REACH THE NEXT LEVEL OF SUPPLY CHAIN PRODUCTIVITY

MC9190-Z HANDHELD RFID READER FOR INDUSTRIAL APPLICATIONS

To control your financial success, you need to control your goods. In today's increasingly complex supply chains, each time one of your employees, partners or distributors touches your products and supplies, your profitability can be at risk. But every error you can prevent, every minute you can save and every inventory recount you can eliminate can mean significantly improved productivity and cost reduction across your entire operation.

The key to streamlining processes and reducing risk, of course, is visibility. You need real-time details about what you have and where it is, so you can make smart decisions about getting it where needs to be. And the solution you choose needs to work the way you do — reliably and efficiently, in tough environments, in constant motion, indoors and out.

KEY BENEFITS
- Reliable, long-range RFID performance for more accurate inventory counts
- Better management on the floor, in the back room and in distribution channels, reducing out-of-stock and excess inventory carrying costs
- Ergonomic design for longer use time with less fatigue
- Ease of use for greater productivity in cycle-counting and data-capture tasks
- Greater reliability at a lower total cost of ownership

THE CHALLENGE
Manage increasingly complex supply chains for maximum effectiveness

It's happening everywhere, no matter what your industry. The marketplace where you find your customers, and your competitors find you, is becoming larger and more global. The business groups you depend on — suppliers, OEMs, distributors, transporters — are becoming more numerous, more specialized and more interconnected. You have never been so dependent on your supply chain to meet materials demand, to fuel production, to add value and to satisfy customers. And your supply chain has never been so complex.

Enterprises have always sought ways to better track and inventory their distributed resources, from raw materials to finished goods. Paper forms and manual procedures worked for many, at least until the sheer volume of goods and materials began to collide with just-in-time supply schemes and ever-shorter distribution cycles.

Bar codes and centralized inventory databases were the next step in the evolution of supply chain management, and the use of technology proved a significant improvement over purely manual processes.

Bar code readers use a line of sight to capture data, a fast, efficient solution for pallet and parcel tracking. But in rough-and-tumble environments like warehouses or outdoor environments like oil and gas, paper bar codes can easily be damaged to the point of unreadability. So the number of suitable applications in these tough environments is limited; most who could rely on bar code systems are likely already using them to maximum effectiveness.

Then came RFID. Over the past decade, a wide range of enterprises have adopted these radio-based systems to enable new workflow process improvements, dropping the associated savings directly to the bottom line. The ability of RFID to capture data without a line of sight greatly reduces manual handling; for example, tags inside a box can be read without opening and unpacking the box. But first generation RFID solutions offered only one type of RFID reader — fixed. Replacing point-and-read, labor-intensive operations with fixed RFID readers delivered tremendous levels of automation in inventory management, but deployment options were still limited.
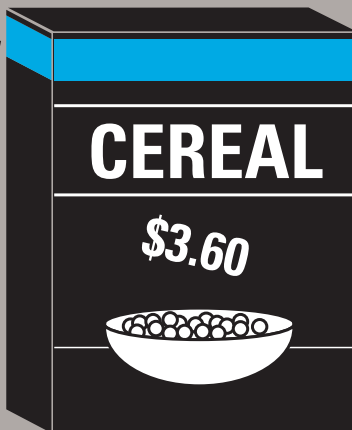
To reach the next level of supply chain performance, you need greater flexibility — more options, suited to more working environments, with higher performance standards and easier integration with your existing systems and processes.

10%
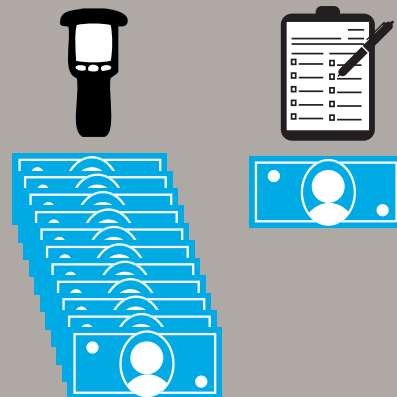of the retail cost of a box of cereal is spent on supply chain logistics

$.05
NET RETAIL PROFIT

$.37
SUPPLY CHAIN LOGISTICS COSTS

CEREAL
$3.60

12X
greater profit is earned by companies with sophisticated supply chain methods than those with unsophisticated methods

Source: Council of Supply Chain Management Professionals, cscmp.org Fast Facts,:2012

INDUSTRIES, APPLICATIONS AND USERS FOR RFID

MANUFACTURING	Inventory management Supply-line replenishment	Assembly line personnel Shipping/receiving personnel
RETAIL	Warehouse management Price audits/changes Store receiving Inventory management	Sales associates Receiving dock personnel Stock room personnel Supervisors
WHOLESALE	Warehouse management Receiving/putaway/shipping	Warehouse personnel
DISTRIBUTION	Returns processing	Loading dock personnel
THIRD-PARTY LOGISTICS	Warehouse management	Warehouse personnel
PHARMACEUTICAL	Enhanced traceability	Compliance personnel
AVIATION	Parts tracking Maintenance and repair operations Baggage	Maintenance personnel Baggage handling personnel
DEFENSE	Logistics/supply	Service personnel

THE SOLUTION

High performance RFID for industrial environments
RFID users have already realized significant competitive advantage by maintaining up-to-the-second inventory, reducing safety stock from more accurate demand models, and improving data integrity and accuracy from the time inventory is received to the time it leaves the shipping dock. The next step is to combine high performance and longer read ranges with the ability to take RFID into challenging environments.

That is the role of the industrial-class handheld RFID reader. The mobility of handheld RFID readers complements fixed reader applications, providing you with more options in managing your supply chain complexities. Handhelds let you quickly and easily collect RFID data in tough operational environments where no suitable chokepoints for fixed portals exist, such as outdoor storeyards and remote sites.

Flexibility at the edge of enterprise
By giving you the flexibility to take RFID out to the very edge of your enterprise processes, today's handheld RFID readers open up a new world of possibilities for process improvement and management. Reliable performance in challenging environments helps speed your return on investment while you more fully leverage the near 100% accuracy and larger data capacity of RFID technology to increase its benefits to your organization.

Mobile processing of exceptions also provides additional support to your audit and verification systems. Remote locations can now be fully integrated with your RFID inventory and asset tracking systems. Reliable, long-range RFID performance allows more frequent and more accurate inventory-count operation to better manage on-the-floor, back-room and distribution inventory, so you can reduce out-of-stock and excess inventory carrying costs.

Combine portability with the ability to read bar code and RFID data in a single device, and you get even more flexibility. Whether you are building on an existing bar code system, expanding to cover outlying facilities or creating a new enterprisewide RFID system, you can start up quickly, reducing deployment risks.

POINT RFID READING WHERE AND WHEN YOU NEED IT

Handheld RFID readers like the Motorola MC9190-Z offer an easy-to-carry wireless form factor that allows workers to take the reader to the RFID tag – unlike fixed readers, which require work flows that bring the items to the reader. With a handheld RFID reader, users have complete control over when, where and how the reader will be used. Since these mobile computers can also offer flexibility to capture additional types of data, handheld devices like the MC9190-Z can be used in a wide variety of areas throughout the business, maximizing cost-efficiencies and delivering a faster return on investment.

Deployment requirements/considerations

There are no major deployment requirements for handheld RFID readers. The devices are ready to use, right out of the box, with integrated batteries, integrated antennas, integrated wireless LAN connectivity and a display and keypad for application interface. The need for power and cabling is eliminated, enabling rapid implementation with minimal investment, making handheld RFID readers ideal for initial RFID deployments and pilots.

Operator intervention

Handheld RFID readers like the MC9190-Z are completely controlled by the user – the device reads only when the trigger is pulled, with the read zone tailored to the specific environment and tag type.

Environmental considerations

While there are no real deployment considerations associated with handheld RFID readers, due to the mobile nature of these devices, there are multiple environmental considerations that must be taken into account to control maintenance costs and ensure a low total cost of ownership.

For example, if your handheld RFID readers will be utilized in the warehouse and at the dock doors, choose a rugged device like the MC9190-Z, designed to handle the toughest environmental conditions – from dust, moisture and grease as well as extreme temperatures. For less demanding environments, such as the retail floor, you can select a more cost-effective device designed for use in more moderate temperatures with less exposure to the elements.

U.S. Air Force photo/Senior Airman Jonathan Steffen

HANDHELD RFID READERS GIVE YOU FLEXIBILITY

IN THE SUPPLY CHAIN

Warehouse personnel in a distribution center can instantly reconcile all incoming shipments against the original order, regardless of the types of material it contains. Once order accuracy has been verified, proper processing instructions can be delivered: whether a shipment should be stored, and if so, on which shelf and the fastest route through the warehouse to that shelf; or cross-docked for immediate shipment to the next stop in the supply chain.

IN INVENTORY MANAGEMENT

Using a rugged, industrial-class RFID handheld reader, your personnel can scan bar codes to take inventory of hazardous and combustible materials, providing the constant real-time visibility that improves asset availability, security and safety.

IN INSPECTIONS AND MAINTENANCE

Technicians responsible for inspecting and maintaining heavy equipment, remote facilities, or even weaponry and military equipment can access a complete maintenance history, maintenance due and detailed information required to complete the job.

A critical factor for handheld readers that will be used in tough industrial environments is the drop specification. Unlike a fixed reader, a handheld reader is very likely to be dropped one or more times over its lifetime. Be sure that the handheld device you choose has been tested thoroughly to provide reliable performance.

Multiple function/multiple use device

Since handheld RFID readers like the MC9190-Z are actually mobile computers, they can offer a wide range of features and functions. In addition to reading RFID tags, the MC9190-Z offers the ability to read additional types of data, such as 1D, 2D and DPM bar codes as well capture images. Ideal when multiple types of product identification and tracking systems are in place, handheld readers enable the deployment of a single device, reducing the total cost of ownership for data capture solutions — there are fewer devices to purchase and support. And robust battery support ensures adequate power for a full shift, eliminating the need for employees to spend time locating and changing batteries, and reducing the quantities of on-hand batteries required to support the mobile workforce.

THE MOTOROLA SOLUTION –
THE MC9190-Z HANDHELD RFID READER

LONG RANGE, HIGH PERFORMANCE SAVES TIME AND MONEY

To put more product into the hands of your customers — and put more profit into your pockets — you need to know what you have and where to find it. On the dock or in the storeroom, the Motorola MC9190-Z Handheld RFID Reader is designed to make that job faster and easier.

The MC9190-Z is Motorola's new best-in-class standard for handheld RFID readers. With its high RF sensitivity that provides for greater accuracy, higher throughput and longer reads, the MC9190-Z reaches further to bring reliable data about your products right to your fingertips. Inventory counts can be accomplished more often, more quickly and accurately and, unlike scanning with bar codes, without line of sight. Then, armed with more complete information, you can better locate and track assets and inventory, and manage your stock levels to avoid running out of product or carrying expensive excess inventory.

RUGGED AND READY TO WORK

The MC9190-Z is sealed to meet IP64 standards so you can use it even in dust or rain. A tough, non-glare LCD screen allows for optimal reading in bright sunlight and worry-free glass protection in rugged use. The MC9190-Z's specially designed corner bumpers enable it to handle repeated drops to a concrete floor with a 6ft./1.8m drop spec. We built it to work for a living, even in your toughest environment.

Multi-modal data capture

Integrated RFID and barcode in one rugged device gives lower total cost of ownership.

Greater efficiency

Reliable, long-range RFID performance allows more frequent and more accurate inventory-count operation to better manage on-the-floor, backroom and distribution inventory — reduce out-of-stock and excess inventory carrying costs.

Maximum rugged design

The MC9190-Z can withstand a 6 ft./1.8 m drop to concrete, 2000 one-meter tumbles and has an IP64 sealing to help ensure reliable operation in spite of everyday drops, bumps and exposure to dust and liquids.

EASY-TO-USE APPLICATION PROGRAMMING INTERFACES (APIS)

Quickly develop easy-to-use applications that reduce training time and cost for your customers: deployment time is reduced, protecting your margins and profitability.

GOVERNMENT GRADE ENCRYPTED WIRELESS SECURITY

Motorola MAX Secure Wired-line grade security keeps unauthorized users from devices, data and network without impacting wireless performance: native FIPS 140-2 Level 1 certification; support for all the latest encryption and authentication protocols; compatibility with Motorola's Mobile Security Suite for device-level protection and compatibility with Motorola's Mobile Virtual Private Networks (MVPNs)

MAKE A SMART CHOICE

The Motorola MC9190-Z joins the broadest, most comprehensive portfolio of business and industrial fixed, mobile, handheld and hands-free RFID readers available today. Simply put, Motorola RFID devices are being used in more applications, more industries and more countries. To you, that means extensive experience you can tap to solve your unique challenges, higher confidence that we can deliver what you expect and greater value built in every device we make. It all adds up to make the MC9190-Z an easy choice.

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