

TRANSFORMING WAREHOUSE OPERATIONS WITH REVERSE THINKING OF RFID REAL-TIME INVENTORY TRACKING SOLUTION



Navigate the Unseen: Empower Your Space with Indoor Real-Time Location Tracking

Digital Transformation improves the quality of life





One pain point of warehouse inventory management is the reliance on manual data entry and scanning processes. Warehouse personnel often need to manually input or scan barcodes or product codes to track inventory movement. This manual approach is time-consuming and prone to human error, leading to inaccuracies in inventory records. The need for constant manual intervention not only slows down operations but also increases the risk of data entry mistakes, resulting in discrepancies between the recorded inventory and the actual stock.

INVENTORY

Another pain point is the lack of real-time visibility and traceability of inventory. Without RFID technology, it becomes challenging to track the exact location of items within the warehouse at any given time. This can lead to difficulties in locating specific products, causing delays in order fulfillment and impacting overall operational efficiency. Additionally, the absence of real-time visibility makes it harder to identify and address inventory issues promptly, such as stockouts or overstocking, which can result in increased carrying costs and customer dissatisfaction.

OUR CONTINUING MISSION TO MAKE A CHANGE AND IMPROVEMENT OF INVENTORY MANAGEMENT BY IT SOLUTION

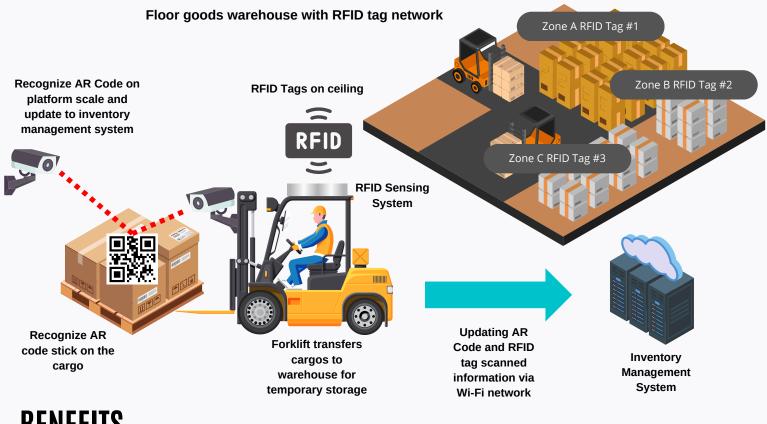
Real-Time Location Tracking Solutions (RTLS) using **RFID tracking technology** enable warehouses to monitor and track assets and inventories in real-time. By utilizing RFID tags and readers, warehouses can accurately locate and manage their resources, leading to improved operational efficiency and stock take accuracy. RFID technology allows for automated data capture, eliminating the need for manual data entry and reducing the risk of errors. With real-time visibility into inventory movements, warehouses can optimize their operations, streamline order fulfillment processes, and make informed decisions regarding stock levels and resource allocation.



Forklift with RFID and AR Code Sensing System

SYSTEM ARCHITECTURE

UHF RID tag network will be installed at the warehouse mounted at the ceilling pipe. All RFID tag EPC(ID) and corresponding warehouse location will be provided to customer for warehouse mapping development.



BENEFITS

- Inventory location tracking: Instead of adding RFID tags to each stock item, we simply install tags on the ceiling, equip forklifts with an RFID sensing system, and load each pallet with an AR code. This will enable accurate tracking of the goods within the warehouse.
- Enhanced operational efficiency: By automating asset and inventory tracking, RTLS eliminates the need for manual data entry and scanning. This streamlines warehouse operations, reduces human errors, and increases productivity.
- Optimized resource utilization: With real-time location tracking, warehouses can efficiently allocate resources such as equipment, personnel, and storage space. This leads to better resource utilization, reduced idle time, and improved overall operational efficiency.
- Enhanced traceability and security: RFID tracking technology provides detailed visibility into the movement and location of assets and inventory. This improves traceability, reduces the risk of loss or theft, and enhances the security of warehouse operations.



RFID WAREHOUSE INVENTORY MANAGEMENT PRODUCTS

RFID Sensing System (Custom Made By HKC)

The RFID Sensing System installed in forklifts within a warehouse is a cutting-edge technology solution that enhances inventory management and operational efficiency. By equipping forklifts with the RFID Sensing System, it enables seamless and real-time tracking of inventory as it moves throughout the warehouse. The RFID readers on the forklifts automatically capture the unique identification information from RFID tags attached to items or pallets, providing instant updates on inventory location and movement. This streamlines inventory management processes, improves accuracy, and facilitates efficient order fulfillment, ultimately optimizing warehouse operations and improving overall productivity.



UHF RFID Tags

Highly robust, all-purpose UHF tags mount to any surface material deliver long read ranges





KEY BENEFITS:

- Extreme durability resistant to outdoor elements as well as blunt and sharp impact
- Multiple mounting options glue, screw, rivet or weld
- Enhanced reliability read-write on any material, up to 36 ft (11 m)
- Broadband frequency for worldwide use

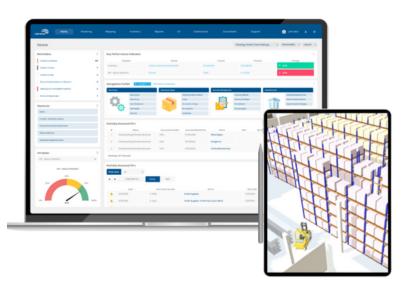
TECHNOLOGY HIGHLIGHTS:

- Worldwide operating frequencies from 860 to 960 MHz + optional NFC
- Fully interoperable; standards compliant
- Reliable performance on both metal and non-metal surfaces
- Waterproof under high pressure / high temperature conditions; chemical and impact resistant
- Mounting options include nails, screws, rivets, welding and glues
- Large memory of up to 512-bit user memory and 128-bit EPC; 2560 bit HF/NFC

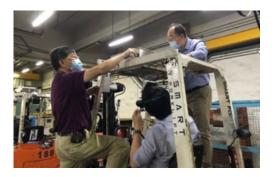
RTLS SOFTWARE Platform

The RFID real time location tracking of warehouse inventory platform offers several features:

- 1. **Real-time visibility and tracking:** The platform provides instant visibility and real-time tracking of warehouse inventory, allowing users to monitor the location and status of items at any given time.
- 2. Accurate inventory management: By leveraging RFID technology, the platform ensures accurate and automated inventory management, eliminating manual errors and discrepancies.
- 3. Efficient order fulfillment: With real-time location data, the platform optimizes order picking and fulfillment processes, enabling faster and more efficient operations.
- 4. **Inventory optimization:** The platform offers insights and analytics to optimize inventory levels, reduce stockouts, and minimize overstocking, resulting in improved inventory management.
- 5. **Asset tracking:** Alongside inventory, the platform tracks and manages assets within the warehouse, ensuring their availability and proper utilization.
- 6. **Enhanced security:** The platform enhances security by providing real-time alerts and notifications for unauthorized movements or unusual activities, helping prevent theft and loss.



REFERENCE CASES



Hactl: Hong Kong Air Cargo <u>Terminals Limited</u> Smart Asset Management Solution (SpotTrack)



<u>Hong Kong Public Library</u> Supply of RFID Intelligent Library Management System



<u>SingHealth (Singapore)</u> RFID Asset Management System

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