

Case Study: How the World's Largest VLM System Powers Growth at Mouser Electronics

With 187 Kardex Shuttles in operation, Mouser Electronics is the largest VLM user in the world - enabling faster order fulfillment with near perfect accuracy.

WEXFORD, PA, UNITED STATES, August 21, 2025 /EINPresswire.com/ -- Empowering Engineers Worldwide One Component at a Time

[Mouser Electronics](#) is a global leader in the distribution of semiconductors and electronic components, dedicated to serving the unique needs of the electronics manufacturing and design community. Mouser ensures customers receive 100% certified, genuine products that are fully traceable back to their trusted manufacturer partners. With an expansive catalog of 1.2 million SKUs sourced from 1,200 suppliers, Mouser delivers an unmatched variety of components to engineers, manufacturers, and hobbyists alike.



Mouser scaled quickly - growing to 44 Kardex Shuttles within nine months. The results have been transformative - with the Kardex Shuttles Mouser Electronics processes orders faster, optimizes existing space, and boasts better picking accuracy.

“

The Kardex Shuttles bring the goods directly to the order puller, drastically decreasing pick duration and travel time, so employees can spend more time pulling orders and less time walking.”

Matt Bell, Vice President of Outbound Operations

Headquartered in Mansfield, Texas, with its new expansion, Mouser operates from a state-of-the-art, 1.6 million-square-foot global distribution center (DC) that serves as the hub for their operations. From this two-building DC complex, Mouser efficiently fulfills orders for more than 650,000 customers across 223 countries and territories. Known for its commitment to supporting innovation, Mouser specializes in helping customers meet New Product Introduction (NPI) demands—providing everything from small quantities of resistors to a wide array of unique components. Whether it's assisting with rapid prototyping or supporting larger-scale supply chain needs, Mouser's

focus remains the same: delivering fast, accurate, and reliable service to a global customer base.

When Manual Processes No Longer Work

As Mouser Electronics continued to experience rapid growth, their manual order-pulling process began to show its limitations. With SKU inventory growing and order volumes reaching 70,000 lines per day, reliance on traditional picking methods was becoming increasingly unsustainable. "We used to pull by order," explains Matt Bell, Vice President of Outbound Operations. "Order pullers had carts and walked up and down aisles of shelving where parts were stored. But with the increase in volume, pulling by order just didn't make sense anymore."

These operational hurdles became a catalyst for change, prompting Mouser Electronics to leverage their longstanding partnership with automation integrator Precision Warehouse Design (PWD), to help design and implement a solution to streamline their processes, reduce walking time, and keep pace with growing demand without sacrificing order accuracy and service. This collaborative relationship, built on mutual respect and shared goals, has proved instrumental in designing and implementing Mouser's automation journey.

Transforming Order Fulfillment with [Kardex Shuttle](#) VLMs

To address their growing operational challenges, Mouser Electronics, supported by PWD, implemented Kardex Shuttle Vertical Lift Modules (VLMs) for higher throughput, increased storage capacity, and better picking quality. "We needed a solution fast," recalls Bell, "From the day we ordered the first Kardex Shuttles to the day they were installed was just 12 weeks."

After seeing the immediate impact, Mouser scaled quickly - growing to 44 Kardex Shuttles within nine months. The results have been transformative. With the Kardex Shuttles Mouser Electronics



"It was becoming challenging to maintain our metrics during periods of growth," says Matt Bell, Vice President of Outbound Operations. "The Kardex Shuttles have helped us maintain our level of customer service—we're shipping on time."



Mouser's current automation ecosystem is both diverse and highly integrated. Kardex Shuttles (187 of them!) manage medium-sized, faster moving SKUs, such as reels.

processes orders faster, optimizes existing space, and boasts better picking accuracy.

This success laid the foundation for Mouser's continued automation journey. Over the next four years, Mouser continued to scale its use of VLMs to keep pace with customer demand. Today, with 187 Kardex Shuttles in operation, Mouser Electronics holds the distinction of being the largest user of Vertical Lift Modules in the world—a testament to their commitment to innovation and efficiency.

Boosting Throughput and Worker Productivity

Operating on a goods-to-person principle, the Kardex Shuttles have significantly increased picking throughput and worker productivity. "The Kardex Shuttles bring the goods directly to the order puller, and the order puller has everything they need right at their workstation—labels, bagging supplies, and other tools," explains Bell. "This drastically decreases pick duration and travel time, so employees can spend more time pulling orders and less time walking."

This efficiency has enabled Mouser to scale its operations without a proportional increase in labor. "Even during years when we've grown by 20%, we haven't needed to increase staffing by nearly that much," says Bell. By leveraging automation to increase productivity and throughput, Mouser has been able to support growth without sacrificing customer satisfaction.

Expanding Capacity Without Expanding Footprint

With space at a premium and more SKUs arriving every day Mouser needed more capacity – and fast. PWD helped Mouser identify an underutilized area where Vertical Lift Modules could maximize cubic storage by leveraging vertical space. This approach allowed Mouser to expand their capacity without requiring additional square footage or major construction.

"The constraints of the facility meant we needed to get more dense vertically," explains Marc DeWall, VP of Operations at PWD. "There was simply no more room for more shelving or mezzanines. VLMs were the ideal solution - not only did they offer fast lead times and higher storage density, they provided added benefits like increased throughput and better picking accuracy."

Enhancing Accuracy While Simplifying Work

Maintaining exceptional order accuracy and on-time shipping is critical for Mouser Electronics, especially as order volumes increase. With the Kardex Shuttles, Mouser has been able to consistently meet their service level goals, achieving a 99.9% on-time shipping rate for next-day orders. "When we started the automation journey, it was becoming challenging to maintain those metrics during periods of growth," says Bell. "The Kardex Shuttles have helped us maintain our level of customer service—we're shipping stuff on time."

In addition to delivering the SKUs directly to the operator, the Kardex Shuttles are equipped with built TIC (transaction information centers). This pick-to-light solution directs order pullers to the exact location to pick from and displays the quantity to pick. "The process is still the same, but it's far more efficient and easier for the worker," Bell explains. "There's very little chance of making an error because the system is designed to be intuitive and accurate." By improving both worker conditions and picking quality, the Kardex Shuttles ensure Mouser delivers the precision their customers rely on.

Mouser's Incremental Approach to Automation Success

Mouser's philosophy centers on their customers: their automation strategy is designed to support and service customer needs, not dictate them. Bell adds, "Our warehouse operations don't dictate our growth—our customers do. Mouser gives the customer what they want, even if it means a little bit more handling and work on our end."

Christina Dube
Kardex
+1 800-639-5805
[email us here](#)

This press release can be viewed online at: <https://www.einpresswire.com/article/839862339>

EIN Presswire's priority is source transparency. We do not allow opaque clients, and our editors try to be careful about weeding out false and misleading content. As a user, if you see something we have missed, please do bring it to our attention. Your help is welcome. EIN Presswire, Everyone's Internet News Presswire™, tries to define some of the boundaries that are reasonable in today's world. Please see our Editorial Guidelines for more information.

© 1995-2025 Newsmatics Inc. All Right Reserved.