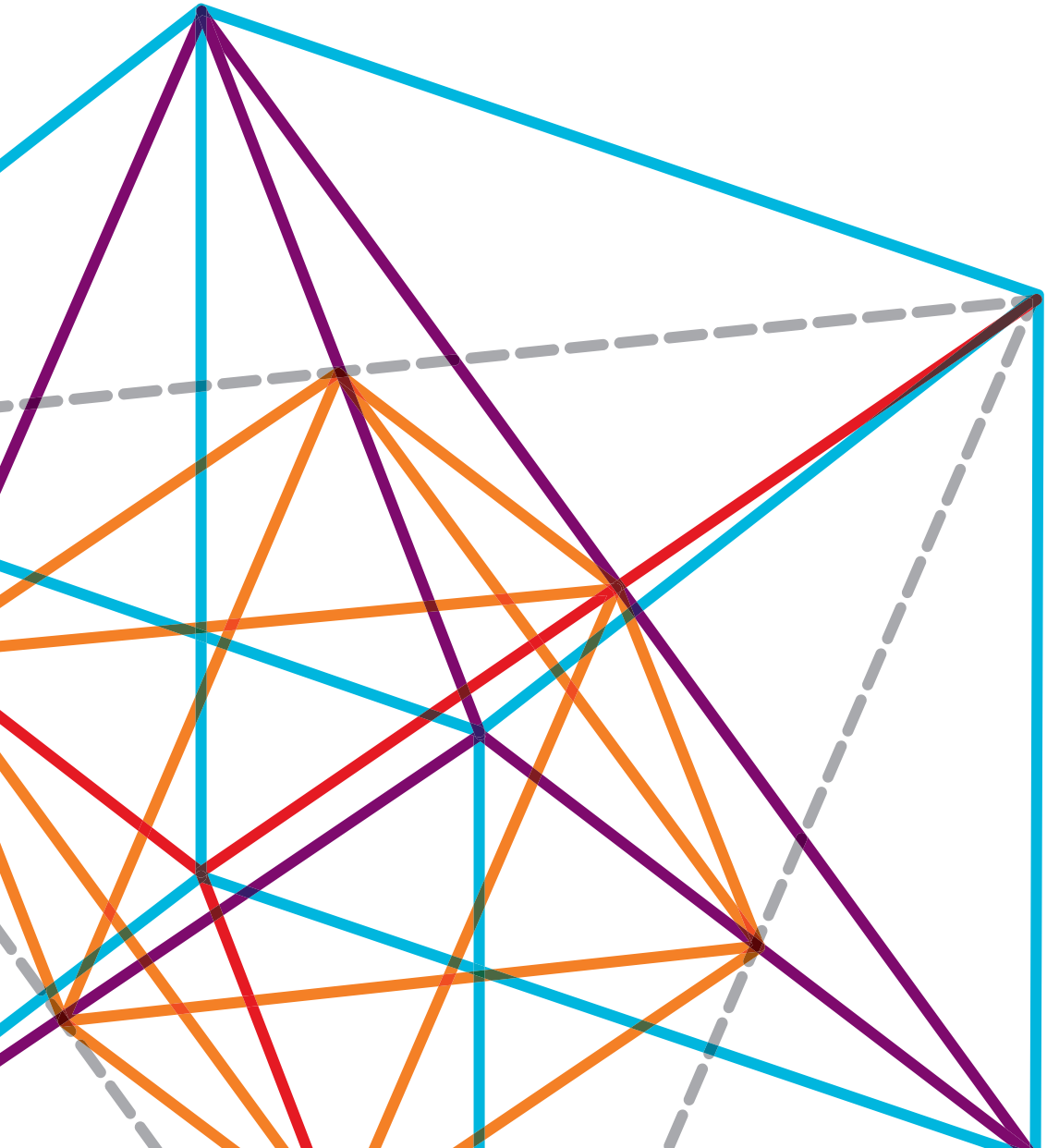
Leveraging Mobile Printers to Streamline Route Accounting and DSD Operations

ZEBRA TECHNOLOGIES

SEE MORE. DO MORE.



EXECUTIVE SUMMARY

Automating route activity provides benefits both in the field and in the office by reducing the labor and time needed to enter data and process paperwork. Mobile printing is an essential element for delivering and enhancing these benefits in route accounting and direct store delivery (DSD) operations. Supporting route activity with mobile printing lets drivers generate accurate, updated orders, invoices, delivery receipts, and other documentation to review with customers to ensure correctness and efficiency.

Mobile printing provides a series of quality improvements and efficiency benefits that department managers often overlook, but can have a significant impact on the bottom line. This white paper will:

- Describe uses for mobile printing in route accounting and DSD applications
- Provide return on investment (ROI) examples that show the financial benefits of mobile printing
- Demonstrate how mobile printing processes can improve distribution, billing, and customer service operations
- Detail how on-demand thermal printing can reduce expenses
- Provide an overview of mobile printer and wireless communications options for route accounting and DSD operations

The pages that follow show how route delivery and sales staff can take advantage of mobile printing to make more deliveries each day while improving the accuracy of each transaction.

LEANER, SMARTER LOGISTICS

THE TIME IS NOW

Route accounting and DSD businesses that service a wide range of industries are looking for ways to improve efficiencies while boosting sales and enhancing the overall customer experience. In today's cost-conscious world, customers demand timely, precise deliveries from their service providers. In a 2008 study, the Grocery Manufacturers of America (GMA) reported that a "vigilant focus on customers and a keen eye on the bottom line ultimately drive business performance."[1] A positive customer experience goes beyond a friendly, reliable face—accurate, efficient transactions differentiate a business from the competition.

In fact, the typical non-automated route accounting and DSD processes rely on manual data entry using pen and paper forms, burdening the delivery professional with error-prone transactions, thus reducing productivity and efficiency. In addition, many businesses depend on cumbersome printers that are fixed-mounted inside their delivery truck fleet. Consider the negative perception and the customer's time wasted whenever a driver must go back to the truck to generate a simple invoice.

1. "The GMA 2008 Logistics Survey," Grocery Manufacturers of America (GMA), 2008.

IMPROVED EFFICIENCY = FASTER TIME TO REVENUE

The best way for mobile workers to meet their revenue challenge is to improve their efficiency by satisfying customer needs on the first visit, which minimizes follow-up or continued interaction with billing, sales, or customer service personnel.

Applications that save time also lead to increased revenues. The GMA uncovered that many DSD drivers spent as much as 6 percent of their time in stores preparing invoices.[2] When freed up from tedious data entry, billing, and report preparation, DSD route drivers are able to spend more time with customers.

Wireless-enabled mobile computers are a powerful solution for providing route sales professionals access to enterprise applications and valuable customer data.

Armed with more time and more information, route sales reps can encourage additional customer purchases by suggesting complementary items and reviewing new products. Sales reps can also access records to quickly settle discrepancies and reduce returns.

Mobile printers can generate receipts, invoices, and other documents, which help DSD drivers and route professionals get transactions right the first time. The result is better quality, efficiency, and profitability throughout the enterprise. In fact, process automation can also increase the service area and customer base without adding personnel—a powerful value proposition indeed.

REALIZE FRONT-TO-BACK PROCESS IMPROVEMENTS

In many businesses, inefficient practices force workers to print invoices at the warehouse the night before each route using centralized printers. If customers or drivers need to make any changes to orders at the customer site, they must hand-write them on the pre-printed invoice, which often creates math errors, and raises concerns about correct pricing. Centralized, legacy printers often contain numerous moving parts, generate waste paper, and require frequent ribbon or printhead maintenance—adding significant workload to information technology (IT) departments.

Mobile printers provide the flexibility that businesses need to generate accurate, up-to-date orders, invoices, delivery receipts, and other documentation to help ensure accuracy and prevent time-consuming disputes. Producing these records on site helps increase customer confidence and loyalty, and helps the mobile workforce earn a reputation for professionalism. Companies can use these benefits to differentiate their service from rivals, which provides a sustainable competitive advantage.

Businesses can also achieve high return on investment (ROI) by using the same mobile printers in their distribution centers to create pick lists, manifests, and labels. The time saved throughout the day accumulates, allowing drivers to make more deliveries per shift. In addition, drivers can spend more time on merchandising and sales, freeing up resources to focus on positive business initiatives and customer loyalty programs.

2. "Driving DSD Supply Chain Efficiencies and Profitability," GMA, 2006.

Faster Pre-delivery Preparation

Mobile computers and printers start providing benefits even before drivers begin their route. Drivers arriving at the distribution center can automatically receive their daily route assignments on their mobile computers via a wireless network connection to the host computer system. Wireless networking eliminates the need to wait in line to check in with a dispatcher, and helps drivers begin their routes earlier. At the end of the shift, departments can use the network to receive daily records and orders from returning drivers.

Newsways Distributors, a magazine and periodical distributor in Los Angeles, switched from paper forms to mobile computers and Zebra® mobile printers to record daily sales and returns, and issue receipts on all routes. At the end of the day, drivers return to the Newsways facility and dock their computers into cradles that transfer all the transaction information into the host computer system. Newsways reported an almost immediate ROI due to the tremendous labor savings from data entry, counting returns, and correcting errors. The information quality also improved because data entry errors disappeared and data became available much sooner.

Salespeople for Pozuelo, a leading Central American producer of crackers and cookies, record customer orders on handheld computers and send them nightly via modem to the company's order management system. The system software then determines truck loading and calculates the optimal route for the company's sales drivers. The drivers use mobile computers to record deliveries and track inventory on the trucks. They issue receipts, invoices, and other documentation with Zebra mobile printers. The system has saved significant time in preparing and processing paperwork, improved inventory accuracy, sped up invoicing, and given Pozuelo and its sales staff tighter control over materials and records.

Simplify Receipt and Order Management

Errors introduced during manual receipt entries add up, driving up DSD operating costs. Consider the following case. The invoice discrepancy rate for small-format retailers averages 10.5 percent,[3] while the rate averages 15.4 percent at supermarkets and other large-format retailers. Small format retailers include convenience stores, gas stations, etc.

A 10.5 percent discrepancy rate would generate 105 inquiries to customer service representatives (CSRs) or account managers per 1,000 orders filled. If calls take an average of 12 minutes to resolve—a conservative assumption, considering the time required for order lookup, investigation, credit authorization, and computer entry—the company would spend 21 hours per month resolving errors. Using the average shipment error rate, companies would need a full-time customer service representative dedicated to error resolution for every 7,600 orders shipped per month.

Furthermore, assuming a CSR earns $10 per hour, the direct labor cost for error resolution is $210 per month per 1,000 orders. If the company earns a healthy 10 percent margin, it must win $2,100 in new business to offset the cost of errors; at 5 percent margin the figure jumps to $4,200. This calculation does not include labor costs associated with returns processing, or savings from preventing rush shipments and additional deliveries to fulfill orders and lost-revenue from unreported over-shipments.

Eliminating DSD and other delivery errors raises customer satisfaction and helps make customers more profitable. The GMA calculated that based on its measured error rates and average DSD volumes, a 250-store small-format chain could have to reconcile 27,000 invoices per year, and a 250-store large-format chain would have 450,000.

With mobile printers, route sales representatives can print accurate delivery receipts and orders and review them with their customers, on the spot. Reviewing receipts during the delivery process provides route sales representatives an opportunity to resolve discrepancies immediately, leading to a timely, cost-effective resolution. The result is a highly efficient, streamlined DSD operation that not only saves money, but also shows a level of professionalism that differentiates the business from the competition.

3. 2006 GMA Report.

Shorten the Billing Cycle With On-site Invoicing

Many drivers in DSD operations still turn in piles of paperwork to billing clerks at the end of each shift. This creates a chance for errors to enter the system as clerks rerecord the billing information. More significantly, it also adds costly delays to the billing cycle. Consider a driver who finishes his or her Monday shift and turns the daily invoices into the billing department. In the best case, the clerks enter the information into the billing system and mail invoices the next day. The customer receives them in the mail two or three days later, a total of three to four days after the visit.

Printing invoices at the time of delivery helps provide a cash-cycle advantage because the route driver can accept payment on delivery. Many companies routinely wait 30 days or more to pay invoices. Delivering the invoice or requiring payment on delivery eliminates the billing lag time and invoice processing delays, significantly improving the business cash cycle by at least a month.

Grupo Elektra, the largest home electronics, furniture, and computer retailer in Mexico, saves hundreds of hours in administrative time each day by issuing mobile printers and computers to its collection force. Elektra has about 3,000 collections professionals who each visit between 30 and 40 customers each day to take monthly payments. Previously, workers recorded all transactions by hand onto paper forms. Each night, approximately 800 regional supervisors entered all the information into the computer system, a process that took hours and was prone to error.

Elektra automated these operations by giving collection professionals handheld computers and Bluetooth®-enabled Zebra mobile printers to record all transactions and generate receipts. At the end of the shift, a simple command uploads the information from the mobile computer to the host system in minutes, instead of hours. The system enables workers to collect and access more customer information, resulting in improved collections and more customer visits per day. Ultimately, such solutions enable organizations to service more customers without adding route staff, which produces significant labor cost savings.

Wisconsin-based Jones Dairy Farm recently implemented mobility for DSD applications with elements of route accounting for enhanced efficiency and customer service. Previously, Jones Dairy delivery staff wasted time going back and forth to their trucks to gather and print data for transactions, relying on manual entry using pen and paper forms. With mobile printers and computers, Jones' drivers now have a fully mobile application that is versatile and user-friendly. Today, the DSD staff produces highly accurate and automated invoices for their customers, better product rotation, and precise tracking and tracing of lot codes.

An emerging application is the use of wide-area wireless data networks for credit card payment authorization. Route agents swipe the credit card through a reader integrated into a Zebra printer, which transfers the data to a mobile computer or cell phone through either a cable or short-range wireless interface. The cellular network or other wide-area wireless data service transfers the credit authorization request, securely and efficiently in seconds. This eliminates the need for batch processing at the end of the shift. Zebra mobile printers offer WPA and WPA2 security, which meet the Payment Card Industry (PCI) Data Security Standard for payment card processing over wireless LANs.

On-site payment processing is also beneficial to companies because it reduces the resources needed to support route sales operations. Billing departments have fewer invoices to process and customer service has fewer calls to resolve because customers can review and approve invoices with their route sales representatives.

Assuming billing inquiries take an average of 15 minutes to resolve, companies can save $640 in invoice processing expenses for every 1,000 orders billed, a breakdown of $250 in reduced customer service labor and $440 in postage. At 10 percent margin, the savings is equivalent to $6,400 in new sales, or $12,800 at 5 percent margin. The entire enterprise wins with mobile printing—billing departments have fewer invoices to process, while customer service has fewer calls to resolve.

UNDERSTANDING MOBILE PRINTER TECHNOLOGY

Printers used in route accounting and DSD applications are typically thermal models wearable on a belt, utility strap, integrated into a single carrying device along with the handheld computer, or secured in the vehicle. Other printers include vehicle-mounted inkjet or impact models. Thermal printers use heat to transfer the print image and have displaced impact as the dominant print technology used in DSD. This shift occurred due to thermal's outstanding reliability, ease of use, and superior total cost of ownership (TCO). Thermal printer solutions target a variety of mobile operations, whether users prefer vehicle-mounted or portable units, cable or wireless connectivity, and other features.

Printers are available in a variety of designs to meet the needs and preferences of each mobile workforce. Mobile printers must be comfortable and easy to use or they will not deliver productivity benefits. While overall weight is important, balance, grip, and ease of carrying and operation remain vital. Several options exist for mobile printer portability such as belt clips, shoulder straps, and carrying cases of varying material from waterproof to lightweight nylon.

Save Money on Paper Supplies

On-demand mobile printing improves the professional look of receipts, service records and other paperwork given to customers, while also reducing form costs. Route accounting customers usually accept 4-inch-wide or smaller receipts in addition to full-page forms. The smaller receipts are easier to store and ultimately save the issuer money because less paper is used. Some companies use mobile printers to print variable information like invoice amounts or delivery contents on labels applied to forms. This satisfies customer desires to keep using familiar forms and saves time by eliminating handwriting and tedious manual recording.

Mobile printers can print text, logos, graphics, and barcodes on durable receipts, and labels of different sizes and thicknesses, and some have integrated magnetic stripe readers for payment card processing. Most models accept a variety of form, label, tag, ticket, and other media for producing durable receipts, invoices, return labels, inspection labels, security marks, and other labels and documents. Top-coated media resists ultraviolet light and remains readable for years, eliminating receipts that fade. Many types of liner-less media also exist, which eliminates the waste and disposal problems associated with peel-away liners used with adhesive labels.

Wireless Connectivity Enables Seamless Mobility

Mobile printers use two forms of wireless connectivity. Short-range wireless replaces the cable connected between a printer and mobile computer. Printers may also have a direct connection to enterprise wireless networks. Route drivers can access wireless networks when they are in their own distribution centers or other company facilities to receive their daily routes and instructions, download customer lists and inventory records, and transfer transaction data at the end of the shift.

Using wireless for cable replacement improves ergonomics and productivity. Wireless systems are more reliable because there is no chance for printer cables and pin connectors to break. This is a tremendous advantage in route accounting, where users are often miles away from their headquarters and do not have immediate access to replacement parts. Bluetooth® technology is very popular and effective for cable replacement because it provides excellent range, speed, and connectivity.

When integrated with a mobile, handheld computer and a wireless network, the benefits of mobile printing multiply. At the start of the work shift, the distribution center can print static inventory sheets for each product pallet. After loading the pallets, drivers can use the handheld computer to scan the inventory tag printed with the mobile printer, ensuring that the inventory on the truck and the system match. This powerful capability can cut work shift inventory time in half, allowing distribution centers to build orders faster.

Longer Battery Life—Higher Shift Availability

How the printer manages its power supply impacts overall battery life and application effectiveness. Battery life varies widely based upon printer usage. Print volume, label size, the amount of wireless activity, and other factors all affect how long batteries last before recharge or replacement. It is critically important in route accounting applications to have enough battery life to power computers and printers for the entire shift, or workers cannot complete their daily tasks. Adapters are available so battery chargers can plug into vehicle cigarette lighters.

Users must test their applications to ensure that the batteries they use consistently perform as needed and will not contribute hidden expenses to the total cost of ownership. For example, nickel metal-hydride (NiMH) batteries have a higher initial cost than nickel cadmium (NiCAD) products, but have less performance degradation over time, are more efficient at holding their charge, and have a longer life span. Lithium-ion (Li-Ion) cells offer the highest power-to-volume and power-to-weight ratio of the three. For example, in a typical printer application, a lithium-ion battery pack producing 7.2 volts has 30 percent more power than a nickel metal-hydride pack, with half the volume and half the weight.

ZEBRA MOBILE PRINTERS

DEPENDABLE AND FLEXIBLE

Established with a proven record of success, Zebra offers a feature-rich selection of mobile printing solutions for route accounting and DSD tasks. Designed to withstand the harsh requirements of portable operations, Zebra printers deliver unmatched integration with a wide range of wireless networks, handheld devices, and data/management systems.

Rugged and Reliable

Centralized, fixed-location printers rarely encounter fluctuating temperatures, humidity, and vibration. However, mobile printers must endure the daily stress of varying environmental conditions, shock, and vibration. Workers on the move need a mobile printing solution that functions reliably wherever, whenever.

Zebra delivers mobile printers that meet stringent IP54 dust and water resistance ratings. Zebra mobile printers can withstand the harsh demands of DSD and field service printing applications, including invoices, delivery receipts, service estimates, sales orders, and inventory management. Superior battery life, rugged construction, and flexible wireless technology serve as the cornerstone of Zebra mobile printer design.

With mobile printers, gone are the days when a driver wrote down the wrong delivery information. Today, drivers can depend on Zebra mobile printers to save them time with accurate receipts and invoices that do not smudge. After implementing the Zebra solution, McMahon Cartage, a Chicago-area gasoline distributor, noticed a significant improvement in its billing process due to clear, error-free printing. In addition, route drivers complete their paperwork 80 percent faster—a huge plus for drivers, who can now spend more time concentrating on driving and servicing their customers.

When using a combined mobile printer and handheld wireless solution, drivers can complete delivery route transactions quickly and conveniently. Mobile workers can issue invoices, print receipts, collect signatures, enter credits for returns, and accept payments on the spot, then communicate these transactions to the host system—expediting customer visits and improving service.

Open Integration Frees Up IT Resources

By partnering with Zebra, businesses gain access to a team of technical experts that specialize in integration excellence. IT departments can achieve easy mobile printer integration with a wide range of applications and enterprise resource planning (ERP) systems. Seamless integration helps free up IT resources to focus on business initiatives and process improvements that can generate revenue.

Designed with common language support in mind, Zebra mobile printers enable users to print using the same commands as their legacy Zebra tabletop or desktop printers. While at the customer location, drivers, can quickly print complex labels, symbologies, and customized graphics that help differentiate their corporate identity.

Mobile printers from Zebra support a wide range of wireless options through modular hardware, enabling anywhere, anytime communications. Businesses can choose the wireless connectivity that best suits their needs including 802.11b/g, Bluetooth 2.0, and dual radio support within the same printer. Because Zebra mobile printers support multiple wireless security and encryption standards, IT departments can feel confident that their networks and critical data remain secure.

Printer maintenance tasks can often burn up significant IT resources, hours better spent on proactive activities. With a high durability factor, Zebra mobile printers have repeatedly proven to lower the number of maintenance issues when compared to other solutions. As a result, IT departments can realize reduced maintenance workloads and operating expenses—while future proofing their mobile printing infrastructure.

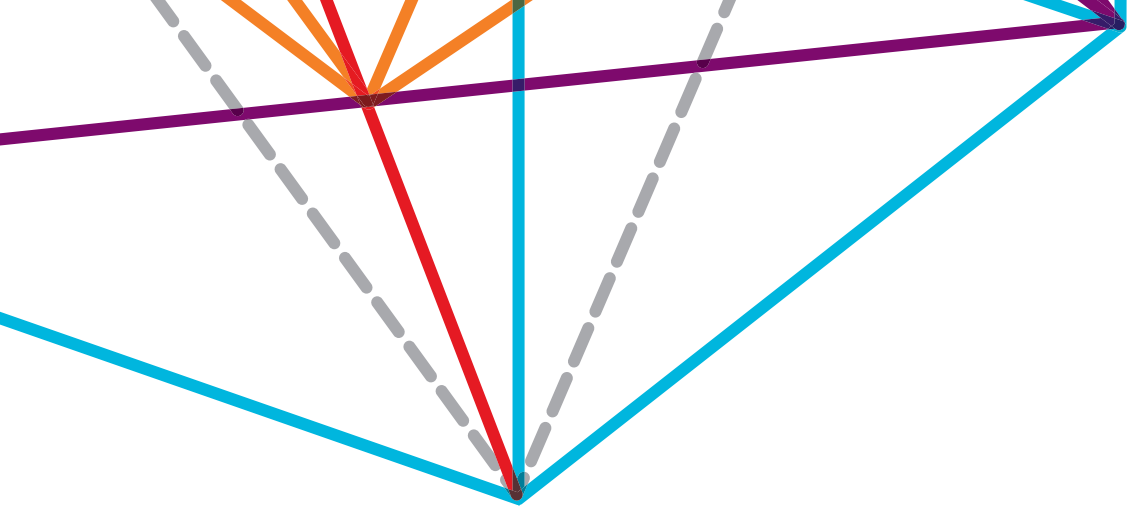
ZEBRA MOBILE PRINTERS DELIVER

When route accounting and DSD departments equip their teams with mobile printers, the entire enterprise acquires a powerful solution that helps enable cost-effective operations. Delivery customers benefit from fast, accurate delivery transactions. Delivery providers benefit from the efficiencies of automation, lowered maintenance costs, and the opportunity for delivery professionals to focus on improving customer loyalty and sales. Zebra mobile printing solutions are ready today to help streamline route accounting and DSD operations—from the source to the destination.

A global leader respected for innovation and reliability, Zebra offers technologies that illuminate organizations' operational events involving their assets, people and transactions, allowing them to see opportunities to create new value. We call it the Visible Value Chain.

Zebra's extensive portfolio of marking and printing technologies, including barcode, RFID, GPS and sensoring, turns the physical into the digital to give operational events a virtual voice. This enables organizations to know in real-time the location, condition, timing and accuracy of the events occurring throughout their value chain. Once the events are seen, organizations can create new value from what is already there.

For more information about Zebra's solutions, visit www.zebra.com.



Corporate Headquarters
+1 800 423 0442
inquiry4@zebra.com

Asia-Pacific Headquarters
+65 6858 0722
apacchannelmarketing@zebra.com

EMEA Headquarters
+44 (0)1628 556000
mseurope@zebra.com

Latin America Headquarters
+1 847 955 2283
inquiry4@zebra.com

Other Locations / USA: California, Georgia, Illinois, Rhode Island, Texas, Wisconsin **Europe:** France, Germany, Italy, the Netherlands, Poland, Spain, Sweden, Turkey, United Kingdom **Asia Pacific:** Australia, China, Hong Kong, India, Indonesia, Japan, Malaysia, Philippines, Singapore, South Korea, Taiwan, Thailand, Vietnam **Latin America:** Argentina, Brazil, Colombia, Florida (LA Headquarters in USA), Mexico **Africa/Middle East:** Dubai, South Africa

©2013 ZIH Corp. Zebra and the Zebra head graphic are registered trademarks of ZIH Corp. All rights reserved. Bluetooth is a registered trademark of Bluetooth SIG, Inc. All other trademarks are the property of their respective owners.

P1026332 Rev. 2 (01/13