

RFID IN THE CONSUMER GOODS INDUSTRY



RFID In the Consumer Goods Industry



Specific Requirements of the Consumer Goods Industry

100% reliability in identifying and tracking goods, on demand and without time delays

Simple to use and implement

Cost effective supply and installation

Ability to be incorporated into existing processes and packaging

100% secure-impossible to counterfeit or reproduce, and difficult to destroy

Excellent data integrity

Ability to identify and capture precious goods in close proximity and multiple orientations

Ability to identify products despite hostile environments ie presence of metal/aluminium, liquids and organic material

 is a complete end to end **Radio Frequency Identification (RFID)** company specializing in consumer goods and related industries. Its patented technology meets consumer goods needs by providing the total solution: **100% identification and reading accuracy and reliability in liquid, metal or organic material environments, in multiple orientations or close proximity, and in multi-item bulk.** Together with its partners and customers,  is engineering the future of RFID in the Consumer Goods industry.

RADIO FREQUENCY IDENTIFICATION IN THE CONSUMER GOODS INDUSTRY

The exceedingly complex and fragmented consumer goods industry involves interdependencies between all players and at all stages, all of which require a “killer” application to solve technological problems encountered in tracking merchandise on supermarket shelves and in trolleys.

Enter RFID, the Holy Grail of asset management technology. Leading the charge is Wal-Mart, the world’s largest retailer, which mandated its top 100 suppliers to become RFID-compliant by January 2005 in order to harness the full potential of this technology. Other big players, such as Gillette, plan to purchase massive quantities of RFID tags to ship with each package, thus creating new value and functionality for their business solutions.

Consumers can adopt a new technology that will transform their lives with more convenience, less stress and more security. Immediate applications of RFID to the consumer goods industry are the elimination of the unreliable, time-consuming barcode and the substitution of the radio wave, allowing filled supermarket trolleys to be scanned in seconds in unmanned self-service checkout aisles.

RFID tags will be used by the retail industry to track individual products during their entire lifetime from their birth at the factory all the way to their death at the local landfill.

consumer



WHAT IS RADIO FREQUENCY IDENTIFICATION RFID ?

RFID is automated object identification and data capture using radio frequency technology to communicate between objects and systems. The technology consists of two main elements – a tag and a reader, that communicate through radio transmission. The tag contains a small chip and an antenna and can be placed on any object. Information stored on the tag (such as product type, product item identification number, manufacturer, date expiry, etc) can be transmitted to an RFID reader over a distance of a few metres.



RFID and barcodes are currently complementary technologies and will coexist for some time to come. The advantages of RFID over barcodes (such as no line of sight required, simultaneous identification of products, increased information capacity, ability to operate in harsh environments, fast read speed, low labour costs, and ability to update/write information to the tag) may result in RFID being more widely used and pervasive in the future.

BARCODES	RFID
Read individually	The only technology that can read items simultaneously
Line of sight required	No line of sight required
Read manually: high labour costs	Automated: low labour costs Information dynamic read write if required
Information read only Limited information memory	Large information memory (30 fold)
Low Durability – susceptible to harsh environments	High durability – can deal with harsh environments
Easy to replicate for criminals	Difficult to replicate
First pass accuracy not guaranteed	First pass accuracy guaranteed

“We are continuing to experience an extremely high demand for SPACECODE readers.

The company has expanded both its manufacturing lines and product offerings to give our systems integrator

and end-user customers the flexibility to innovatively apply RFID solutions in their businesses”



The advantages of Spacecode's solution are ideally suited for the consumer goods industry

- 100% reliability and accuracy
- Mixed pallet and multi item reading
- Excellent performance in metal environments
- Outstanding ability to read items in close proximity and multiple orientations
- No absorption by organic material such as liquids and food
- Total ability to identify items inside large volumes
- Full compatibility with any numbering standard
- Simple integration with existing IT systems

SPACECODE™ RFID TECHNOLOGY

Spacecode is a complete end to end RFID solutions provided, and owner of patented RFID technology. Spacecode Research Laboratory has been developing RFID technology for difficult/hostile environments; where the focus of activities have been on technical solutions giving 100 % identification and reading accuracy in all environments.

The SPACECODE™ RFID technology works where other solutions and technologies fail. The system is uniquely able to ensure 100% reliable operation with appropriately high read rates. Due to its patent protected technology it is ideally suited for harsh and challenging applications, where many objects need to be identified simultaneously, which are in close proximity, randomly oriented and in the vicinity of metal, water, or other organic material.

REAL TIME BENEFITS OF THE SPACECODE™ TECHNOLOGY

The list of benefits for the consumer goods industry generated through the use of the SPACECODE™ solution include:

- **Perfect asset management**
 - inventory control and distribution
 - product availability
 - productivity gains in distribution and receiving
 - reduced inventory losses and write-offs
 - labour cost reductions
 - item level RFID tagging
 - reduced administrative errors
- **Visibility and accountability at every point in the business process**
- **Improved and optimized speed and reliability of the business processes**
- **Anti-counterfeiting**
- **Improved security, reduced theft, reduced fraud**
- **Improved information flow and data integrity**
- **Increased visibility thus reduced business logistics process losses**
- **Efficiency gains simply through knowing where what is in the business**



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