



Canadian systems integrator chooses Omron AMRs to help customers satisfy delivery needs safely and efficiently

RAMP, an automation systems integrator in Waterloo, Ontario, was seeking a way to offer an autonomous materials transport solution to its customers that was both efficient and safe. The company provides robust automation solutions to all manufacturing industry sectors with the goal of delivering the utmost in performance, flexibility, and cost-effectiveness.

As a systems integrator, RAMP offers solutions that can be lean in addition to fully automated and robust. The company's interest in autonomous transport grew in tandem with the

emergence of strong trends and market indicators in favor of such an investment.

Upon reviewing what the market had to offer, RAMP decided to work with Omron's autonomous mobile robot (AMR) technologies. The company conducted several tests assessing all market players and found that the Omron solution was the most stable, giving confidence that the rollout would be successful.

Omron's status as creators in the AMR space, along with its global footprint and proven track record, also influenced RAMP's choice.

Business need

A Canadian systems integrator wanted to offer its customers a safe and highly efficient automated transport solution.

Unique solution

The company chose to work with Omron mobile robots, which provide a variety of payload options in a single, coordinated fleet.

Customer benefits

The systems integrator's customers can realize an ROI of two years or less in most applications with a solution that solves a variety of delivery problems.

The solution

AMR fleets with multiple payloads

ramp



The need

When implementing a new technology, concerns about safety and efficiency often arise. Integration can take time, and the manufacturing environment might not have the requisite safety measures in place to accommodate the system.

However, the materials transport solutions present in many manufacturing environments already pose challenges with safety and efficiency. Heavy lift truck traffic, for instance, is something that poses safety risks. A mobile robot fleet can help reduce these risks, and the right AMR technology will maximize efficiency, shorten integration time, and work safely around people.



The technology

Omron's AMR product line offers end users a range of payloads, from relatively small (90 kilograms) to medium-sized (250 kilograms) and all the way up to large payloads of 1,500 kilograms. The robots are flexible and capable of safely navigating dynamic and peopled environments.

In RAMP's solution, all robots work under a single fleet manager system, with the ability to adjust the fleet according to environment changes with software updates. The fleet manager is a flexible control system that utilizes several communication protocols as well as artificial intelligence, so the total control system is integrated with the production system as well as the material management system.



The outcome

Thanks to the new solution, most conveyors can be eliminated, and customers benefit by having large payloads of finished goods transported to the shipping areas and medium-sized payloads used for intermediate prime parts. The standard AMR tops reduce engineering and integration time.

RAMP's customers are able to realize an ROI of two years or less in most applications. This could result from the number of shifts worked, the number of deployments required per vehicle, lot sizes, or any number of other improvements. Regardless of a customer's particular delivery problem, the RAMP team can now design and implement a solution that will satisfy the need safely and efficiently.

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