



RFID for Jewelry Industry

An Overview



End to End
RFID Solutions





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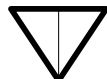
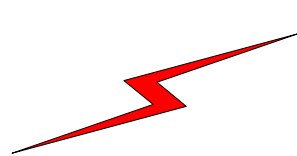
What is RFID?

Radio-frequency Identification is an Automatic Data Collection (ADC) Technology

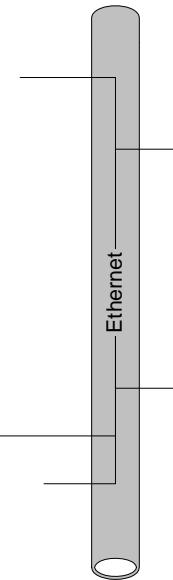
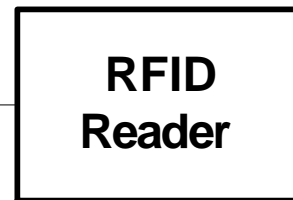
Uses radio-frequency waves to transfer data between a reader and a movable item to identify, categorize, track..



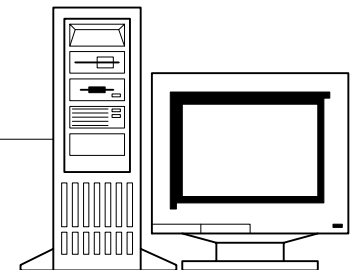
RFID Tag



RF Antenna



Network



Workstation



RFID Technologies

Active

Long Range
(Far Field)

High Cost

Short Life

Bulkier

Passive

Short Range
(Near Field)

Low Cost

Long Life

Thin/Light

RFID over Barcodes

Feature	RFID Tags	Barcodes
Read more than one item at a time	Yes	No
Read while item is moving	Yes	No
User Programmable	Yes	No
Line of site read not required	Yes	No
Lifetime guarantee	Yes	No
Sturdy in harsh environments	Yes	No
Able to resist water damage	Yes	No
Built-in security	Yes	No
Inventory without handling items	Yes	No
Able to locate specific items	Yes	No



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The Need

The jewelry industry faces a tremendous task of maintaining, and accounting for thousands of jewelry items in a single store

The loss of jewelry items through theft and misplacements cost jewelry industry thousands and more a year.

Rising precious stones and metal prices have further placed need on the jewelry industry to find new ways to manage mounting costs.

How can the technology help to improve the management situation with their precious metal wares

?



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The RFID Advantage

RFID technology offers **unique possibilities** to the challenges faced by the jewelry industry.

RFID is capable of handling **simultaneous multi scan** capabilities means jewelers will not be manually accounting for each jewelry item one piece at a time, but all at a time.

RFID gives the feasibility of running near **real-time monitoring** of jewelry goods everyday, every time, thereby **heightened security** throughout.



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Towards a Smart System

RFID coupled with powerful jewelry software solutions, promises to slash operating costs of jewelry business through canceling "waste" from theft and loss

A well designed RFID jewelry solution opens new opportunities into gathering customer trending for a jewelry retail business.

With such real time data, the jewelry business owner can “adjust” to his retail space and be rewarded with improved sales.



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Shorten Jewelry Inventory Cycle

Heighten Security

Improved Business Intelligence



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Jewelry RFID Tags

Technology: Passive UHF, Passive HF, Active

Key Feature: Identification, Security and Inventory

Price Range: Passive ~ INR 50 – INR 75 || Active ~ INR 750

Other Features: Reusable, PVC, Paper Face

RFID PoS Tray

Technology: Passive UHF, Passive HF

Key Feature: Multiple Identification, POS

Price Range: INR 30,000 – INR 50,000

Other Features: Desktop Device, Small Foot Print



RFID Smart Roof

Technology: Active

Key Feature: Real Time Inventory and Security

Price Range: ~ INR 50,000 per 50 sq. m. floor area

Other Features: Anti Tamper Alarm System, Remote Control

Configurations contd..



Handheld RFID Jewelry Solution

Technology: Passive UHF, Passive HF

Key Feature: Daily Inventory

Price Range: INR 100,000 – INR 250,000

Other Features: Touch Screen PDA, Wireless Transmission

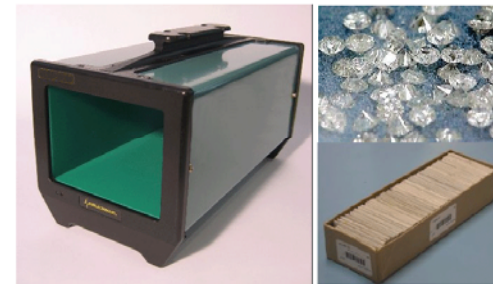
RFID Tunnel

Technology: Passive HF

Key Feature: Fast and Accurate Inventory

Price Range: INR 300,000 – INR 500,000

Other Features: Read up to 750 closely packed items in 2 sec



RFID Inventory Tray

Technology: Passive HF

Key Feature: Fast and Accurate Inventory, Intelligent Systems

Price Range: INR 200,000 – INR 250,000

Other Features: Read up to 200 closely packed items in 2 sec



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Company Overview

Application research based company, developing **identification, security** and **tracking** solutions, empowered with **RFID** technology.

Founded by **IIT Kharagpur** alumni, incubated by **SIDBI**, is now a **privately funded** company with strong support from **industry** and **academia**.

We value **Strategic Focus, Disciplined Execution** and **Best Customized Solution**

Mission

To create and extend knowledge in RFID utilization and its impacts on business processes

Vision

To be the leading worldwide developer and supplier of RFID based identification, security and tracking systems and internationally recognized as a leader in RFID application research.



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- The Aviatech Group
 - Aviatech Consultancy Pvt. Ltd.
 - Associated Airsupport Pvt. Ltd.
 - Airborne Components Repairs & Services Pvt. Ltd.
- Daphne Consultants Pvt. Ltd.
- GenX RFID*



Our Experience



Allama Iqbal Library, University of Kashmir.
Srinagar.

Largest library automation project in the country

Collection size : 550,000 items

Memberships : 10,000

ERP : Virtua from VTLS Inc. USA

RFID : rLiMS from Daphne Systems

Integration Protocol : SIP2

National Centre for Cell Science, University of Pune

Location: Pune, Maharashtra

Technology: Passive HF RFID

Solution: RFID visibility and tracking solution to more than 10,000 valuable items in the R&D center

Perfect Vision Opticals

Location: Faridabad, Haryana

Technology: Passive UHF Gen2 RFID

Solution: RFID retail supply chain solution to a leading optical retail chain in the NCR. The warehouse implementation provides RFID labeling of incoming stock, order picking, dispatch and stock management. At the showroom level, the solution automates incoming stock reconciliation, inventory and security at the entry exit gates.



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Our Experience

HCL Infosystems Limited

Location: Noida, U.P.

Technology: Passive HF RFID

Solution: RFID student identification system for a renowned law college in the state of Madhya Pradesh.

Shree RamKrishna Export

Location: Mumbai, Maharashtra

Technology: Passive UHF Gen2 RFID

Solution: RFID inventory, diamond cutting process flow management and day end stock reconciliation to one of the largest diamond exporting house in the country.

Fx Hyundai

Location: Faridabad, Haryana

Technology: Passive UHF Gen2 RFID

Solution: RFID spare parts management system with primary focus on theft prevention and stock management at one of the largest Hyundai Service Center in the NCR.

HAFED

Location: Panchkula, Haryana

Technology: Active 2.4 GHz RFID

Solution: RFID warehouse security system to the Haryana State Cooperative Supply & Marketing Federation Ltd., an apex cooperative institution of the state. GPRS enabled RFID locks to be used for real time online monitoring of remotely located warehouses of more than 8 Lac MT storage capacities.

The Approach

Holistic approach to deliver the whole solution





Questions ?



Thank You