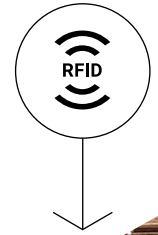# RFID Retail Requirements Expansion

Things to consider for integrating RFID into your packaging workflows

Overview:
The RFID Future Is Now

As more major retailers such as Walmart, Dick's Sporting Goods and Nordstrom continue to expand the number of departments where RFID tagging will be required, further penetrating store inventory, manufacturers face an accelerated timeframe for getting an RFID tagging solution in place to be compliant.

The reason for the ever-broadening supplier requirements comes down to operational efficiency. Retailers gain real-time inventory visibility for reduced losses, more efficient compliance and significant cost savings. And suppliers can also benefit from RFID technology with the ability to automate inbound audit processes, improve inventory accuracy, and quickly process outbound validations, saving time and money.

How RFID Can Improve Your Operations

As RFID technology continues to transform the retail industry, suppliers and manufacturers need to keep in mind that the potential ROI gains aren't limited to retailers. All organizations throughout the supply chain can reap tremendous gains by implementing RFID, leading to increased revenue, reduced labor time and costs, and enhanced overall customer experience. That's because RFID provides higher product visibility and enables reliable asset tracking and management, which can help to streamline manufacturing, increasing production speeds and eliminating manufacturing errors.

Immediate Operational Efficiencies
In addition, while some may see the expanding mandates as just adding labor and tasks to the supplier's shipping process, that viewpoint overlooks the fundamental business value that RFID contributes through greater inventory accuracy. In fact, with RFID, organizations can leverage valuable upstream data in tracking/moving their products from dock to stock. With precise tracking information, your operations can see fewer shipping errors, better product quality and the ability to optimize stock levels.

Long-Term Benefits
Not only does RFID unleash your ability to introduce labor-saving automation to shipping processes, it also builds lasting value in terms of increased understanding of product life cycles from manufacturing to distribution.

That transparency also helps suppliers demonstrate accountability to their retail customers in three ways:

1	Claims compliance	With the item-level precision of RFID, suppliers can be sure the right product is shipped at the right time, to the right retailer. The technology provides a full audit of the supply chain, allowing suppliers to prove compliance with any retailer, shipper or regulatory requirements.
2	Shipment validation	Every time an item—or an entire case—is moved, suppliers and their retail customers can see if both the content and the quantity of a shipment are correct and report real-time status of an entire batch of products. This helps improve billing accuracy, logistics planning, replenishment accuracy, distribution strategies and more.
3	Preventing gray market diversion	In some high-end markets, it's important to protect the secure transport of products that are highly counterfeited. With RFID technology, suppliers can monitor the entire supply chain, keeping channel integrity secure so retailers are assured of receiving the genuine article.
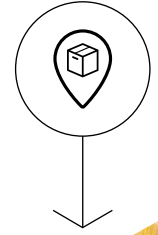
30-60% ▲
Greater
inventory accuracy

20-45% ▼
Fewer hours spent
conducting inventory

10-35% ▼
Lower
inventory costs

50-90% ▼
Less physical
count time

Making Supplier Requirements Work for You

Retailers generally follow the industry standards set forth by the SGTIN-96 GS1 EPC Tag Data Standard and may require additional approval from industry experts (check with the retailer for specific requirements). Products must be tagged in line with these standards prior to arriving in stores. And, while each retailer has its own specifications, with guidelines to integrating RFID into packaging cover the following points in a similar fashion.
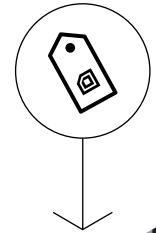
Getting Started

You'll need to develop an internal team to take on the overall project, and delegate tasks such as beginning discussions with packaging providers and approved RFID inlay manufacturers to launch the initiative.

Topics to be covered should include:

Procurement and forecasting	Data management and serialization requirements	Quality control process

Determining the Details

The first step is to select an inlay manufacturer that meets the retailer's specifications for the product. Alternatively, you can print your own RFID labels or tags when you equip yourself with market-leading Zebra printers that include factory- or field-installable RFID encoders. With the industry's widest range of RFID printers and certified supplies, Zebra makes meeting retailer requirements in-house simple.

In either case, product manufacturers and suppliers need to establish a process that ensures the following items are correct:

RFID inlay specs, including the appropriate inlay size to fit packaging	Placement of RFID tag	Tagging requirements
EPC symbol	RFID encoding and serialization requirements	RFID application formats, including paper stock, font size, ink color, copy minimums
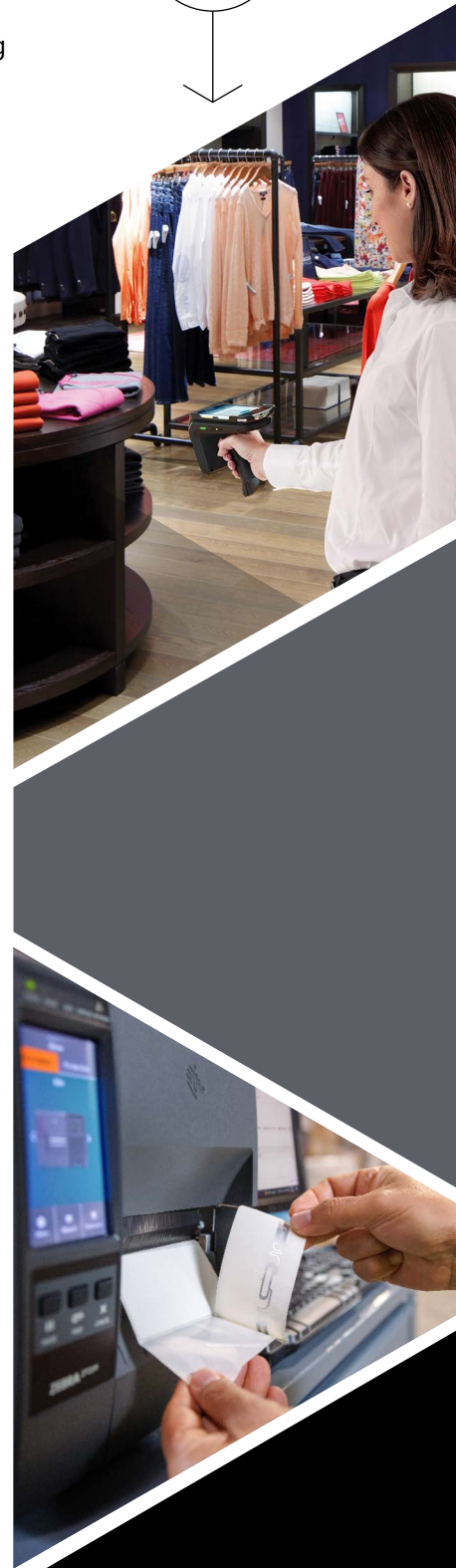
The Ins and Outs of RFID vs. Barcodes: What Suppliers Should Know

Both barcode and RFID technologies are used as a means of identifying important information about individual products, but they operate differently and provide complementary information. Because of that, it's best to use them together, rather than deploying one or the other. Fortunately, both technologies support the same GS1 identification and data exchange standards, so you can use the technology that's right for your applications without needing to deploy/support separate data systems.

Differences Include:

More Accessibility
To gather data, a barcode scanner has to physically scan the barcode, but because RFID readers use wireless technology, RFID does not require a direct line-of-sight to be read. That means many RFID tags can be read at the same time, enabling:
- Quick counting of large groups of "items" with little to no human intervention
- Retrieval anywhere in the supply chain—when and wherever information is needed

Detail
UPC codes provide limited information (who made it and what it is). RFID is serialized and tells you details such as what the item is, its color and model number.

Cost
Barcode printing is less expensive than RFID tagging, although the price for RFID inlays does vary based on quantities and formats.

One vs. Many
Users need to scan barcodes one at a time, which can mean that tracking individual products is resource-intensive when barcodes are the only identifying tag. By contrast, EPC-enabled RFID codes are designed to enable rapid scanning of many products at once.

RFID puts another set of tools in a company's automatic identification and data capture (AIDC) toolbox and gives them the flexibility to choose, based on how the technology is being used.

The Zebra Edge

When you're implementing a new technology, it helps to work with a partner who has the expertise you need to solve problems. Zebra offers the industry's broadest, field-tested portfolio for unmatched accuracy and interoperability.

The key to success is to leverage Zebra's decades of expertise, design thinking and software development to achieve maximum RFID efficiency. In addition, Zebra services are available in more than 80 countries around the world, so you'll have support nearby whenever you need it most.

For More Information

Discover trends in the retail/supplier space by listening to Zebra podcast series, Supply Chain Visibility Stories.

Explore the industry's broadest, field-proven portfolio of Zebra RFID readers, antennas and printers, engineered for unmatched accuracy and interoperability.

Learn why Zebra Technologies is a Leader for the fourth year in a row in 2023 Gartner® Magic Quadrant™ for Indoor Location Services.

Get more information about Zebra RFID solutions, purpose-built for relentless performance in any environment.

Gain edge-to-edge visibility with wall-to-wall choices.

As the developer of RFID readers and printers with decades of expertise, design thinking and software development, Zebra can recommend the right solution for your use case.

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