MINGQ
– TECHNOLOGY –

Warehouse Management and Asset Tracking Solutions

Based on RFID technology and positioning tracking technology, the solution aims to realize the automatic management of the whole process of warehouse entry and exit and real-time location monitoring of items. Through the deep integration of hardware equipment and system software, the operation efficiency, data accuracy and intelligent level of warehouse management are improved, and a full range of warehousing logistics management support is provided for enterprises.
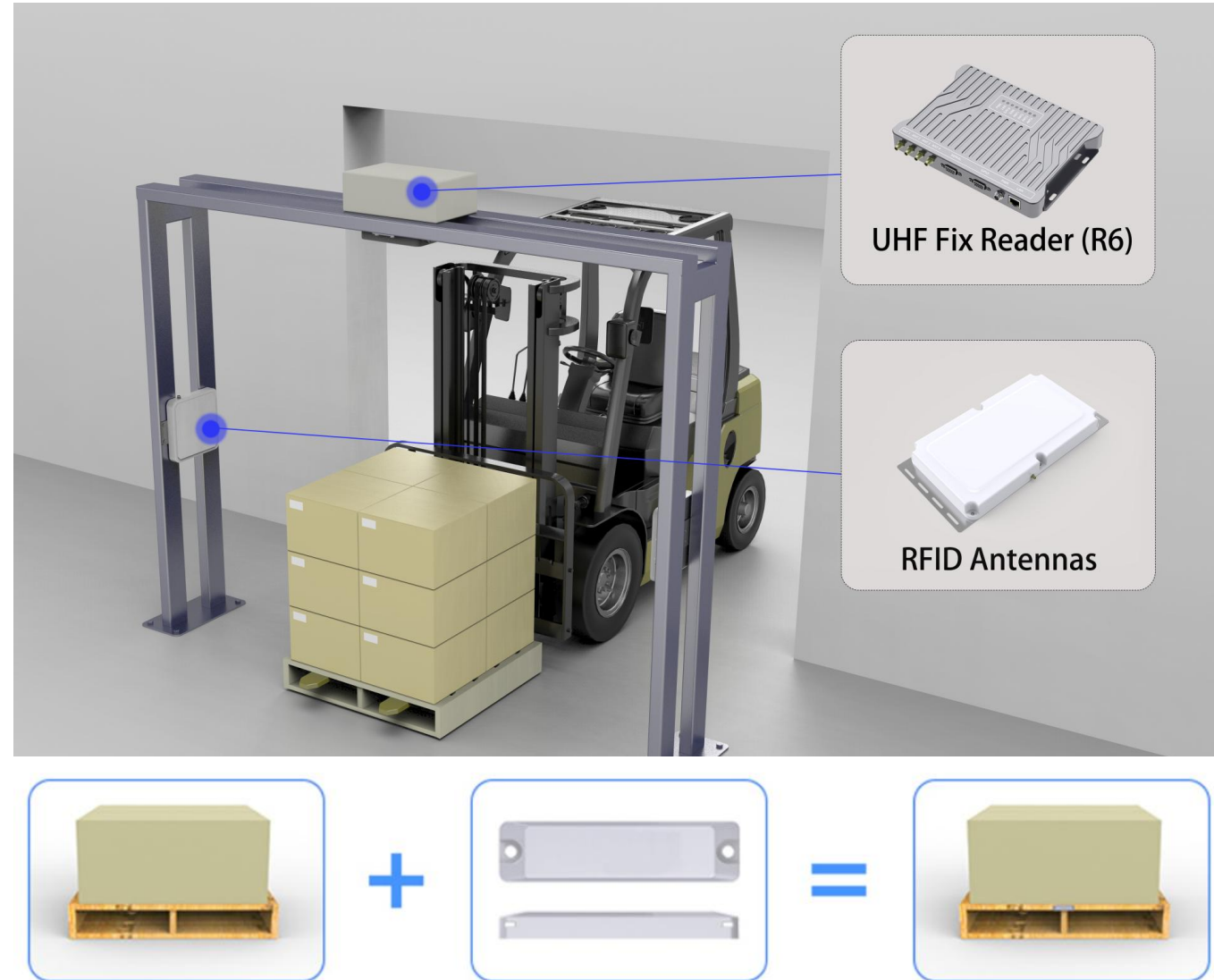
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Are You...?

Inefficiency: Relying on manual data entry and manual operation, the inbound and outbound processes are time-consuming and prone to errors

Inaccurate data: Inventory data is delayed or erroneous and cannot reflect the actual situation in a timely manner.

Difficulty in location tracking: Items cannot be accurately located in the warehouse or during transportation, causing management confusion.

Application of RFID in Warehouse Management

RFID warehousing forklift transports goods through the warehouse gate. The reader installed at the warehouse gate automatically collects the RFID tag information on the goods and the electronic tag information on the pallet, and reads the information and sends it directly to the data center. The background realizes the binding of the goods information and the pallet, completes the entry scanning and binding, realizes automatic scanning, automatic binding, and automatically completes the entry operation without manual intervention.

UHF Fix Reader (R6)

RFID Antennas

Application of RFID in Warehouse Management

Manual inventory: the warehouse administrator uses RFID hand-held machine to read the label information of the carton board in the warehouse, and checks whether the real-time inventory data is consistent with the warehousing information in the database.

✦ Most Powerful Application Performance.

✦ Fast Wireless Connectivity.

✦ High protection.

✦ Powerful Capture Functions.

✦ Superior UHF RFID Reading Capability.

✦ Highly Customizable.

RFID Applications Advantages

1 **Automated data collection**

RFID readers can quickly read RFID tags on goods and pallets through wireless signals to achieve batch data collection, replacing traditional manual code scanning and saving operation time.
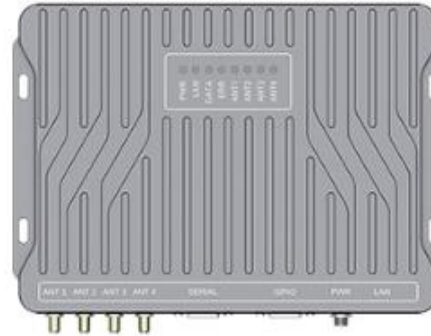
2 **Real-time data transmission**

The RFID device transmits the collected information to the data center in real time, and the backend system updates the inventory data in real time to achieve full-process tracking and dynamic management of goods.

3 **Seamless system integration**

RFID hardware is linked with warehouse management system (WMS) or enterprise resource management system (ERP) to provide enterprises with end-to-end information management capabilities

Fixed RFID Readers

- Range: 0-10m (The reading distance varies with the gain of the antenna)
- Size: 216mmx155mmx25mm
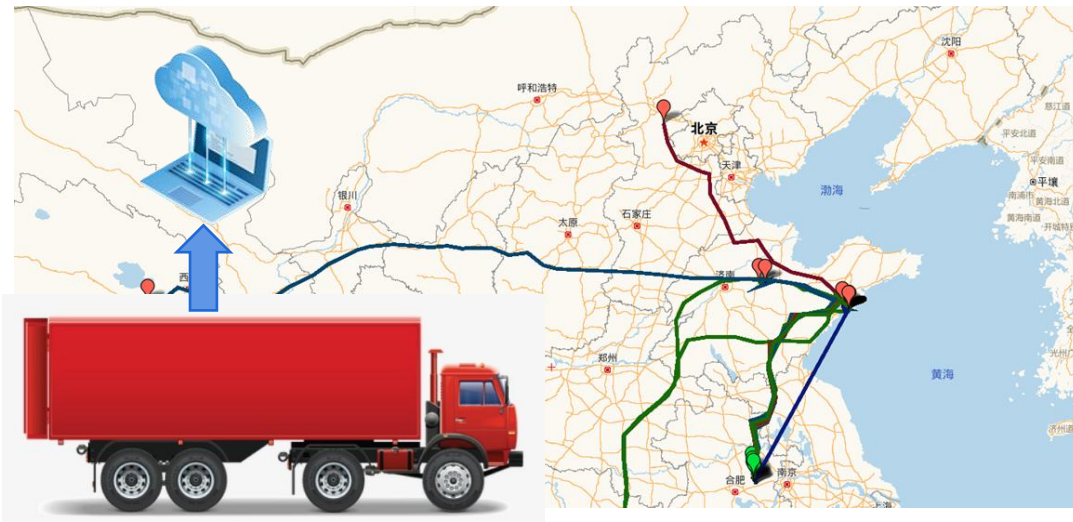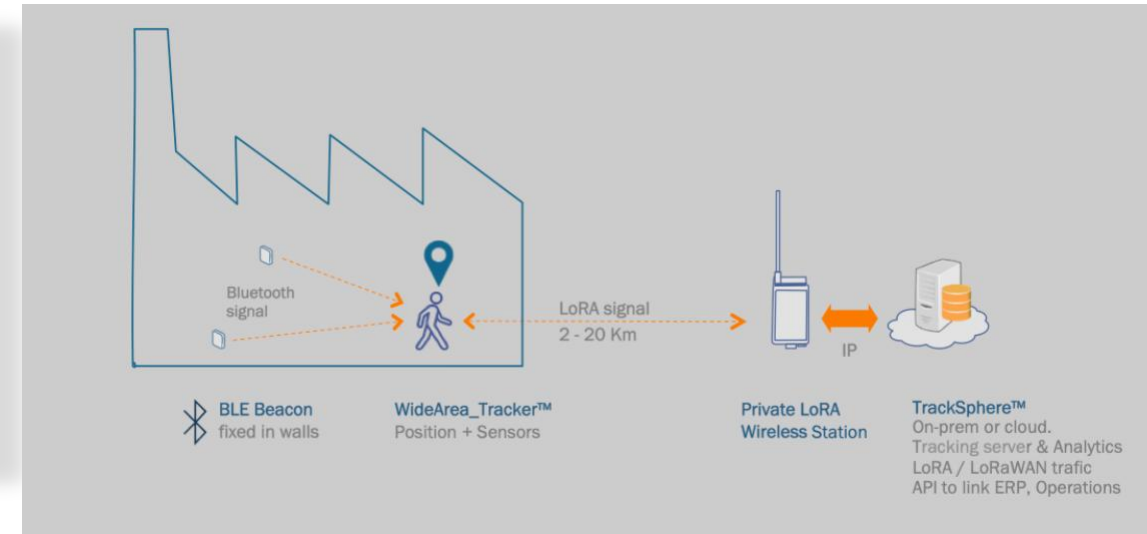- Communication: TCP/IP、RS232

RFID Antennas

- Gain: 10.5dBi
- Polarization: Circular
- Size: 460mm×220mm×35mm

Location tracking solutions

◆INDOOR TRACKING: BlE + LoRa

The combination of Bluetooth and LoRa offers significant advantages for indoor positioning. Bluetooth provides high-precision tracking for key areas, while LoRa ensures wide coverage for large-scale data transmission. This integration balances precision and range, with features like low power consumption, cost efficiency, and strong scalability.

◆OUTDOOR TRACKING: Satellite + 4G

Satellite positioning (e.g., GPS, BeiDou) combined with 4G provides precise tracking and real-time data transmission. Satellites offer wide coverage and high accuracy, while 4G ensures reliable updates even in blocked signal areas. This low-power, flexible solution is ideal for logistics, transportation, and agriculture applications.

Asset tracker

◆**Asset Tracker**

The tracker communication solution supports both Lora and Cat1 communication modes, which can greatly reduce power consumption in the warehouse or cabin; the positioning solution supports BLE indoor positioning and GNSS outdoor positioning, covering the entire process of the measured assets; the power solution has a built-in rechargeable lithium battery and an external photovoltaic panel to support outdoor energy acquisition; the device also has an integrated accelerometer to monitor excessive vibration, excessive tilt, etc. during cargo transportation.

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