



Helping to streamline shelving processes.

CASE STUDY

Summary

In an effort to reduce the expenses and printing costs associated with constantly updating product pricing, this large grocery retail chain commissioned Beacon EmbeddedWorks to implement a smart shelving solution. Using embedded technology to reduce development time, we were able to help create a solution that eliminates hours of employee stocking time through the use of barcodes and network connectivity that allowed for accurate price updating.

Challenge

With over 2,400 locations across the United States, the customer spent millions of dollars per year updating prices throughout their stores. Commissioning the our team of experts, the customer sought to reduce these expenses by implementing a smart shelving solution that would reduce employee time and printing costs to update product pricing.

Customer Profile

The customer, one of the world's largest grocery retailers, has a family of stores that span across multiple states and includes multi-department, discount, and convenience stores. With a 120+ year history, the client has a reputation of using the latest technology to enhance customer experience.

More Information

Why choose a Beacon EmbeddedWorks SOM?

See what differentiates our SOMs. beaconembedded.com/system-on-modules/

About Beacon EmbeddedWorks

Beacon EmbeddedWorks is a full-service provider of innovative System on Modules (SOMs). Backed by a suite of customization, security, and support services, our dependable, pre-certified, and feature-dense embedded solutions serve the most strenuous applications.



Solution

Utilizing our design and engineering services, the customer wanted to build an active display system that would integrate seamlessly with their existing pricing database. The customer's existing infrastructure requires that new pricing is sent to stores on a weekly basis; with about 20% of products needing to be updated per week. As a manual process, store associates would have to go through the store and replace tags on these items. With smart shelving technology, pricing would be sent from the customer's database via an Ethernet connection to each shelf to update the display. Aiming to pilot the solution within 9 months, the team implemented an agile development approach to build, measure, and learn from small pieces of the solution at a time. This strategy help us to meet the customer's aggressive timeline and ensure the best solution was piloted in stores.

Our team recommended the Torpedo System on Module (SOM) to accomodate time constraints by reducing development and testing time. Inside the shelf, the SOM would be responsible for receiving the updated pricing data and projecting that data on to the shelf's display. This data comes through the connection pre-distorted and passes through a series of optic lenses in order to display the price labels precisely across the 48 inch self.

An additional benefit of the smart shelving system came in the form of a competitive distinguishing factor. The display can project both images and product videos. Engineers spent hours adjusting the optics to accommodate varying angles and spacing across the length of each display. At two inches wide, the shelf and display could include a small speaker to emit audio from videos or commercials. This provided yet another benefit in allowing our customer to distinguish themselves through the ability to play video on their shelf displays.

The customer also wanted to use this connected technology to make the stocking process easier on employees. To achieve this goal, each shelf is equipped with a unique barcode. Stocking associates can scan the barcode, and the data that appears will show them where items need to be supplied.

Results

Beacon EmbeddedWorks delivered the final product on-time and the client produced over 60 test shelves. These test shelves were piloted in a store for consumer acceptance and client evaluation. Throughout the pilot, Beacon provided continuous technical support; visiting the test store location to make updates. Having been pleased with the results, the customer is continued to engage with Beacon EmeddedWorks to develop the next phase of the project which includes enhancements like motion detection and seasonal promotion graphics and pictures.

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