UHF RFID Logistic Management

System Construct Presentation

UHF RFID Features

- WENSHING Electronics Co., Ltd was established in 1987, our major business line ranges from computer, electronics to communications including the design, manufacturer, production and sales in this related fields. We provide fourth UHF RFID long range readers, including Industrial Reader, Handheld Reader, Out-door Reader and In-door Reader operate in 840~960MHz and complies with industry standard.

- Industrial Reader reading range able to reach 35 meters, 7 meters for Handheld Reader and 30 meters for Out-door and In-door Reader. Suitable in different passive tags and interfaces, complies with the industry standard.

- RFID readers can both write and read the tag, capable of handling above 200 tags, fast processing. Adapt to warehouse management requirement of supply chain. No need for extra human labor cost, it greatly improves tracking quantities and directions, step further for making the cost down and more efficient.

- Passive Tag features highly security, greater storage data capacity compared with traditional bar code and not easily been counterfeited. More than million times of re-write and read functions, it is able to withstand in harsh environment owing to a special-made material of TAG proofing longer product lifetime with additional features as non-directional limitation and cost-effective.

Brief Introduction

WENSHING electronics applies the UHF RFID technology into "RFID Logistic Management", It provides comprehensive applications including self-check in/out, rapid inventorying check, high-speed searching misplaced book and burglar-proof system.

Highly decrease the procedure of check in/out and inventory work. On the contrary, it increases the security, improve the lending book management and solve the security magnetic stripe drop-out situation. Not only help library staff works more efficiency but also make the readers more satisfied.

System Structure

UHF RFID Handheld Reader

- Connect with Android smartphone in order to read and write the information on tag. Also rapid uploading or updating the information during the connection with the mainframe.

Android Smart Phone

- Using smartphone to read the barcode on book and connect with UHF RFID handheld reader to write into the corresponding tag.

UHF RFID Industrial Reader

- Connect with system mainframe, immediately monitoring books in/out and inventory.

Main System

- Integrated books position management, inventory check management and check in/out management.

UHF RFID Handheld Reader

- ## WS-LOOKID Handheld Reader：

  Size：135*108mm (W*D)
  Frequency：902~928MHz (Adjustable)
  Sensitivity：-86dBm
  RF Output power：1W (30dBm)
  Distance：7m (MAX.)
  Interface：Wi-Fi、Bluetooth (Serial Port Profile)
  Memory ：Micro SD 32G (MAX.)
  Power supply：DC 5V 1A
  Protocol：EPC Class 1 Gen 2 ISO18000-6C IS18000-6A/B
  Wi-Fi：IEEE802.11b/g
  Bluetooth：Bluetooth V2.1+EDR Class2
  Wi-Fi：WEP64/WEP128/ TKIP/CCMP(AES)　OPEN/WPA-PSK/WPA2-PSK

UHF RFID Industrial Reader

- ## WS-UHFRFIDANT4 Industrial Reader :

    Size：160*160*55mm (W*D*H)

    Frequency：902~928MHz (Adjustable)

    Sensitivity：-90dBm
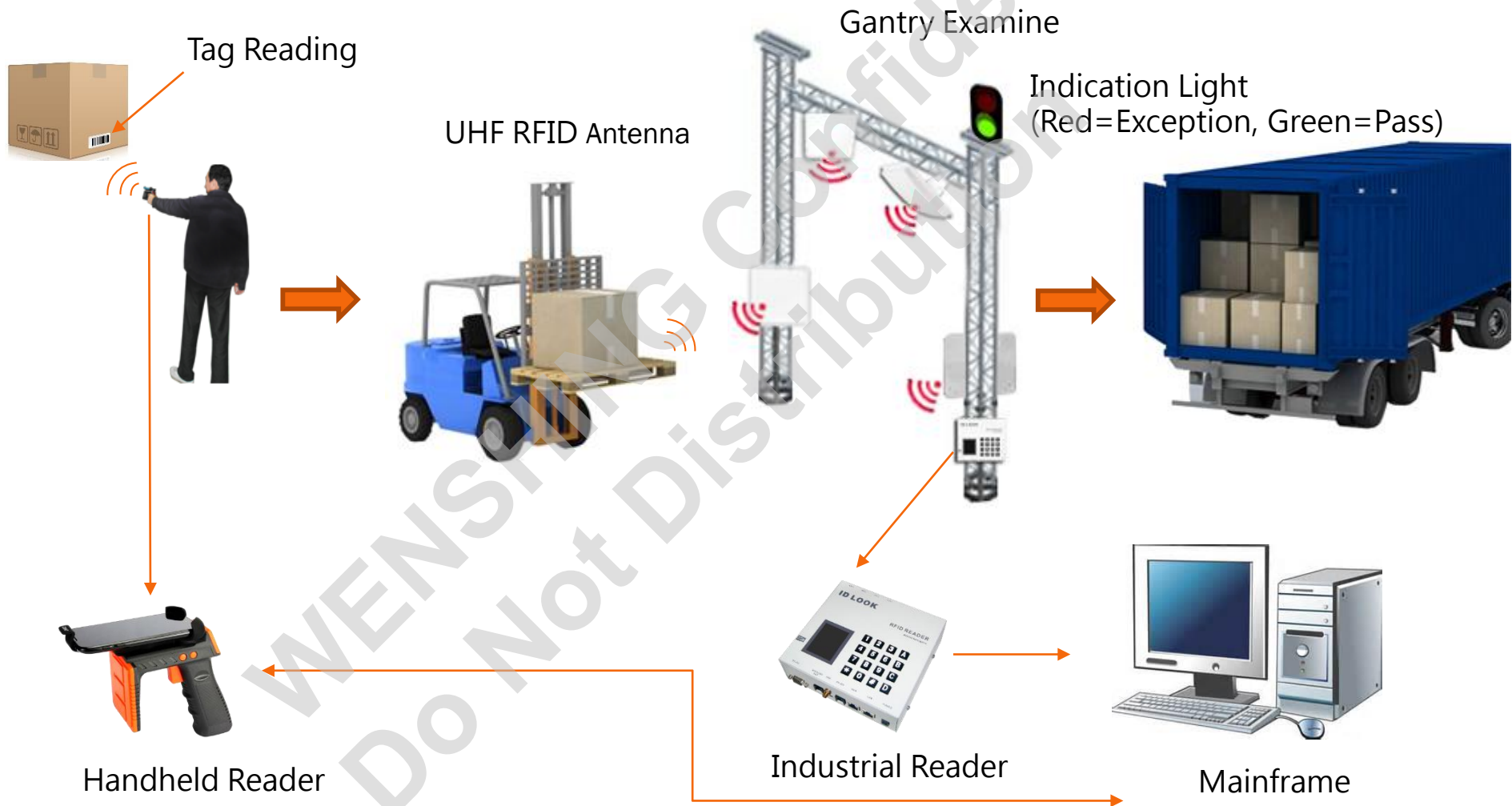
    RF Output power ：2W (33dBm)

    Distance：35m (MAX.)

    Interface：Weigan26/34、RS232、RS485、Wi-Fi 、Ethernet

    Power supply：DC 12V 1A

    Protocol：EPC Class 1 Gen 2 ISO18000-6C IS18000-6A/B

    Wi-Fi：IEEE802.11b/g standard

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System Procedure

Tag Reading

UHF RFID Antenna

Gantry Examine

Indication Light
(Red=Exception, Green=Pass)

Handheld Reader

Industrial Reader

Mainframe

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Packing Management

Stick the Tag on the carton, use the handheld reader to read product data to the Tag, and the carton is certified.

Tag

Stick Tag on the carton.

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Stock In Management

When goods pass through the Gantry Examine and into the warehouse, all information will be written to the Industrial Reader, then the mainframe of warehouse and network system will command the cargo system to the corresponding allocation.
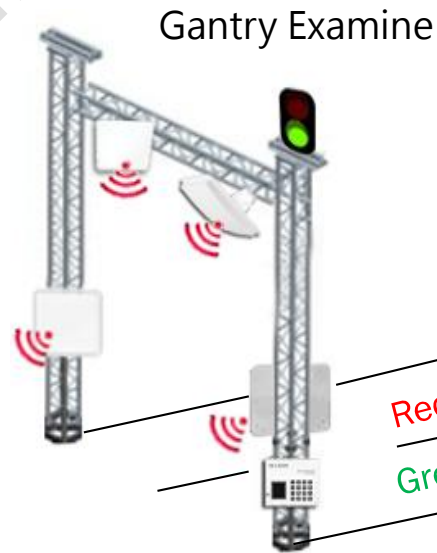
Mainframe

Gantry Examine

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Stock Out Management

Before the forklift receives shipping command to pick up goods to the designated location, it will reconfirm the accuracy, then deliver goods to the shipping port, meanwhile the Industrial Reader on the Gantry Examine will read the Tag information to verify and release shipments.
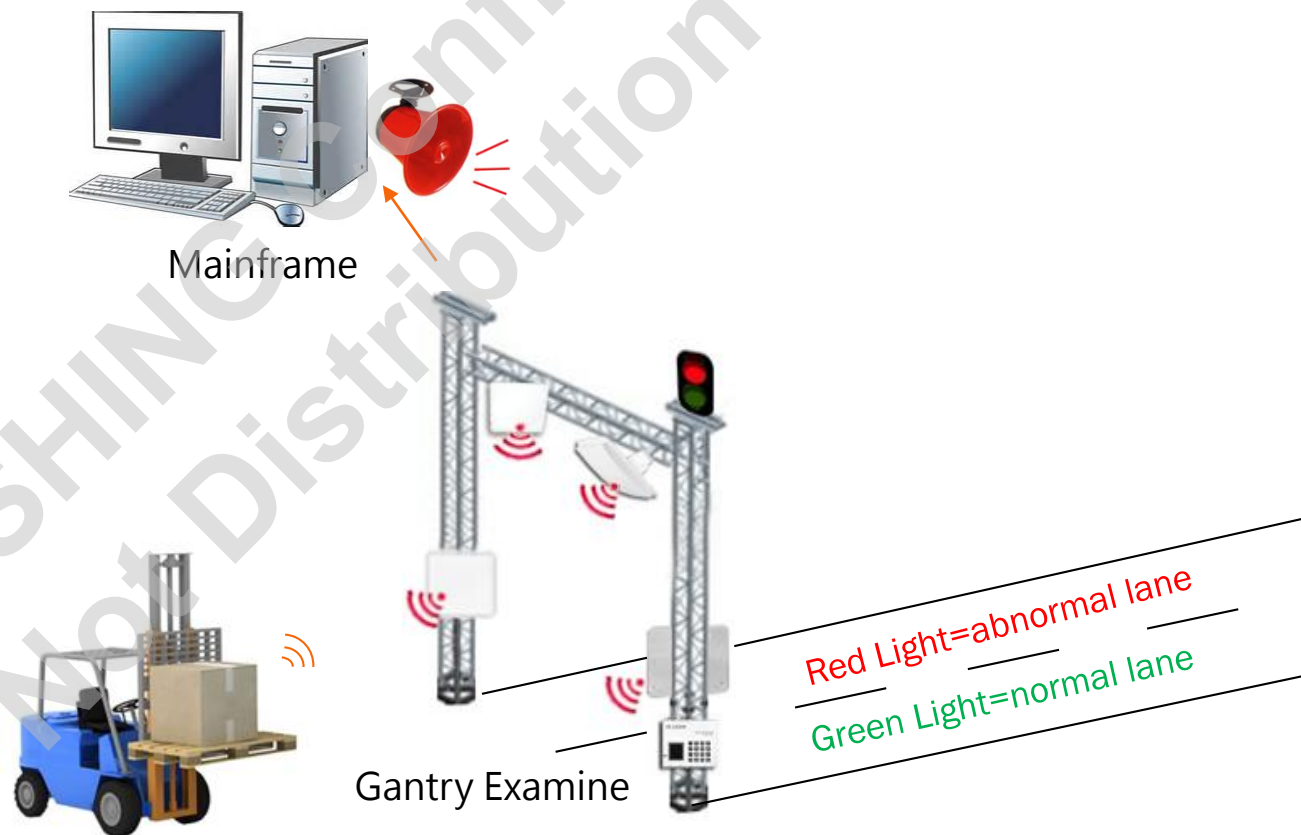
Mainframe

Gantry Examine

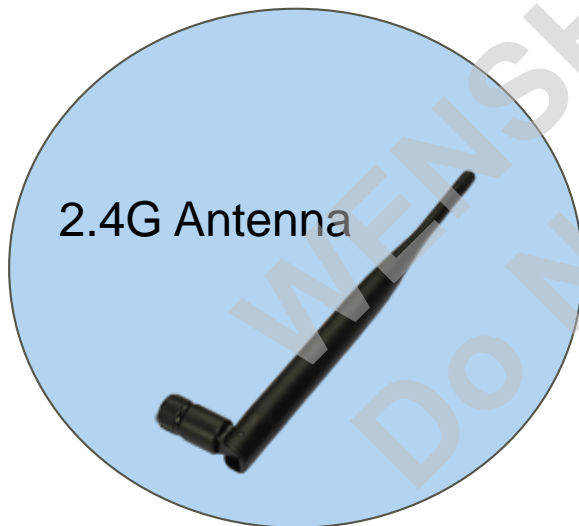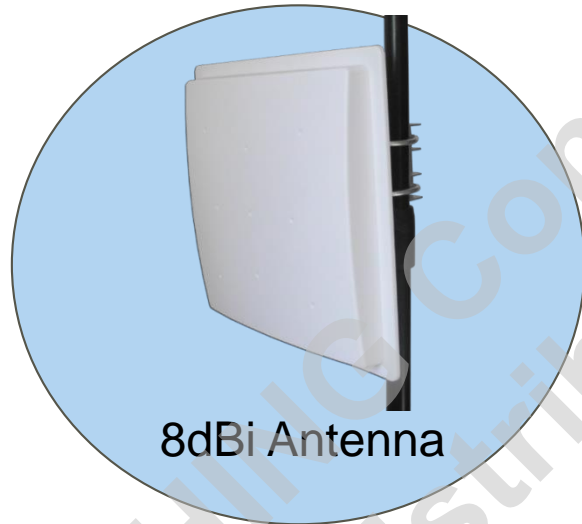Red Light=abnormal lane

Green Light=normal lane

Unusual Management

When the goods misplaced, the mainframe will reveal abnormal information with alarm, and the red light on, indicate the driver to the abnormal lane to reconfirm the goods information.

Mainframe

Gantry Examine

Red Light=abnormal lane

Green Light=normal lane

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Accessory

8dBi Antenna

9dBi Antenna

2.4G Antenna

12dBi Antenna

Directional Antenna 8dBi

Technical Specifications	
Frequency (MHz)	902~928
Bandwidth (MHz)	26
Voltage Standing Wave Ratio (VSWR)	≤1.25
Antenna Gain (dBi)	8
Antenna Length (mm)	225*225*30
Polarization	Circularly polarized
Maximum Power (W)	100
Input Impedance (Ω)	50
Horizontal Lobe width (˚)	60
Vertical Lobe width (˚)	60
Front to Back ratio（dB）	25
Half-Power Angle E-Plane	68
Half-Power Angle H-Plane	68
Connector	SMA
Antenna Cover Material	ABS

Directional Antenna 9dBi

Technical Specifications	
Frequency (MHz)	902~928
Bandwidth (MHz)	26
Voltage Standing Wave Ratio (VSWR)	≤1.25
Antenna Gain (dBi)	9
Antenna Length (mm)	280*280*40
Polarization	Circularly polarized
Maximum Power (W)	100
Impedance (Ω)	50
Vertical Lobe width (°)	60
Horizontal Lobe width (°)	60
Front to Back ratio（dB）	20
Connector	SMA
Antenna Cover Material	ABS

Directional Antenna 12dBi

Technical Specifications	
Frequency (MHz)	925
Bandwidth (MHz)	26
Voltage Standing Wave Ratio (VSWR)	≤1.25
Antenna Gain (dBi)	12
Antenna Length (mm)	445*445*40
Polarization	Circularly polarized
Maximum Power (W)	100
Impedance (Ω)	50
Horizontal Lobe width (˚)	40
Vertical Lobe width (˚)	38
Front to Back ratio（dB）	25
Half-Power Angle E-Plane	38
Half-Power Angle H-Plane	40
Connector	SMA
Antenna Cover Material	ABS

Thank for your attention and your faithful support !