
Changing Supply Chain with Rfid

Radio-frequency identification (RFID) uses electromagnetic fields to automatically identify and track tags attached to objects. The tags contain electronically stored information. Unlike a barcode, the tag need not be within the line of sight of the reader, so it may be embedded in the tracked object. RFID is one method for Automatic Identification and Data Capture (AIDC).

Today, the largest RFID application aids companies and governments in supply chain management. RFID is being used to manage products through production, distribution and retail. Those in the manufacturing sector can especially benefit from implementing RFID in supply chains because they can decrease the costs associated with product tracking and inventory management and increase the accuracy and timeliness of inventory data.

RFID in supply chain

RFID Applications can be used to monitor and manage the movement of the finished products throughout a given supply chain. RFID tags can be attached directly to the items and materials or they can be attached to the containers that carry them. Pallets, trailers, totes, carts, cargo containers, and reusable transport items can all be tagged. The movement of the products are monitored and recorded in real time. This can be within a warehouse, a freight yard or within a retail location.

RFID applications in the supply chain enable more frequent and accurate inventory counts RFID applications in the supply chain can also decrease costs associated with inventory counting.

In addition, RFID applications in logistics have shown significant results. RFID applications in fleet management enable a more cost-effective long-range tracking solution, global tracking of containers and cargo, reliable tracking of capital and inventory assets during transportation and increased security. Attaching RFID tags on long range vehicles, trailers or other mobile assets, companies can gain real time visibility into their business assets utilization.

Anti counterfeiting

RFID applications can be used to protect brand identity and to protect consumers from counterfeited products. RFID applications in anti-counterfeiting are, usually, aimed at high-value end consumer products. Each product will have a unique ID, which can be used to check if the product is authentic or not. These unique numbers combined with encryption algorithms can

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create authentication schemes that are extremely difficult to circumvent.

RFID applications in anti-counterfeiting can be used in many industries, such as, pharmaceuticals, electronics, entertainment, retail and IT. It is estimated that counterfeiting costs legitimate companies about \$600 billion worldwide each year. The payback from even modestly successful anti-counterfeiting efforts can be very high.

The pharmaceutical industry is in the process of creating an RFID application that will document the authenticity of their products at the point of sales. Not only will the products have a unique ID, but information about the chain of custody for the product will be stored on the RFID tag or in an associated database. If the product is not properly tagged or the tag is not associated with the proper supply chain, then you know that the product is counterfeit.

While many anti-counterfeiting efforts are a large expense faced by firms, RFID applications in anti-counterfeiting have high returns. Placement of RFID tags on products at the point of manufacture enables both tracking and ensures that counterfeit products do not end up with the customer.

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