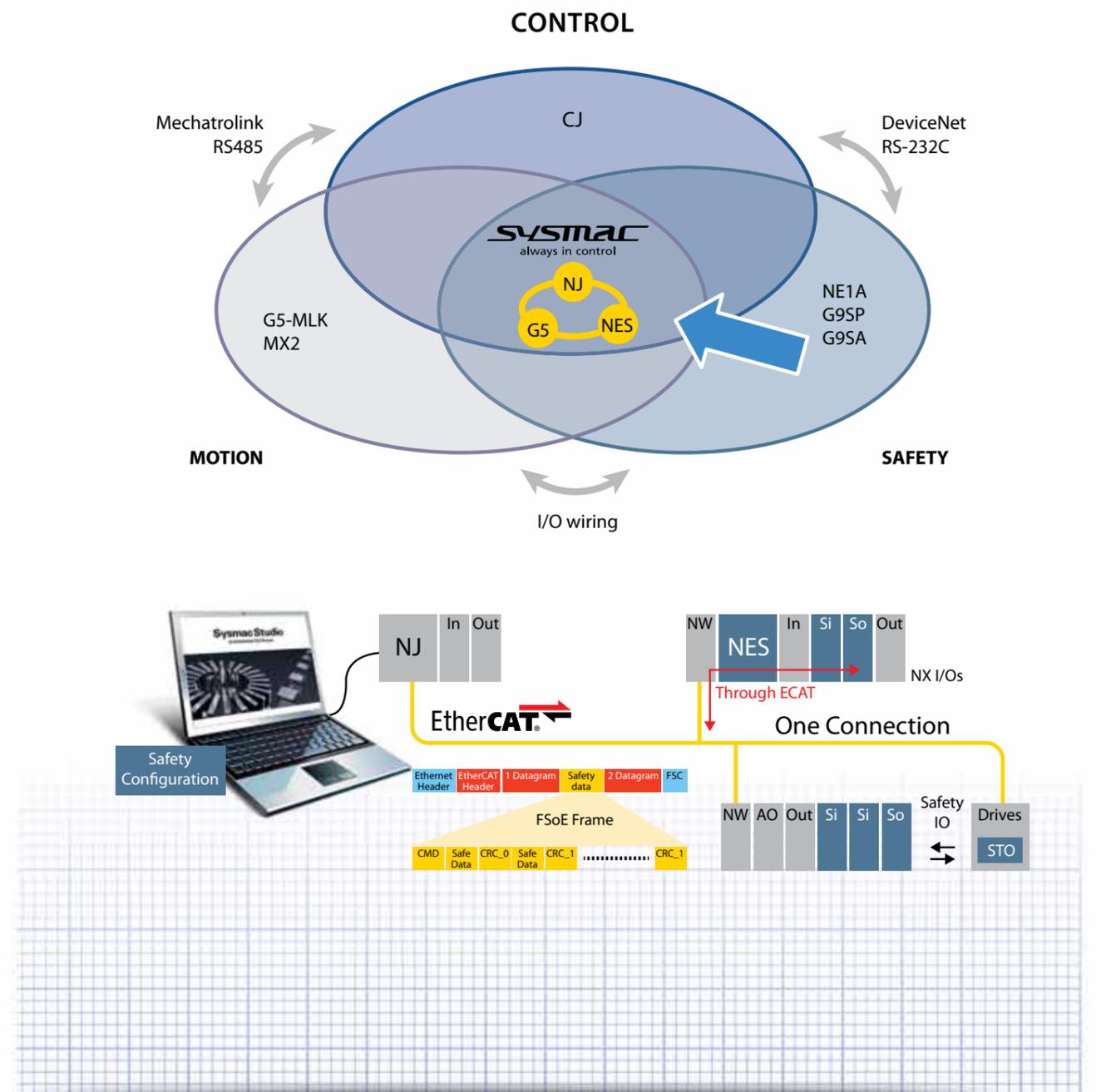
The release of the Sysmac NJ Series Machine Automation Controllers was a decisive step towards the full integration of logic, motion and vision into our 'One Software' platform (Sysmac Studio), using our 'One Machine' network (EtherCAT) and all focused on our 'One Control System' (Sysmac NJ Controller).

Machine design and development are never complete without functional safety. The development of a proper safety strategy is essential to all machine design and should be taken into account at an early stage as it can dramatically influence life cycle costs, especially development times and maintenance cycles.

Machines must be designed to be intrinsically safe so, when a hazardous situation cannot be avoided through conventional engineering - e.g. by protecting the moving parts - additional measures must be implemented to reach the required safety performance. This is where Sysmac's Integrated Safety solutions make all the difference.

The new NX Safety Controller has been created using state-of-the-art technology and is implemented in the latest NX I/O system. Nanosynx is new and innovative I/O technology, offering outstanding speed and performance, with nanosecond resolution delivered by EtherCAT networking which is defining new levels of speed and accuracy in automation.

The safety communications layer is known as Safety over EtherCAT (FSoE) and is used to transport safety data between an NX Safety Controller and the NX I/O distributed safety devices. The release of the NX Safety Controller as part of the Sysmac Integrated Architecture enables Omron safety systems to meet applications up to Category 4 and Performance level (PLe) according to ISO 13849-1.



Sysmac Studio and IEC 61131-3 PLCopen Safety programming

One of the benefits of advanced Safety Controllers compared with classic hard-wired safety solutions is the flexibility and reusability of code. Omron NX Safety Controllers are programmed according to the IEC 61131-3 standard and use the same Sysmac Studio Integrated Development Environment (IDE) used for the rest of the Sysmac devices.

Standards like IEC 61131-3 and PLCopen bring openness and usability that ensures end users can avoid becoming the prisoner of a particular brand. NX Safety Controllers incorporate PLCopen Function Blocks (FBs) that in combination with Motion Control FB's make Sysmac one of the most open platforms on the market. Furthermore, Sysmac Studio allows the integration of NX Safety Controller variables within the global variables of an NJ controller. Sysmac Studio IDE thus supports a common methodology for hardware definition, programming and maintenance.

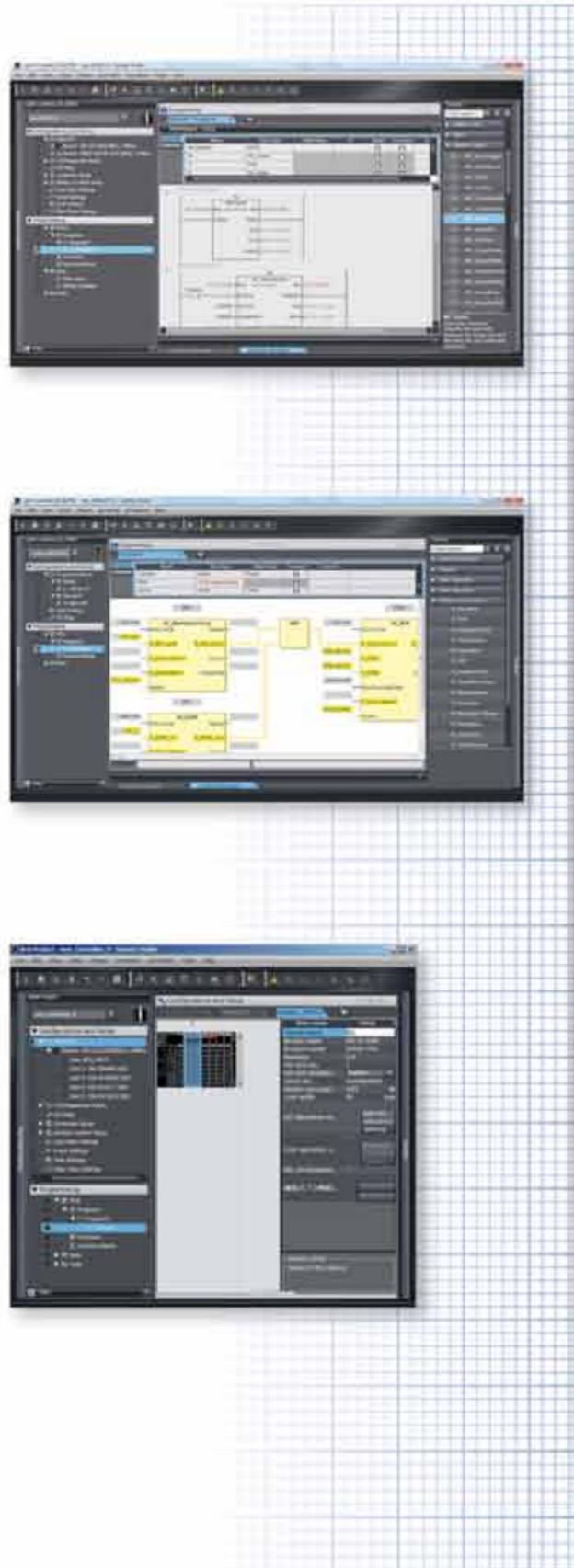
Operating Principle of the NX Safety Controller

The NX Safety Controller supports safe logic in its local NX backplane and in remote NX remote backplanes by means of the NX EtherCAT coupler (NX-ECC201). Functional Safety Over EtherCAT (FSoE) uses the so-called 'black channel' for communications which allows safety data and non-safety data to be combined without risk in a single network. FSoE can achieve SIL-3, with the probability of one undetected error exceeding 100,000 years!

Sysmac NJ Controller is the EtherCAT network master. The NX Safety Controller establishes a connection-ID mechanism with its associated NX devices. In this way, the NX Safety Controller manages the safe logic while the NJ EtherCAT Master is responsible for safe and non-safe communications. One interesting consequence is that NJ Controller has continuous access to the FSoE data and can, if necessary, use this in standard automation processes.

Benefits of Sysmac integrated Safety.

The NX Safety Controller and distributed Safety I/O can be freely placed on the NX-I/O bus. The integration

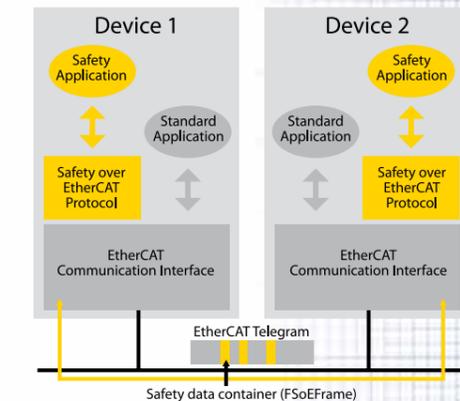


into Sysmac Studio simplifies system design, setup and maintenance, allowing machine builders to focus on the improvement of performance and safety rather than on system configuration. The combination of NX-Safety and Omron safety components - from safety switches and sensors to motion devices with integrated safety functions - brings great benefits to machine builders looking for a single source solution.

Our commitment

Sysmac NX Safety Controller series in combination with new NX I/O system and Sysmac NJ Controllers contribute to increased machine safety and improved productivity over the total machine lifecycle. Omron is a global "One stop solution" supplier who can offer not only components, but also solutions and services like Input-Logic-Output for functional safety in automation.

Safety over EtherCAT®





SYSMAC specialists

It is exactly one year since SYSMAC platform was launched globally to the market. A fully integrated platform under the simple concept of One controller, One connection and One software. On the other hand, over the past few years, we at Omron Europe, have refocused our business, parallel with Sysmac development, aiming to provide our customers with the best support, the new Sysmac platform. Our Application Engineers are constantly improving their knowledge with intensive training on new technologies, products and applications. Omron Europe now has more than 700 field and sales engineers in 19 countries to add value to machine builders in terms of advanced and integrated machine control.

Automation Center: a global network of competence centers

Omron's commitment to the machine builders goes beyond product and technology, it also embraces advanced technical and application support. These four global automation centers are now fully operational. All the centers are globally coordinated from the Automation BU head-quarter in Japan.

The current Automation Centers in the world:

- ATC-Japan located in Kusatsu, Japan, already opened on the 1st of August of 2011
- ATC-China located in Shanghai, China, already opened on the 3rd of June of 2011
- ATC-US located in Fremont CA, USA, already opened on the 1st of April of 2012
- ATC-Europe located in Barcelona, Europe to be opened on the 30th of November of 2012



Automation Center Europe

The key tasks of the Automation centers is to provide the best technical and application support for SYSMAC platform and all the devices (software and hardware) around it. The field of expertise of the ATC includes networking, software, safety, advanced motion control, robotics and CNC.

Barcelona: the logical host place for Automation Center Europe

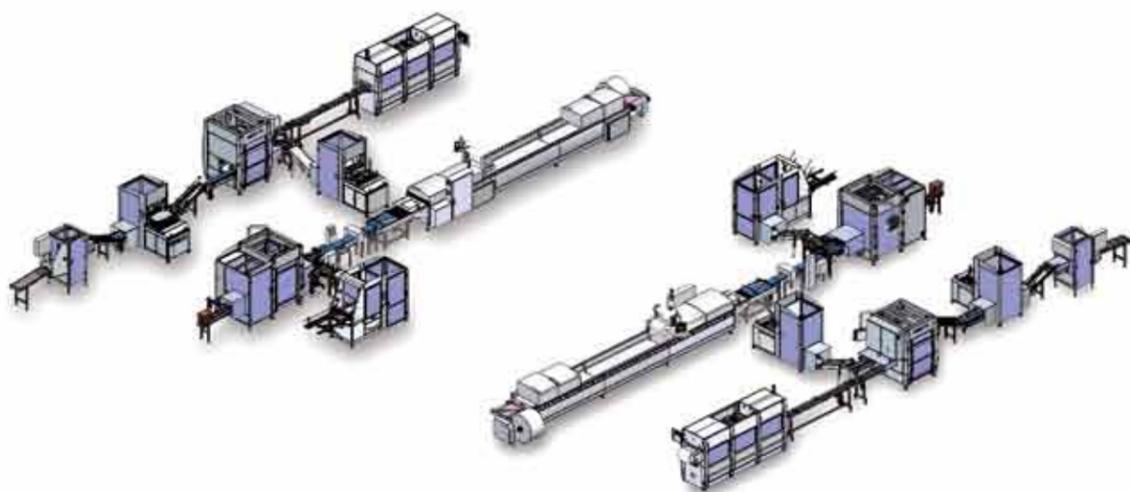
Omron Europe has its Motion Application Center in Barcelona since 1999. This center hosts more than 40 experts in software, hardware and application specialists. It is there where all the software and motion application libraries are developed. Therefore it was just a matter of continuity to have the ATC in Barcelona. ATC will represent a real competence where customers can see, test and have a real life experience of the most advanced technology.

Come and visit us...



Single-controller in a turnkey packaging line

Mecapack, a specialist manufacturer of primary and secondary packaging machines has recently developed a turnkey packaging line. Working in close cooperation with Omron has enabled the company to base its concept on a single line controller, a strategically important step forward, with which Mecapack intends to satisfy customer expectations both in its French home market and in the rest of the world.



Denis Oerther, in charge of the Purchasing Department at Mecapack, sees obvious benefits in optimizing line control: **"A single platform reduces the number of components and the wiring and programming times in the workshops. It also reduces stock volumes, and the variety of spare parts needed."**

Delta robot - R2A



A member of the Proplast group, French manufacturer Mecapack develops and manufactures packaging machines, including tray sealing systems, thermoforming equipment, case forming and case packing solutions. They have recently integrated Création Technique (now called Idpack) into the business, strengthening their expertise in secondary packaging machines. The company's nine R&D engineers, working in a 23-person Research Department, add value to the company, while Omron has been providing expertise in sequential logic and motion control to Mecapack for more than 15 years.

Build a relationship with a single project

A complete turnkey packaging line

"These days our customers look for machines which can work at high speed and with increased capacity," says Benoît Méfort, responsible for Development at Mecapack. "But they also want to build a relationship with a single Project Manager who can offer a global solution for both primary and secondary packaging. This is what we have been working to establish for the past five years."

Cyrille Couloigner, in charge of Mecapack's Automation Research Department, adds:

"We have developed from being a manufacturer of individual machines towards becoming a supplier of engineering solutions. We owe this evolution directly to the development of Omron technology."

Benoît Méfort explains that Mecapack has been working continually on the reliability and operation of a global full-line concept, while

integrating third-party products such as metal detection systems and labelling machines: "We're introducing into packaging lines notions of production efficiency which are well known in the automotive industry, while reducing product-format changeovers to the minimum. Every second means a lot to us!"

Industrialized development

As part of this project, one of Mecapack's objectives is to streamline machine conception, which will reduce delivery times - among other benefits. To achieve this, the company is deploying Omron's Sysmac platform, which puts the entire line under the same logic of control and parameter setting. "Many of our customers are in favour of this rationalization," says Serge Pitois, Product Manager at Mecapack, although he notes that "A single controller means a complete change in strategy."

The benefit of a single controller

Benoît Méfort adds that "This is where the Omron team add their expertise to our knowledge, and answer any queries that might arise on our side. Our partnership with Omron allows us to achieve the performance levels that we had initially set as an objective, which is important with new technologies. You could look at this as a joint investment by Omron and Mecapack, and I do want to emphasise the fact that the Omron team is always very reactive when we need help!"



According to Serge Pitois, deploying a single controller such as the Sysmac platform is the only way to create a complete packaging line which can meet expectations in terms of performance, and of return on investment and costs. Mecapack integrates a sequence of automation products and Delta-2 robots – developed internally, with motors and control by Omron - that fit into the single line-controller concept. Ethernet connectivity means the controller can also communicate with the multi-articulated robots used in the case-packing stage.

This consistency in the sequential functions and motion control is much appreciated because it allows shorter format changeover times. It also allows remote maintenance and diagnosis of the complete line through a single communication entry point. These are significant benefits for both the end user and Mecapack.



Mecapack is going global

80 % of Mecapack's customers are in the food and beverage sector, but the company also manufactures machines for the pharmaceutical, medical, and supply chain (secondary packaging) sectors. Larger food manufacturers and large or medium size supermarkets will also turn more and more to primary packaging. One third of Mecapack's turnover presently comes from France, but there is a strong desire to develop the company's global activities, a strategy which can be supported by Omron's extensive international network.



Keep asking, stay curious: Be an engineer!

The Omron blog

Omron Europe published a new website on which we share what we experience, working in the automation industry. You can expect to find behind the scenes stories about the future, machines, cool stuff, manufacturing, experts from the field and the innovations in our industry. To give you an idea, below are two random articles. Use your Layar app to read them immediately on your mobile.



Back to the future:

The civilization starter kit

Marcin Jakubowski built a tractor in six days. Then he told the world how to do it: he made the designs, the budget and an instructional video available free online.

» omron.me/SRGKT7



A passion for quality

Everyone knows that quality is important: it's what keeps customers happy and what builds and maintains brand values. But to really differentiate a business, to set it apart from other machine makers, passion has to be more than mere words.

» omron.me/Xh2qdE

We invite you!

If there is anything that you would like to share with us, please do not hesitate and contact us at Omron@eu.omron.com » blog.omron.eu

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Hiroyuki Usui
Chief Executive Officer