



H&M Bay leverages RFID solutions from Motorola and Franwell to accelerate cold storage freight transfer



“The cold storage facility and RFID tracking capabilities at our cross-docking distribution center have definitely sped up freight transfers and reduced our labor costs. Franwell and Motorola helped us enhance our main business model, LTL temperature-controlled freight, and the cold storage facilities also enable new business opportunities such as longer-term storage combined with exclusive shipping.”

— John Walker, software development manager, H&M Bay

The company: H&M Bay, Inc.

In business for more than 25 years, H&M Bay provides efficient, reliable transport of temperature-controlled less-than-truckload (LTL) freight. H&M Bay has distribution centers in California, Florida, Maryland, Massachusetts, North Carolina, and Washington. With its strategically located distribution centers and an owner/operator network of over 10,000, H&M Bay provides industry-leading delivery to companies throughout the continental U.S.

The challenge: Fast, efficient product handling and inventory tracking

In the LTL freight industry, time is always a major factor in successfully meeting customers' needs. When temperature control is required, a focus on operational efficiency is critical, and efficiency is a guiding principle at H&M Bay.

Being the premier freight mover in the LTL frozen and refrigerated commodities market, H&M Bay is always looking at ways to increase service excellence. One example is the company's custom Web-based dispatch system designed and implemented by John Walker, H&M Bay's software development manager. The web based system was designed to allow customers and remote workers access to critical operations data 24x7. The customer Extranet opens up the dispatch operations of H&M via online order entry and real time push or pull shipment tracking. Tight integration with the

Customer profile



Company
H&M Bay, Inc.

Location
Federalsburg, Maryland, U.S.

Industry
LTL temperature-controlled freight

Motorola products

- Motorola RD5000 Mobile RFID Readers
- Motorola XR-Series Fixed RFID Readers
- Motorola VC5090 Vehicle-mounted Mobile Computers
- Motorola MC9090-G RFID Handheld Readers

Applications

- RFID-enabled pallet handling and real-time inventory tracking for perishable products requiring cold storage facility

Partner

- Franwell

Benefits

- Improved speed of cold storage freight transfers, reducing cross-docking labor by 25 percent
- Increasing revenues by 0.5 percent in new temperature-related accounts
- Providing real-time tracking of product
- Alerting capability helping ensure storage in proper temperature area



Microsoft Navision Accounting application provides customer and vendor account insight tightly integrated with shipment information.

H&M Bay also planned to install cold-storage facilities at its cross-docking distribution center in Federalsburg, Maryland, as another means to expand its cold storage service offering. The goals of the project included increasing the center's cold storage capacity and accelerating freight transfers. As the project proceeded, H&M Bay decided to leverage the automated identification and locationing capabilities of RFID to facilitate product control and tracking in the cold storage rooms.

"We needed an inventory control system in the new facility: clearly it was less efficient to track product manually, and we saw that RFID could provide additional benefits including real-time location access," Walker stated.

Walker emphasized that the entire workforce uses forklifts, so the RFID system needed to be mobile. With some personnel who are part-time and many who are temporary employees, ease of use was a major focus for H&M Bay. "The RFID system needed to record putaway and pickups and location assignments without operator intervention, and we

wanted a system that the team could start using quickly and effectively without time-consuming training," Walker stated.

The solution: Franwell domain expertise and rugged Motorola RFID technology

H&M Bay chose Franwell, Inc. to help them develop and deploy an extremely user-friendly RFID system for the new cold storage facility. Known for its RFID development in supply chain environments, Franwell engineered a solution specifically for H&M Bay's new freezer and cooler areas.

The custom RFID solution includes Motorola RFID technology, Franwell PalletTrack software, and H&M Bay's proprietary dispatch system all interfacing through Web services over a wireless network. Along with the Gen2 UHF RFID tags that are used to track the pallets as they move throughout the facility, there are 1,434 stationary, metal mount RFID tags used to identify warehouse slot locations – 975 of these tags are in the freezer and 459 are in the cooler. These tags are permanently associated with the warehouse slot. As the operator puts away an RFID tagged pallet, a Motorola RD5000 mobile RFID reader detects the RFID tags and the Franwell system automatically associates that pallet of product with the warehouse location and sends a

message to the inventory system. The system also detects when product is removed from a warehouse location and updates the inventory with the proper information.

Each forklift truck is outfitted with a Motorola RD5000 Mobile RFID Reader and a Motorola VC5090 Vehicle-mounted Mobile Computer. "We chose the RD5000 because it's designed to be mounted on a forklift and built to take abuse in a rugged environment," said Terri Crawford, Franwell's chief operating officer and vice president.

Industrial-class Motorola XR440 fixed RFID readers are located at the cooler and freezer doors to capture pallet tags as product is brought in and out of the cold storage facility on forklift trucks. The system uses this information captured at the doors to determine the movement of inventory into and out of the storage areas. "The fixed readers are protected in metal boxes on the non-refrigerated side; however this is definitely not a dirt-free environment. Ruggedness was important to us, and we have not had a single problem with the Motorola fixed reader hardware," Walker said.

A key goal was to record pallet information automatically with limited operator intervention. RFID tags on pallets and rack locations and fixed readers support this approach. Franwell designed a very user-friendly interface on the forklift-mounted VC5090 that requires minimal operator training.

"The VC5090 has a nice form factor, the touch screen works really well, and the Franwell software gives you the status of the system at a glance," Walker said. "As the forklift operators move from some natural light into varied lighting situations in the warehouse, they can still see the screen. Franwell did a great job of supporting our requirements: the operator can tell what's working, what pallet he had, what the location is, and he can also pick pallets with a bar code scanner or by typing in the associated tag number."

H&M Bay teams also use a Motorola MC9090-G RFID handheld mobile computer to commission the location tags and make the initial assignment to the location. "Franwell developed a nice interface and it's easy to use—just scan the tag with the MC9090 and use the stylus to hit a drop-down box," Walker explained.

The benefits: Real-time tracking, reduced labor, increased revenue opportunities

"This is a unique RFID system, and we did have some implementation hurdles. We've made a few adjustments, and it's really working well," Walker said. "We have real-time inventory information, our LTL truck loads and reloads are faster, and we were able to reduce our cross-docking workforce by 25 percent."

The solution has also helped launch an additional business model at H&M Bay. "We have a new fulfillment capability involving palletizing and cold storage for customers on a month to month basis. We then ship their product LTL anywhere in the U.S. from our facility," Walker explained. This service was not possible with the trailer storage used in the past, and has increased revenues by 0.5 percent in new temperature-related accounts.

T.J. Adams, H&M Bay's Federalsburg warehouse manager called the RFID system "an inventory control dream" because he can quickly reference product locations. "If a dispatcher has a question about an order, I use the order number to find its exact location. I can run reports on what is in cold storage and use that to check my inventory. If I had to do this manually it would take a lot of time and stacks of files to put it together," Adams said.

The system also alerts H&M Bay personnel if a pallet is placed in the wrong storage area, which is a critical issue for temperature-sensitive products. "For example, it is important to keep fresh items cool, but we do not want them in the freezer, and the alerts can prevent that," Adams explained.

For H&M Bay, the benefits of RFID-enabled cold storage supported by Franwell consulting, engineering and design and Motorola RFID technology include:

- Reducing cross-docking labor by 25 percent by streamlining pallet handling
- Speeding freight transfers
- Increasing temperature-related customer revenues by 0.5 percent
- Providing real-time tracking of product in cooler and freezer areas
- Alerting capability helps ensure storage in proper temperature areas

About our partner

Franwell, Inc. is dedicated to the development of leading-edge products and services with a focus on supply chain solutions and RFID integration. Serving the food, pharmaceuticals, and cargo industries, Franwell develops unique RFID software applications and products as well as undertaking custom development, engineering and integration. Franwell provides comprehensive consulting and system integration services and a product line that includes a complete set of RFID solutions. For more information, visit www.franwell.com.

About Motorola

Motorola is known around the world for innovation in communications and is focused on advancing the way the world connects. From broadband communications infrastructure, enterprise mobility and public safety solutions to high-definition video and mobile devices, Motorola is leading the next wave of innovations that enable people, enterprises and governments to be more connected and more mobile. Motorola (NYSE: MOT) had sales of US \$30.1 billion in 2008. For more information, please visit www.motorola.com.



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