



American Discount Variety Store Leverages enVista's In-House Engineering Services to Improve Scanning Automation

enVista designs, builds and implements Cognex Vision solutions while reducing the downtime for Fortune 500 retailer



ABOUT

The American, multi-price-point chain of discount variety stores is a Fortune 500 company with 15,115 stores throughout 48 states and Canada. The company's entire network is supported by a nationwide logistics network of 24 distribution centers (DCs).

OPPORTUNITY

Before this project, the client's facilities leveraged existing scan tunnels that were using outdated and obsolete hardware. The retailer called on enVista to upgrade these tunnels with new technology that would increase efficiency, enable higher scanning speed and provide better results. enVista needed to perform the upgrade in a shortened timeframe to minimize operational downtime, thus creating more revenue and reducing the need for overtime or additional shifts and operational costs to catch up from a longer downtime window.

Morehead, KY Distribution Center

When commissioning a tunnel for the retailer's Morehead, KY DC, enVista's team noticed that the barcode symbology and code length required for the scan tunnel was repeated on a different barcode on the containers. The second barcode was being unnecessarily scanned based on the original barcode specifications and scripting. Because of this, the retailer was experiencing an excess of irrelevant data, as well as challenges with destination information. enVista and the client's team needed to address the scan tunnel's scripting errors without incurring downtime or interfering with production.

Olive Branch, MS Distribution Center

While on-site during the testing phase at the retailer's Olive Branch, MS DC, enVista's team noticed that the facility's scan tunnel was not obtaining the anticipated results. enVista's on-site electrical engineers worked with the client to troubleshoot the system and find the root cause of the scan tunnel's issue.



The team was able to determine that the encoder on the facility's sorter had failed, thus misaligning the timing of the scan tunnel results with the facility's system expectations. The facility needed to resolve the error in the sorter in order for the scanning process to operate correctly.

SOLUTION

enVista's automation team leveraged its partnership with Cognex, a leading provider of machine vision systems, software and sensors used in automated manufacturing, to provide a solution that solved the hardware and timeframe concerns at both facilities. enVista built and commissioned the scan tunnel off-site at our Willowbrook, IL facility, allowing the team to deliver the equipment to the client facilities already tested and proven, reducing the risk of incorrect or missing components post-delivery. Additionally, by the time of delivery, the scan tunnel was ready to be placed in position, which reduced the downtime window required for installation and integration into the customer's system.

enVista's on-site electrical engineers referenced a previous installation with the retailer that had similar barcode filtering requirements to resolve the scanning challenge for the Morehead DC. By leveraging the experience and expertise of the on-site electrical engineers during commissioning, enVista quickly identified the issue, determined a course of action and corrected the scripting of the scan tunnel to filter out the incorrect barcodes.

After diagnosing the encoder problem at the Olive Branch facility, enVista's engineers were able to resolve the issues at the sorter to ensure that all product was flowing through the scanning process and the results were delivered within the expected timeframe.

RESULTS

Not only did these projects improve the read rates to more than 99 percent post-project, as well as overall performance of the scan tunnels, but the process of building the tunnels off-site reduced the risk and reduced the required downtime window. It also provided the team with extra time to address any issues that arose during the installation and startup of the tunnels in the facilities. Previously, building, installing and testing on-site would take up to 36 hours (three to four days) of downtime, with only one installation shift working. enVista's process reduced the downtime window to 12 hours for this installation and reduced the overall downtime to one day for the client.

