



American Apple Creates Highly Efficient Fresh Produce and Vegetable Packing Operations with Zebra's Mobile Technologies

Zebra's Mobile Computers and IST's Mobile App Deliver Real-Time Inventory Tracking, Order Validation, and Product Traceability

CASE STUDY

AMERICAN APPLE, LLC

CUSTOMER PROFILE

Located just seven miles inland from the shores of Lake Michigan, American Apple, LLC, grows over 180 acres of Michigan apples across 13 varieties. The excellent growing conditions provide frost protection from the lake during the spring and cooler nights in the fall. Because of this unique growing location, American Apple can pack premium-flavored apples with excellent coloring during most seasons.

INDUSTRY

Agriculture & Food Packing

SOLUTION

- Zebra WT6000 wearable computers
- Zebra VC80 vehicle-mounted computers
- Zebra MC3300DS mobile computers/scanners
- Zebra desktop printers

BENEFITS

- Automated packaging inventory tracking
- Validation and matching of finished cases of goods with customer orders
- Real-time finished goods inventory and production summaries
- Production time-mapping and trends for forecasting and planning
- Improved order picking accuracy and shipment quality
- Precision product traceability for compliance and food safety



THE CHALLENGE:

Replace Inefficient and Error-Prone Manual Inventory and Tracking Processes with an Affordable, Automated Alternative

American Apple was opening a new, fresh produce and vegetable packing facility and wanted to redesign its operations to achieve greater efficiency and order picking accuracy. Previously, the company did everything by hand and visually, from tracking packaging materials and finished goods to verifying correct picking, shipping products, and managing food safety compliance.

Doing things manually required many man hours to complete and was often inefficient and error-prone. To avoid these issues, American Apple wanted to replace its manual processes with an automated system that could track its inventory, picking, and packing with much greater efficiency and accuracy.

The system needed to be affordable, easy to use, and address problems in several key areas of the company's operations:

Physical Inventory of Packaging Materials

American Apple maintains a constant supply of packaging materials for its fresh food product inventory and shipments. Keeping a physical inventory of these materials required visual inspection that took multiple people many hours per week.

Pack Type and Pallet Matching

Packing and shipping the right products to the right customers requires that every finished case of goods match the right product pack type and the right pallet. But manual tracking and matching were inefficient and created risks that customers wouldn't get exactly what they were paying for with each pallet.

Finished Goods Inventory

Physical inventory of finished goods was tracked manually on paper and on a white board, which required multiple man hours per day as well as multiple physical counts, so salespeople could set up trucking.

Accurate Shipments and Order Fulfillment

American Apple was using paper bills of lading (BOLs) for product shipments, which added hours to picking and order fulfillment processes and led to errors due to mislabeled or misread information.

Compliance Traceability

Food safety regulations require an ability to track food products to specific fields and conduct rapid recalls. But American Apple's manual processes meant it could take hours to determine what finished product might need to be recalled in the event of an issue.



THE SOLUTION:

Zebra Mobile Technologies and a Custom Mobile App from IST

Industrial Service Technology (IST), a provider of barcoding, inventory, and mobility solutions for leading companies such as Whirlpool Corporation, Kenco Logistics, Penske and Gemstone Solid Surfacing, teamed up with Zebra Technologies to create a custom fresh produce and vegetable packing solution for American Apple.

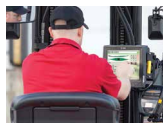
As a trusted technology company since 1982, IST has proven experience in helping companies tackle their biggest challenges with mobile automation. As a certified Zebra partner, IST also has access to Zebra's complete portfolio of mobile computing and barcoding solutions, including affordable and easy-to-use technologies that would make it easy for American Apple to transform its food packing operations.

IST worked with American Apple to understand its current processes and business needs, recommend the right Zebra hardware for automated tracking and traceability, and develop a custom mobile software application to deliver the real-time inventory, order, and production insights the company needed.

Benefits of Zebra's Mobile Technologies



Zebra's solutions include compact, lightweight wearable mobile computers that can be deployed to keep food processing workers' hands free for picking and packing.



Zebra also offers vehicle-mounted computers for on-the-go computing in trucks, forklifts, or other vehicles.



Zebra solutions are rugged devices that are ideal for outdoor use, with military-grade drop resistance and the durability to withstand bumps, spills, dust, vibration, extreme temperatures, and more.



Zebra's handheld mobile computers are multi-purpose devices that combine enterprise mobile computing and advanced barcode scanning in a single, lightweight solution.



Zebra's desktop printers and supplies provide fast, reliable printing of high-quality barcode labels that ensure proper adhesion, durability, and scannability—even when exposed to moisture, chemicals, and outdoor conditions.

Advantages of IST Application Development

- IST is not just a hardware provider, but also an expert in software development. Our certified programmers can develop custom applications or help connect off-the-shelf solutions with existing IT systems and solutions.
- Our services include complete software development, testing, deployment, training, and on-going on-site and remote support.

THE RESULTS:

Perfect Scanning and Tracking from Start to Finish

The complete solution delivered on numerous business-critical needs for American Apple:

Real-Time Packaging Supply Tracking

With the new system in place, American Apple can now add and assign custom bills of material (BOMs) for every finished case of goods, and automatically deduct packaging supplies from inventory as it palletizes products. This gives the company real-time supply control as well as real-time data on usage trends for just-in-time supply delivery.

Pallet and Product Packing Validation

The software solution from IST validates every single finished case of goods and matches all cases on a single pallet. This makes sure that each customer gets exactly what they pay for and guarantees that American Apple isn't giving away higher-margin crops at a discount.

Automated Physical Inventory

Combined with Zebra barcode scanning, IST's solution captures data and provides real-time inventory summaries and detailed inventory data for American Apple's production, shipping, and sales teams. The company can also map product times and trends for specific pack types and use them for forecasting and production planning.

Automated Picking Validation and Logistics

IST's picking program has replaced paper pick sheets and manual processes, and the program delivers the information that the shipping and office staff need to ensure they pick the oldest inventory to maintain the best quality for the consumer. The solution also validates each picking choice by the front office and sales staff, and then matches it to what gets loaded on trucks. This enables better up-front planning for logistics inside the food packing facility, letting the company leave finished product racked until just before trucks arrive.

Complete Food Safety Traceability

Thanks to Zebra's mobile tracking solutions and IST's software application, American Apple now automatically tracks which cases of products came from specific fields. This helps the company ensure food safety compliance and do it more efficiently and with less waste by targeting much smaller quantities. It will also allow the company to complete a recall in under two hours in the event that one is required.

A More Efficient and Expanding Operation

Mobile automation has helped American Apple increase its overall efficiency and output by enabling greater visibility and control over batches of products as they are coming in and being shipped out. It's also helping the company improve overall food quality while enabling rapid growth. In fact, due to efficiency and automation enabled by IST and Zebra, the company is now looking to double the size of its warehouse.

For more information on how you can maximize operational efficiency and automate processes with Zebra solutions and IST expertise, contact us now.



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