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## Cutting-edge technology for Mobile Intralogistics

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LogiMAT presents a broad selection of automated guided vehicles, shuttles, cobots, and autonomous mobile robots. LogiMAT 2022 is a showcase for the latest solutions in flexible intralogistics transport and an absolute must for those who wish to navigate the market and develop a sustainable strategy for intralogistical material flows with mobile devices.

The materials, parts, and finished products used in recurring workflows between smart integrated workstations in factories and logistics centers are increasingly transported without any need for permanently installed material handling technology. Equipped with high-precision sensors and real-time image processing, autonomous mobile robots (AMRs), shuttles, and automated guided vehicles (AGVs) offer flexible transportation alternatives. Within just a few years, these transport devices have been consistently improved and engineered for greater autonomy by manufacturers such as the former startup Magazino (Hall 5, Booth D55), ASTI Mobile Robotics (Hall 2, Booth B39), and Agilox Service GmbH (Hall 1, Booth C18) as well as various forklift makers and industrial machinery and equipment manufacturers. The robots in particular are increasingly being designed to be able to reach into boxes. “Robotics and human-machine collaboration have become a defining issue in intralogistics in recent years and are revolutionizing many aspects of the picking process,” affirms Michael Ruchty, LogiMAT Exhibition Director at event organizer EUROEXPO Messe- und Kongress-GmbH in Munich. “Mobile robots are now an integral part of flexible material flow concepts, and it is impossible to imagine efficient intralogistics in logistics centers and industrial assembly and production plants without them.”

The range of industrial trucks in this segment is quickly expanding as innovative new designs, features, and technological advances yield new potential applications and fuel user demand. LogiMAT 2022 has responded to these rapid developments by devoting an entire exhibit hall to mobile transport vehicles for the first time. In addition to many established manufacturers of forklift and material handling technology presenting their latest products from these segments, LogiMAT is concentrating most of the exhibitors with innovations in the AGV and AMR market in Hall 2. “The international exhibitors will be on hand from May 31 to June 2 to show off the latest innovations such as AI-controlled AMRs and picking robots,” Ruchty confirms. “The lineup includes cutting-edge equipment for automated storage,

retrieval, transfer, heavy-duty transport, picking from boxes, free navigation, and coordinated integration of multi-vendor fleets.”

## **Product innovations on two floors**

More than 80 exhibitors will be on hand in Hall 2 alone to present their latest developments in AGVs and robot-based automation in intralogistics to an industry audience. An initial overview underscores the innovation on display: MakroSolutions GmbH (Hall 2, Booth EF70) is presenting various AGVs, AMRs, and storage robots that can be flexibly integrated into any existing warehouse system. Safelog GmbH (Hall 2, Booth D11) also offers a high degree of flexibility in features and potential uses with its AGV X1. With its modular design, the mobile robot can be configured to customer specifications, traveling for example under various unit load devices such as shelves and pallets and transporting them to pick stations. Four electric lifting columns provide a top load of 1,500 kg, and a differential drive allows travel speeds of up to 1.6 m/s.

ASTI Mobile Robotics (Hall 2, Booth B39), which was acquired by ABB last year, will be coming to LogiMAT 2022 with several innovations. These include the Mouse and Tractor lines (tugger AMRs), the Platform line (top load transporters), the Forklift line (for pallets) and the Boxmover line (for small containers and trolleys). A cloud platform delivers real-time communication and traceability, enabling industrial connectivity and data analysis, simplifying decision-making, and optimizing operations and processes. The international Kivnon Group (Hall 2, Booth B19) will be represented at LogiMAT with the new K03 Twister, designed for transporting medium-sized payloads in highly specialized processes and working environments with limited space. Equipped with a rotating lift table, the AMR can rotate itself while maintaining the absolute position of the load and simultaneously lifting or lowering as needed.

EK robotics GmbH (Hall 2, Booth B05) will fill 238 square meters across two levels showcasing new products and technological innovations from the AGV and AMR segment. Highlights include the new X Move transport platform and the Vario Move transport robot. X Move accommodates 300, 600 or 1,200 kg payloads using various load-handling attachments. The Vario Move transport robot features a modern industrial design and the same variety of configuration options with standardized components.

## **Autonomous transports with the highest AMR on the market**

Synaos GmbH (Hall 2, Booth A21), Accerion Unconstrained Robotics B.V. (Hall 2, Booth

D19), and Idealworks GmbH (Hall 2, Booth A15) complement the range of hardware components in the mobile transport sector with newly developed software and control components. Synaos developers are coming to Stuttgart to present the SYNA.OS Logistics operating system, which uses AI and state-of-the-art cloud technology to integrate vehicles, forklifts, and mobile robots from different manufacturers and sync their movements using real-time data. AI-based algorithms optimize processes second by second for greater efficiency. Accerion Unconstrained Robotics provides computer vision with its Triton localization systems, enabling mobile robots to operate accurately and reliably in high-performance intralogistics operations. The localization systems are infrastructure-free, requiring no embedded stringlines, QR codes, or additional functionality for lidar. Triton guides mobile robots to follow a virtual grid with sub-millimeter accuracy and operate seamlessly in dynamic environments with speeds of 1.5 to 2 m/s. Idealworks, a spinoff of the BMW Group, will also be presenting a complete solution with the new AnyFleet control system and the iw.hub AMR. iw.hub loads and unloads goods up to a maximum weight of 1,000 kg independently, manages transport speeds of up to 8 km/h, and recognizes and reacts autonomously to obstacles depending on the nature of the object. The cloud-based AnyFleet control system can also integrate equipment from other manufacturers.

The latest products in the AGV and AMR sectors also reflect the lineup of many LogiMAT exhibitors in the other exhibit halls at Messe Stuttgart. Andreas Laubner GmbH (Hall 4, Booth B45), a specialist in auto-ID solutions, will be presenting transport robots from Fetch Robotics that can be brought online quickly and easily through cloud software. Knapp AG (Hall 3, Booth B05) will show the latest generation of its AI-equipped Pick-it-Easy Robot and innovations around the Open Shuttles AMRs. Agilox Service GmbH (Hall 1, Booth C18) has announced it will debut a “disruptive new product group with smart AMRs” at LogiMAT, including the Agilox OCF, and omnidirectional counterbalance forklift for small and medium payloads. The intralogistics robot free-lifts load devices such as open or closed pallets weighing up to 1,500 kg to heights of up to 1,600 mm and features plug-and-play integration into existing systems without the need for any changes to the warehouse environment. Geek+ (Hall 7, Booth D51) is coming to Stuttgart with a similar approach and a European debut of its RoboShuttle8 solutions. A star of the RoboShuttle fleet is the RS8-DA, which reaches shelves with a height of over 8 meters and, according to the manufacturer, is the highest AMR on the market.

Robotics manufacturer Magazino (Hall 5, Booth D55) and Carrybots GmbH (Hall 5, Booth B67) are among those presenting the latest AMR and AGV innovations in Hall 5. Magazino will present the production-ready version of its Soto mobile robot for the first time publicly at LogiMAT 2022. The fully autonomous robot automates material handling in production, moving totes from storage to the assembly line without any

manual intervention. Soto accommodates up to 24 totes in different sizes weighing up to 20 kg each, moves them autonomously from start to finish, and places them in flow racks of various heights. Carrybots will debut its Herbie AGV, featuring a modular, expandable system structure that is marketed as a cost-effective entry-level solution into the world of autonomous transport.

## **The future of autonomous transport**

Pixel Robotics GmbH is co-exhibiting with Logivations GmbH (Hall 8, Booth F05) and will present an AI-controlled robot for the first time at LogiMAT. The Pixel PT was redesigned from the ground up for pallet transport and is said to offer a payback period of less than 1.5 years. BITO-Lagertechnik Bittmann GmbH (Hall 6, Booth C31) will also present LEO Locative, a new driverless bin transporter from the LEO product family. The LEO system works without Wi-Fi or a computer and can be easily set up and brought online by users on their own. K. Hartwall Oy AB (Hall 9, Booth D51) is coming to LogiMAT with A-Mate<sup>®</sup>, the first all-electric free-lift pallet AMR with omnidirectional drive. The robot can transport a variety of unit load devices, from pallets and roller containers to folding cages and crates. Guided by proven SLAM navigation, the A-Mate<sup>®</sup> transports loads of up to 1 metric ton and lifts them up to 1 meter without supporting shears under the forks. This allows for close access when loading and unloading conveyors and pallet racks.

Hamburg-based industrial truck manufacturer Still GmbH (Hall 10, Booth B41) is coming to LogiMAT 2022 to present its new ACH series to a broad public for the first time in realistic use scenarios. The compact AMRs work in symbiosis with automated vertical conveyors such as reach trucks or narrow-aisle stackers and are available in three versions. The ACH 06 model handles the automated transport of lighter goods weighing up to 600 kg. The medium-sized ACH 10 can handle payloads of 1,000 kg, while the ACH 15 carries up to 1,500 kg. The two larger models feature a loading platform of 1,200 x 1,200 mm and can move at 1.2 m/s when loaded. ACH 06 features a loading platform of 900 x 900 mm a travel speed of 1.5 m/s. Also on display: Still's OPX iGo neo order picker, which can operate autonomously in aisles, detect and understand its environment, and adjust its behavior accordingly. Still is developing the device in coordination with the European research project IMOCO (Intelligent Motion Control), which aims to establish fully autonomous AGVs and AMRs that use high-precision sensors, laser scanners, cameras, and radar to detect objects such as shelves, obstacles—even signage, markings, and displays—and integrate them into their behavior.

“The innovations on offer in the AGV/AMR segment at LogiMAT 2022 underscore both the current technological developments and the prospects for future developments

through the integration of AI processes and methodologies and related fields such as sensor technology, image processing, and robotics,” concludes Exhibition Director Ruchty. “This makes a visit to LogiMAT 2022 a must for those who wish to navigate the market and develop a sustainable strategy for flexible intralogistical material flows with mobile transport devices.”

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