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MADE Competence Center i4.0

COMAU

Press Release

Comau and Siemens collaborate to integrate robotics and artificial intelligence in the PLC

- *SIMATIC Robot Library and the "Comau Next Generation Programming Platform" use Profinet's "Standard Robot Command Interface," a growing industrial communication protocol*
- *Thanks to this standard, manufacturing companies can quickly and easily program and manage Comau robots using Siemens software and control systems*
- *As the integration and automation between the Siemens PLC and the robotic controller do not require prior knowledge in robotic programming the solution reduces work time and costs, increasing production efficiency*

Milan, 19 October 2022 – At the event "The Integration of Robotics and Artificial Intelligence in the PLC" held this afternoon, Comau and Siemens presented several application cases to demonstrate the concrete ability of Siemens PLCs to communicate at an industrial level with Comau robot controllers. The event was held at the MADE - Competence Center Industry 4.0 in Milan, created to support and accompany Italian manufacturing companies on the path of technological innovation and digital transformation.

Thanks to the SIMATIC Robot Library, which is available for PLCs or the Siemens Programmable Logic Controller S7-1500, and through the "Comau Next Generation Programming Platform, an innovative platform found in Comau robot controllers, it is now possible to establish a connection based on the Profinet "Standard Robot Command Interface," a protocol that increasingly facilitates and improves the integration of Comau robots with Siemens programming and control systems.

During the event, the benefits of the seamless integration were highlighted, both for OEMs (Original Equipment Manufacturers) and final customers. The use of Artificial Intelligence algorithms to optimize robot handling, grasping and inspection processes was also demonstrated. Finally, robotic solutions that, due to the *Standard Robot Command Interface, can* enhance industrial applications in fast-developing sectors where the use of automation is growing significantly, such as food, beverage and pharmaceuticals, were also shown. The benefits, therefore, are many. By creating a single programming environment, this solution simplifies the management of automation on multiple levels; from the handling of a single robotic arm, to the integration between robot and automatic machine, to the automation of an entire work line. As a result, companies can save costs and operational time, increasing their efficiency and productivity.

More generally, the use of the SIMATIC Robot Library together with the *Comau Next Generation Programming Platform* helps reduce the difficulty of deploying automation solutions in companies that already use a Siemens PLC and want to introduce Comau robots into their lines without investing in complex technology or having to face a challenging learning curve.

Finally, thanks to three levels of simulation, event attendees were able to appreciate the digital twin of the Comau robot in a free space as well as the one inside the workstation. The audience also witnessed the use of Process Simulate software to simulate the robotic arm inside the entire production line.

"We are pleased that the MADE 4.0 Competence Center, a point of reference for industrial innovation for Italian manufacturing companies, has hosted the presentation of the new solution developed by Comau and Siemens to increasingly simplify and speed up the communication between Comau robots and Siemens programming systems," explained Duilio Amico, Head of Sales EMEA Robotics at Comau. *A joint technology that is useful in multiple industries, including high-growth sectors such as Food & Beverage and Pharma, where the use of a high degree of automation is now strategic in order to lower working time and costs."*

"The event held today at MADE - Competence Center Industry 4.0 in Milan – is a meeting aimed at showing in concrete terms how industrial robots can be integrated into our controllers," said Cristian Sartori, Product Management Head of Advanced Automation at Siemens. *"Thanks to the "Standard Robot Command Interface," our PLCs speak the same language as the robots, thus offering greater speed and flexibility in design. This technological breakthrough is also an enabler for integration into applications in different technology areas such as robotics and artificial intelligence."*

“Today’s presentation of Comau and Siemens solutions is part of those activities that at the MADE Competence Center we call Demo Experiences. They are moments in which our partners benefit from the infrastructure and technologies present in the Center to show a selected audience of companies how innovative applications work,” commented Davide Polotto, business relations manager at MADE Competence Center. *“Moments like these best represent the synergies that we are able to create as a Competence Center between our partners and companies in the market, expanding the number of solutions we are able to offer to those who turn to us.”*

The *Standard Robot Command Interface* is a Profinet Consortium protocol for industrial communication that enables companies to:

- reduce the degree of complexity in application design

- use automation and PLC language skills

- create a universal program for both the machine and the industrial arm

The interface also offers tangible cost and time savings, since all automation products and cells can be managed without specific skills in robotic programming. The proposed solution is totally flexible. In addition to the simplicity of application design or reconversion, it also helps the end user, who can operate and maintain a modular and adaptable system from a single HMI interface for both the machine and the robot.

Working with a major automotive customer, Comau has verified a reduction in configuration and programming costs when using kinematics resolution in the robot controller, and leveraging the single programming interface for both the PLC and robot. In addition to automotive, applications include all end-of-line processes, pick and place, handling of boxing and palletizing operations, logistics, and more. Another major benefit is the ability to virtually program Comau robots with the Siemens virtual PLC controller in a single operation. This allows end users and system integrators to refine the programming sequence, download the program on site, and immediately start operating the robot.

ABOUT SIEMENS

Siemens AG (Berlin and Munich) is a technology company focused on industry, infrastructure, transport, and healthcare. From more resource-efficient factories, resilient supply chains, and smarter buildings and grids, to cleaner and more comfortable transportation as well as advanced healthcare, the company creates technology with purpose adding real value for customers. By combining the real and the digital worlds, Siemens empowers its customers to transform their industries and markets, helping them to transform the everyday for billions of people. Siemens also owns a majority stake in the publicly listed company Siemens Healthineers, a globally leading medical technology provider shaping the future of healthcare. In addition, Siemens holds a minority stake in Siemens Energy, a global leader in the transmission and generation of electrical power. In fiscal 2021, which ended on September 30, 2021, the Siemens Group generated revenue of €62.3 billion and net income of €6.7 billion. As of September 30, 2021, the company had around 303,000 employees worldwide. Further information is available on the Internet at www.siemens.com.

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ABOUT MADE Competence Center Industry 4.0.

MADE Competence Center Industry 4.0 is an ecosystem that aims to create a digital factory model to support manufacturing companies that want to undertake innovation projects focused on Industry 4.0. MADE makes available to companies, particularly small and medium-sized enterprises, a wide range of knowledge, methodologies, and particular attention to on digital technologies, ranging from design to engineering, production control, and end-of-life management. Companies that turn to MADE have the opportunity to engage directly with innovation and understand, "hands-on," how solutions currently available on the market can be used to improve their competitiveness.
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ABOUT COMAU

Comau, a member of Stellantis, is a worldwide leader in delivering advanced industrial automation products and systems. Its portfolio includes technology and systems for electric, hybrid and traditional vehicle manufacturing, industrial robots, collaborative and wearable robotics, autonomous logistics, dedicated machining centers and interconnected digital services and products able to transmit, elaborate and analyze machine and process data. With over 45 years of experience and a strong presence within every major industrial country, Comau is helping manufacturers of all sizes in almost any industry experience higher quality, increased productivity, faster time-to-market and lower overall costs. The company's offering also extends to project management and consultancy, as well as maintenance and training for a wide range of industrial segments. Headquartered in Turin, Italy, Comau has an international network of 6 innovation centers, 5 digital hubs, 9 manufacturing plants that span 13 countries and employ 4,000 people. A global network of distributors and partners allows the company to respond quickly to the needs of customers, no matter where they are located throughout the world. Through the training activities organized by its Academy, Comau is also committed to developing the technical and managerial knowledge necessary for companies to face the challenges and opportunities of Industry 4.0.
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