

## RFID-Based Solutions

**HTES Ltd**, as solutions provider and development experts, recognises the key role **Radio Frequency Identification (RFID)** technology play and have developed number of systems based on this technology to help those who seeking to identified and track their products at any point along the supply chain or to track their mobile assets.

A basic RFID system contains of the three elements;

1. Transponder/Tag
2. Reader/Writer
3. Software.

These three elements combined enable the procedure of identifying, tracking and recording information on an object.

Transponder/tag come in a variety of memories: some can be read-only (RO), or write-once-read-many (WORM0, or read-write (RW), or either passive (no internal power source) read by a reader or active (with long life battery cell in side) send signals. An RFID tag to be placed on the targeted objects and each has a unique coded identification word stored in its internal memory. RFID tags can store up to 32 KB of data.

The tag subsequently transmits its unique ID information to the reader, which in turn converts it into useful information.

RFID readers located at fixed or portable locations within the premises are used to monitor objects movements. These readers can be either stand alone devices or to be liked to a central computer in network configuration. A windows application software package based on the central manage system activities in real-time and computer or mobile PC is used to secure environment.

**RFID** technology can be classified according to their frequency ranges into:

- Low frequency 150 KHz: Short to medium read range — low reading speed
- High frequency 13.56 MHz: Short to medium read range — medium reading speed
- UHF frequency 868-920 MHz: Long read range — high reading speed

Read ranges for RFID passive tags can vary from 2 mm to several meters away.

RFID is essentially a wireless data collection technology that can be integrated into any system for the purpose of reading and writing. With web-enabled systems tag's ID code can be linked to central databases for further processing.

There is a wide range of applications for the RFID technology; examples of such applications are given below:

1. Retail applications such as fashion shops and department stores.
2. Livestock tracking & Food Safety
3. Hands Free Access Control, Company Cards, Vending Machines
4. Inventory control
5. Products loyalty
6. Electronic consumables identification.
7. Automation of Laundry Services
8. Casino Gaming
9. Car-body parts tracking
10. Sports Timing (Marathon, Pigeon Races)
11. Vehicle Identification & Tracking
12. Parts Identifier
13. People Tracking

**HTES Ltd** bring up to date technologies to your doorstep. We are committed to build our business around meeting our customer's requirements for pricing, availability, quality and support.

If you desire results that will make a difference to your company's performance, then give us a call now. We'll be pleased to discuss how we can work together to achieve your goals and objectives.



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