



PORTAL
TRACK

The Power of **RFID Software**

Asset Tracking

Asset Identification

Inventory Count

Inventory Management

The Power of RFID for Asset Identification



In our current business environment, managing assets efficiently is important for staying competitive. RFID (Radio Frequency Identification) technology revolutionizes this process by streamlining how businesses identify, track, count, and manage their inventory. With MSM Solutions' PortalTrack RFID software, companies gain a sophisticated tool specifically configured to meet their unique industry needs, whether in healthcare, manufacturing, automotive, or distribution. Let's explore how RFID's versatile identification capabilities can transform your asset management strategy.

Why RFID for Asset Identification?

RFID technology utilizes radio frequency signals to automatically identify and track RFID tags attached to objects. These RFID tags, which store data electronically, can be read from a distance and without direct line of sight, offering a significant advantage over traditional barcode or manual systems. This capability is crucial for modern businesses that require a reliable and efficient way to manage vast numbers of assets across the manufacturing floor, distribution warehouse, and within a hospital.

The Role of RFID in Asset Identification

The first step in effective asset management is understanding exactly what items you have—this is where RFID excels. Each item can be equipped with a unique RFID tag that carries all necessary information about the asset. This identification process is crucial as every item might require a different type of RFID tag depending on its nature and the environment it's in.

How RFID Software Enhances Asset Identification

Automated Data Collection: PortalTrack RFID software automates the data collection process, significantly reducing human error. It ensures every asset, no matter how small or large, is accounted for with its unique RFID tag.

Adaptive RFID Tagging Solutions: Recognizing that every item is different, PortalTrack supports a variety of RFID tags designed to meet the specific needs of different industries and asset types. Whether it's high-heat environments in manufacturing or sterile conditions in healthcare, the right RFID tag is used for each scenario.

Filling Data Gaps: PortalTrack excels in providing a complete inventory overview and facility mapping, capturing data on assets that might otherwise be overlooked. This level of detail helps businesses fill crucial gaps in their asset management. It adapts RFID to your operation, providing real-time data you may not know you're missing and interacting flawlessly with existing ERP and WMS systems.

Beyond Identification: The Full Spectrum of RFID Capabilities

While identification is the cornerstone, RFID's capabilities extend to tracking, counting, and managing assets—crucial components for comprehensive asset and inventory management. By starting with precise identification—"What is it?"—businesses can then effectively track location ("Where is it?"), manage quantities ("How many are there?"), and make informed management decisions ("What do I do with it?"). This holistic view not only boosts operational efficiency but also drives profitability by minimizing losses and maximizing asset utilization. Stay tuned for Part Two in our RFID software series, *Where is it? The Power of RFID for Asset Tracking*

Conclusion

RFID technology offers an innovative and customizable solution for asset identification that meets the diverse needs of various industries. By harnessing RFID's full potential, businesses can not only understand their assets better but also enhance their overall operational efficiency and competitiveness. Embrace RFID technology with MSM Solutions, and step into a future where every asset is just a scan away from revealing its comprehensive digital identity.

The Power of **RFID** for Asset Tracking

Asset tracking is critical for maintaining operational efficiency and accuracy. Traditional methods of asset tracking on paper or spreadsheets are becoming increasingly obsolete. Enter RFID (Radio Frequency Identification) technology – a powerful solution that revolutionizes asset tracking by providing real-time data, enhancing accuracy, and reducing manual labor. In Part Two of our Series on RFID Software, we will explore the fundamentals of RFID asset tracking, its advantages, applications, and future trends and introduce how MSM Solutions' PortalTrack RFID software helps businesses Identify, Track, Count, and Manage their assets.

1. What is RFID Asset Tracking?

RFID (Radio Frequency Identification) asset tracking uses electromagnetic fields to identify and track RFID tags attached to assets automatically. Traditional asset tracking methods often rely on counting, barcodes, and manual data entry, which can be time-consuming and error-prone. In contrast, RFID asset tracking provides automated data capture without the need for a direct line of sight, which increases accuracy and efficiency.



2. How Does RFID Asset Tracking Work?

RFID technology consists of RFID tags, readers, antennas, and software. The RFID tags, attached to assets, transmit data to RFID readers through antennas. The readers then communicate this data to software systems for processing and real-time tracking.

The RFID Asset process is:

- Encode an RFID label or RFID tag
- Apply the RFID tag to the asset
- Detect the RFID tag's signal with antennas
- Capture the data with RFID readers
- Process the data through software to provide real-time tracking and updates

3. RFID Asset Tracking Software

When selecting RFID asset tracking software, look for features such as real-time tracking capabilities, integration with existing systems (Oracle, SAP, ERP, WMS), user-friendly interface, scalability, and flexibility. MSM's PortalTrack RFID software offers comprehensive asset-tracking solutions with advanced features and seamless integration capabilities. These features include real-time asset location tracking across a factory floor, warehouse, or yard. Manufacturers can do batch tracking, and shipment tracking data access. By tracking throughout the entire supply chain, from point-of-origin to point-of-sale, manufacturers reduce errors, make better business decisions, and authenticate the product at all touchpoints.

4. Applications of RFID Asset Tracking

RFID asset tracking benefits various industries, including automotive, healthcare, logistics, retail, and manufacturing. Specific use cases and success stories include hospitals using RFID to manage and locate critical medical equipment, logistics companies improving inventory accuracy and reducing losses, and manufacturers enhancing production efficiency through real-time asset tracking. Retailers improve inventory management and safeguard themselves from counterfeiting and theft.

5. Choosing the Right RFID Asset Tracking System

When choosing the right RFID asset tracking system, consider scalability, cost, ease of use, and vendor support. Evaluate different RFID systems based on these criteria to choose the best fit for your business. If you evaluate MSM Solutions's PortalTrack, we can customize it to fit the features, scalability, and cost you need. Scalability ensures the system can grow with your business. Cost considerations include the total cost of ownership. MSM Solutions is a total RFID solutions vendor that provides RFID hardware, software, and maintenance. Ease of use is crucial as user-friendly systems reduce training time and improve adoption. Reliable vendor support is essential for smooth implementation and operation. MSM Solutions is a premier Zebra partner.

6. Common Questions about RFID Asset Tracking

Here are some common questions about RFID asset tracking:

Can RFID be used for asset tracking?

Yes, RFID is highly effective for short-distance monitoring up to 10 feet. Longer distances may require battery assistance to drive the signal farther.

How much does an RFID asset tag cost?

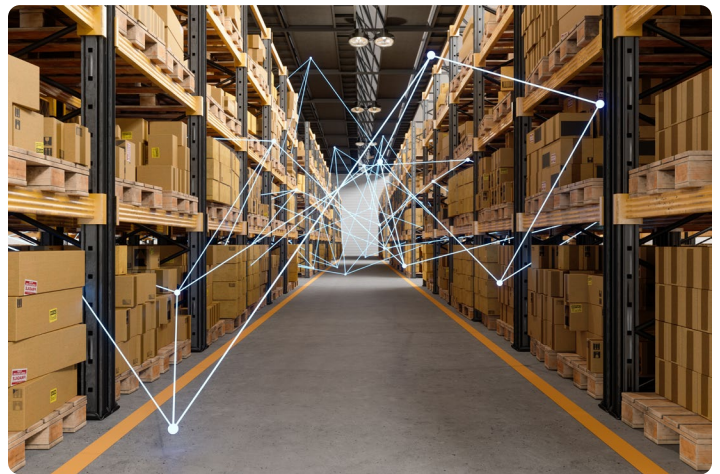
RFID inlays cost 2-10 cents, but creating it into a label or a special form factor to attach to the asset can increase the cost by 2X-10X.

How does RFID track the real-time location of assets or employees?

RFID readers capture data from tags in real-time, instantly updating the PortalTrack software system.

7. Implementing RFID Asset Tracking in Your Business

To implement RFID asset tracking in your business, follow these steps: assess your business needs and goals, choose the right RFID system and vendor, plan the implementation process (including tagging assets and setting up readers and antennas), integrate the RFID system with your existing software, train your staff on how to use the new system, and monitor the system's performance and make necessary adjustments. Potential challenges include cost, integration, and training, which can be overcome by starting with a pilot project to demonstrate ROI, working closely with your vendor for seamless integration, and providing comprehensive staff training.



8. Future Trends in RFID Asset Tracking

Emerging technologies and innovations, such as IoT integration, AI-driven analytics, and enhanced tag technologies, are driving the evolution of RFID asset tracking. The future of RFID asset tracking includes more sophisticated, cost-effective, and integrated systems, making asset management more efficient and reliable.



The Power of **RFID** for Inventory Count

Equally as important as knowing where your items are is knowing how many of them you actually have. Inventory counts based on yesterday's data can easily result in missed shipments, lost sales, and, ultimately, unsatisfied customers.

RFID (Radio Frequency Identification) technology revolutionizes this process by streamlining how businesses Identify, Track, Count, and Manage their inventory.

Let's explore how RFID enables faster inventory counts with greater accuracy to answer the question, "How many do I have?"



How RFID Enhances Inventory Counting

RFID technology revolutionizes inventory management by providing real-time visibility and accuracy throughout the entire supply chain. By attaching RFID tags to items, cases, or pallets, you provide assets with a Digital DNA, enabling businesses to automatically and precisely track the movement and location of inventory as it enters, moves through, and exits their facilities. RFID readers placed at strategic points, such as loading docks, storage areas, and retail floors, continuously capture data from the tags, which is then integrated into inventory management systems. This seamless process reduces human error, enhances inventory accuracy, and enables quick and efficient cycle counts. Moreover, RFID helps in identifying discrepancies between physical inventory and recorded data, facilitating immediate corrective actions. This enhanced control over inventory levels leads to improved stock management, reduced carrying costs, and better fulfillment rates, ultimately contributing to higher customer satisfaction and streamlined operations.

What is Digital DNA and How Does It Work in Inventory Counting?

Digital DNA is much more than just an Electronic Product Code (EPC); it gives your items a true "Digital Voice," enabling you to track virtually any piece of information associated with an RFID-tagged item. Using your item's Digital DNA, RFID software like PortalTrack enables faster inventory counts with greater accuracy and can integrate and automatically update POS or accounting systems with accurate inventory counts. Read The Power of RFID for Asset Identification – Part One of a Series on RFID Software to learn more.

RFID Count Use Cases

Perpetual Inventory

Perpetual Inventory with RFID refers to an automated inventory management system that continuously updates stock levels in real-time by using RFID technology to track and record the movement of items, thereby eliminating the need for manual inventory counts and ensuring accurate, up-to-date inventory data.

Cycle Counting

Typically, cycle counting is done manually or by manually scanning barcodes. On average, it might take a worker about 1-2 minutes to scan and count each item, which includes locating the item, scanning the barcode, and recording the count. For a warehouse with thousands of items, this process can take multiple people and days to complete. In contrast, RFID technology can perform cycle counts in a fraction of this time, often completing in minutes what would take hours or days with barcode scanning.

Inbound/Outbound Order Validation

RFID order validation ensures the right products are shipped and received by automatically scanning and verifying items against order requirements during packing and receiving. This real-time verification process flags discrepancies immediately, reducing errors and ensuring accurate shipments and deliveries.

Case, Pallet, and Item Level Verification

RFID can count inventory at the case, pallet, or item level, with item-level Digital DNA providing the greatest visibility. At all levels, RFID significantly enhances accuracy, speed, and traceability, allowing for confident, real-time business decisions.

Who is Responsible for Inventory Count?

Warehouse managers, material handlers, stockers, and inventory control specialists are typically responsible for the inventory count process. With RFID technology, businesses can streamline these responsibilities and enhance accuracy, making the task faster and easier for the responsible personnel.

How MSM Solutions' PortalTrack Enhances Inventory Counting

PortalTrack RFID Software is customized to integrate with each business's existing processes and RFID hardware and systems, ensuring that the RFID solution enhances inventory management without disrupting established workflows.

You Make the Rules

MSM Solutions empowers businesses by allowing them to define how the RFID system works for them. "You make the rules, we don't" encapsulates their philosophy of providing tools that adapt to your business, not the other way around.

Automatic Inventory Counting

PortalTrack can be used for "portals" like a dock door, receiving station, or smart shelf. When used with an RFID reader, PortalTrack will automatically count the items passing through the portal or station with a timestamp and location.

Handheld Inventory Counting

The simplest and lowest-cost method to inventory tracking is using a handheld RFID reader to count RFID-tagged items. MSM PortalTrack can operate on handheld RFID readers like the Zebra RFD 90 and store inventory counts to be integrated into existing inventory management and logistics systems.

Missing Inventory Counts

PortalTrack RFID Software excels in providing a complete inventory overview and facility mapping, capturing data on inventory to ensure it matches what is expected. This level of detail helps businesses understand what might be missing, what might need a recount, and fill the gaps in their inventory management.

Choosing the Right RFID Solution for Your Business

Selecting the right RFID solution is crucial for comprehensive inventory management. It's important to choose a vendor that can provide a complete solution, from hardware to software and everything in between. MSM Solutions is unique in this regard, offering fully encoded and printed RFID tags, top-of-the-line RFID hardware from the best providers in the industry, expert RFID consulting and installation services, as well as their

advanced PortalTrack RFID software. This end-to-end capability ensures seamless integration and operation of your RFID system, enhancing asset tracking, inventory accuracy, and overall operational efficiency.

Common Questions About RFID Inventory Counting

How many items can RFID count at once?

RFID systems can read and count hundreds to thousands of tags simultaneously, depending on the system's configuration and the environment.

How does RFID handle different types of inventory?

RFID tags can be customized to work with various inventory types, from individual items to large pallets, ensuring accurate tracking across all categories.

What is the cost of implementing RFID for inventory counting?

The cost varies depending on the scale of implementation, including the number of tags, readers, and the integration with existing systems. However, the return on investment can be significant through increased accuracy and efficiency.

How do you prevent duplicate RFID tag counts?

PortalTrack RFID software uses sophisticated algorithms and timestamp data to ensure each tag is counted only once, even if it passes by the reader multiple times. Sometimes errors occur due to duplicate programming of the same Digital DNA on an RFID tag. To address this, you can examine the chip's IC number to trace the source of the error. By identifying the specific IC number, you can pinpoint the manufacturing or programming stage where the duplication happened. Once identified, RFID tags can be reprogrammed with unique identifiers to correct the issue and ensure accurate inventory tracking.

Conclusion

RFID technology delivers inventory management solutions for more than just retail and apparel. Healthcare, manufacturing, automotive, and distribution have all seen RFID enhance operational efficiencies. Embrace RFID technology with MSM Solutions, and step into a future where every asset is just a scan away from revealing its comprehensive digital identity. Deployed globally, many of the world's leading and most recognizable brands trust MSM Solutions and PortalTrack RFID software to monitor millions of events around the world every single day for them.

The Power of **RFID** for Inventory Management



Effective inventory management is the backbone of any successful business, ensuring that products are available to meet customer demand while minimizing excess stock and reducing operational costs. As businesses evolve and the complexity of supply chains increases, traditional inventory management methods are proving insufficient. This is where Radio Frequency Identification (RFID) technology comes into play, offering a revolutionary approach to inventory management. In this fourth installment of our series on RFID software, we will delve into the transformative power of RFID for inventory management, building on the foundations laid in previous parts of this series.

Understanding RFID Inventory Management

RFID systems streamline inventory management by automating data capture, allowing for the simultaneous reading of multiple tags without the need for manual scanning. This automation significantly reduces the risk of human error and ensures that inventory data is updated in real time. The real-time visibility provided by RFID allows businesses to track inventory levels more accurately, optimize stock management, and respond quickly to supply chain demands.

In today's dynamic business environment, the ability to access accurate, up-to-date inventory data is crucial. RFID technology enhances inventory management by offering greater efficiency, reducing manual labor, and enabling businesses to make quicker, data-driven decisions. This leads to improved operational efficiency, reduced costs, and a more responsive supply chain.

How RFID Works in Inventory Management

The RFID system relies on four key components: tags, readers, antennas, and software. The RFID tags, which store essential information about each item, communicate with readers and antennas to capture data. This data is then processed by software, turning it into actionable insights for your business.

The process starts when you tag an inventory item. As the tagged items move through the supply chain or warehouse, RFID readers capture data in real-time, automatically updating inventory levels. This seamless process ensures accurate records, enabling your business to quickly respond to changes in inventory status, reducing the risk of stockouts or overstock situations.

Advantages of RFID in Inventory Management

RFID technology is a game-changer in inventory management, bringing a new level of accuracy and efficiency to the process. By automating data capture, RFID slashes the margin for error and eliminates the headaches of manual inventory counts. With RFID, businesses gain real-time visibility into their inventory, allowing for instant updates that enable smarter decisions about restocking, order fulfillment, and inventory allocation.

This technology doesn't just make your operations more accurate; it also lightens the load for your team. By reducing the need for manual labor, RFID frees up your staff to focus on more strategic, value-added tasks. Plus, with fewer opportunities for human error, the reliability of your inventory data gets a significant boost.

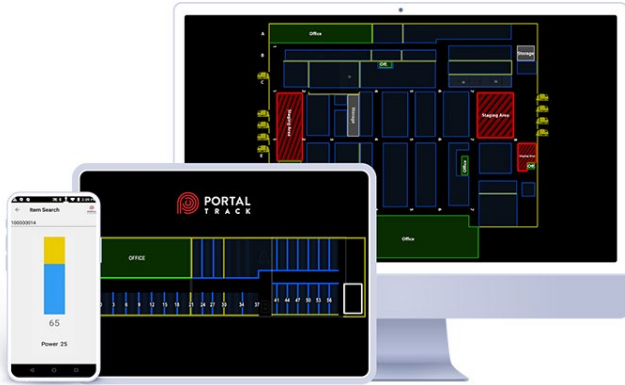
RFID also gives you tighter control over your inventory, with detailed tracking that helps prevent losses due to theft, misplacement, or administrative errors. And if your business already uses ERP or WMS systems, RFID seamlessly integrates, enhancing those systems with real-time tracking and management capabilities. This integration not only ensures a smooth transition but also maximizes the value of your existing systems, driving better efficiency and ultimately, better business results.

RFID Inventory Management Software

When selecting RFID inventory management software, consider features such as real-time tracking, integration capabilities, scalability, and customizable reporting tools. These features ensure that the software meets

your business's specific needs and can grow with your operations.

MSM Solutions' PortalTrack RFID software stands out as a customizable, scalable platform that integrates with existing ERP and WMS systems. It offers real-time data visibility, automated reporting, and event monitoring, providing businesses with the tools they need to manage inventory effectively.



RFID Inventory Use Cases

Enhanced Workflow Efficiency: By integrating RFID systems with existing inventory management processes, businesses can streamline workflows. RFID tags and readers facilitate faster throughput of goods, minimizing manual intervention and increasing operational efficiency.

Pallet-Level and Zone-Based Tracking: RFID enables precise tracking of pallets and products within large facilities, such as warehouses or manufacturing plants. The technology can be used to divide areas into zones, providing detailed visibility of inventory movement and ensuring that items are quickly located and retrieved.

Error Reduction in Shipping and Receiving: RFID systems help validate orders by automatically scanning and verifying items during packing and receiving processes. This reduces errors, prevents mis-shipments, and ensures that the correct products are delivered, enhancing overall accuracy in the supply chain.

Mobile Tracking and Reporting: Equipping workers with mobile RFID readers and tablets enhances inventory management by allowing them to assign specific locations to pallets or items within a facility. This mobile capability simplifies the tracking process and reduces the time spent searching for misplaced inventory.

Challenges and Solutions in RFID Inventory Management

Implementing RFID in inventory management offers substantial benefits, but it's not without its challenges. High initial costs, integration complexities, and the need for staff training are common hurdles businesses may face when adopting this technology.

To address these challenges, it's crucial to approach RFID implementation strategically. Opt for scalable solutions that can grow with your business, ensuring that the technology adapts to your needs over time. Integration doesn't have to be overwhelming; start with a phased approach, gradually incorporating RFID into your existing systems to minimize disruption and ease the transition. Thorough training programs are essential to ensure that your team is comfortable with the new technology, helping to prevent operational hiccups and maximize the effectiveness of your RFID system.

By taking these steps, businesses can successfully navigate the initial challenges and unlock the full potential of RFID for inventory management.

Future Trends in RFID Inventory Management

The future of RFID in inventory management is bright, driven by innovations like IoT integration, blockchain for secure tracking, and AI for predictive analytics. These emerging technologies will not only enhance RFID's capabilities but also open new avenues for efficiency and accuracy. As RFID evolves, it's poised to become an even more indispensable tool, offering businesses deeper insights and more robust control over their inventory than ever before.

Choosing the Right RFID Solution for Your Business

Selecting the right RFID solution is crucial for comprehensive inventory management. It's important to choose a vendor that can provide a complete solution, from hardware to software and everything in between. MSM Solutions is unique in this regard, offering fully encoded and printed RFID tags, top-of-the-line RFID hardware from the best providers in the industry, expert RFID consulting and installation services, as well as their advanced PortalTrack RFID software. This end-to-end capability ensures seamless integration and operation of your RFID system, enhancing asset tracking, inventory accuracy, and overall operational efficiency.

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