



RFID FOR FOOD: Quality & Efficiency for Today's Consumables

The need to feed an ever-growing world population has led to remarkable innovations, with higher crop yields and the ability to mass-produce a staggering array of items. In an age when farm-to-table and understanding food's genesis is becoming de rigueur, it's not a stretch to imagine RFID playing a significant role.

KEY BENEFITS

- ▶ Increased shelf accuracy at reduced manual work-load
- ▶ Waste reduction, shrinkage reduction
- ▶ Faster checkout at POS

APPLICATIONS

- ▶ High speed inventory counts
- ▶ Item level supply chain management
- ▶ RFID based theft protection

FOOD INVOLVES EVERYONE

Throughout the supply chain for food, from producers and retailers to government regulators and actual consumers, there are questions of quality, authenticity, and affordability. Food retailers are facing stiff competition and profit margins that are much below 2 %, while having to manage 40 000 Stock Keeping Units (SKUs) per store.

From the government perspective, agencies at the federal and local levels are concerned about the health risks of poorly produced and improperly stored foods, and there are efforts in place to improve distribution networks to minimize waste and catch counterfeiters.

As for consumers, there is the ongoing challenge of finding quality and nutrition within the limits of the weekly food budget.

FOOD & FASHION

The food industry is, in many ways, very similar to other sectors in the consumables market, especially fashion. Like food retailers, clothing retailers have to manage a high number of SKU'S due to size and type complexity.

Also Fashion retailers need to constantly introduce new products while anticipating demand so as not to over- or undersupply the market.

Government agencies help the fashion industry fight fakes and combat unauthorized sales in black-market channels, and the consumers who buy clothes are price-conscious and seek value in their purchases.

Food and fashion have so much in common, in fact, that many of the same solutions used to improve the supply chain for fashion can be applied to food.

One success story in particular for fashion is the use of Radio Frequency Identification (RFID) technology to enable item-level tracking, increase revenue, and raise profit margins.



HOW RAIN RFID CAN HELP

Efficient Food Inventories

A typical supermarket stocks an average of 40,000 Stock Keeping Units (SKUs). The large number of SKUs makes inventory control a major challenge, and inaccurate counts can lead to dissatisfied customers.

RFID tags can help supermarkets and other retail locations manage inventories more precisely, for more responsive logistics and greater efficiency. Shelves are always fully stocked and shoppers always find what they want, when they want it.

Protected Perishables

The “fresh” category is an especially important segment of the food industry, since it offers the highest growth rates. Rotten food has expenses associated with it, not just in lost sales, but also because it costs substantial money to dispose of unsaleable items.

RFID labels can be used to track food items more closely while they're in the supply chain as well as in the retail store, to ensure proper handling, and can also be equipped with sensors that monitor environmental conditions, so as to avoid spoilage.



In the retail store

The typical consumer behavior to fetch the product with the longest fresh time from the shelf can be reverted with RFID by providing price discount curves based on freshness.

NXP IS THE #1 in RAIN RFID FOR RETAIL

NXP Semiconductors is the world's leading supplier of RFID chips. Jointly with our partners we have helped retailers and brand owners in all kinds of industries, use RFID to create a competitive advantage.

Because it enables smaller, more versatile RFID labels without compromising performance, the UCODE® product family is the RFID chip solution of choice for more than 50 retailers around the globe

KEY FEATURES

- ▶ Best-in-class performance for accurate high speed inventory counts – 20 000 per hour.
- ▶ Consistent high performance over billions of chips, ensured by strongest test parameter settings – testing each single chip at NXP fab.
- ▶ Broad band UHF design, suitable for fresh food environment
- ▶ Product Status Flag for fast theft detection
- ▶ Tag Tamper Alarm for in-store theft deterrence



LEARN MORE

For more information about NXP's RFID portfolio, or to inquire about an RFID implementation, please visit www.nxp-rfid.com or email rfid.info@nxp.com.