

Nuremberg, March 14, 2024

LogiMAT 2024, Hall 3, Booth D11

Siemens Xcelerator sets new standards for sustainable, adaptive, and flexible material flow systems in the intralogistics industry

- **End-to-end automation and digitalization in intralogistics as a decisive competitive advantage**
- **NEW: Simove for automated guided vehicles and mobile robots with new features**
- **NEW: Simatic Robot Pick Pro and Simatic Robot Pack AI for robot systems**

Following the motto "LogiMAT 2024 – experience the flow," Siemens is showcasing its extensive automation and digitalization portfolio for the intralogistics industry at this year's Logimat. Intralogistics is the backbone of every supply chain. Increasing demands for energy efficiency and sustainability as well as labor shortages and cybersecurity threats require efficient and adaptive material flow technology. IoT-enabled hardware and software from the Siemens Xcelerator portfolio cover the entire warehouse operation, including receiving, transport, storage, picking, packing, and shipping. By leveraging digitalization, automation, and innovative technologies like the digital twin, Siemens is improving the efficiency and sustainability of the intralogistics industry and paving the way for a smart, adaptable, and resilient future for logistics operations.

Implementation of flexible, safe, and autonomous intralogistics processes with new functions for AMRs

At the trade show booth, Siemens will be demonstrating a fully automated autonomous mobile robot (AMR) application that was realized using the Simove modular system and features comprehensive integration across all levels. With Simove, Siemens offers a system platform specifically designed for automated guided vehicles (AGVs) and

AMRs. The platform includes modular software components and libraries for guidance control, navigation, and general automation and uses standardized automation and drive components. The Simove modular system for AGV and AMR applications enables the precise design of applications that meet individual requirements. A real AMR with a robot arm that performs gripping tasks will also be on display. A fully integrated Siwarex weighing system for Simatic ET 200SP will be used for fast process control and precise inventory recording.

Another highlight is the autonomous load-carrier handling technology. The AI-based software system enables AGVs and AMRs to visually detect, autonomously approach, and automatically pick up load carriers in variable and dynamic environments. Autonomous load-carrier handling solutions are used for applications like forklift trucks, and their flexible use can significantly reduce costs, engineering, and time expenditures. In the area of safety, Siemens will be presenting the Safevelo software prototype for AMRs. It allows the fail-safe monitoring of a vehicle's speed, which enables the protective fields of safety laser scanners to be switched dynamically. Safevelo is kinematics-independent and doesn't require any additional safety or incremental encoders to determine an AMR's direction of movement. This saves valuable installation space, simplifies the system architecture and engineering, and reduces cabling costs.

New features for Simatic Robot Pick AI vision software

To enable robot systems to reliably pick and pack any item, they must be able to interact with their environment and adapt to changing situations in the process. Simatic Robot Pick AI is a pre-trained AI vision software that enables robots to reliably grip previously unknown articles – also called model-free gripping – in demanding pick-by-robot applications for a wide range of objects. Pre-training of the robot by the user is no longer necessary. The pre-trained deep learning algorithm processes a new 3D camera image in milliseconds and determines robust 3D poses for collision-free removal of the object, regardless of their shape and size.

Siemens will be showcasing two new features at Logimat. The first is the beta version of Simatic Robot Pick Pro. The solution supports the oriented gripping of any object with the aid of multi-suction grippers, which means that large, heavy, and complex objects can be handled in applications like bin picking, depalletizing, and sorter induction. The second is the Simatic Robot Pack AI capability, which determines

suitable placement poses for any unknown objects on the robot arm. This ensures that the volume in a target container like a shipping box is optimally utilized.



With Simove, Siemens offers a system platform specifically designed for automated guided vehicles (AGVs) and automated autonomous mobile robot (AMRs).

This press release and press pictures are available at <https://sie.ag/6YHPMD>

For more information about Siemens at LogiMAT, see www.siemens.com/logimat

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Siemens AG (Berlin and Munich) is a leading 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 fiscal 2023, which ended on September 30, 2023, the Siemens Group generated revenue of €77.8 billion and net income of €8.5 billion. As of September 30, 2023, the company employed around 320,000 people worldwide. Further information is available on the Internet at www.siemens.com.