UHF RFID Staff Access Control & Attendance System

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.**

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System Introduction

WENSHING electronics applies the UHF RFID technology into "RFID Access Control & Attendance system", It provide comprehensive applications including staff in and out and attendance management. System function as following:

Personnel Management: Achieve personnel and personnel's records management to increase, transfer or delete personnel reports and printed more conveniently.
System has powerful functions in data analysis and export, allows data easy export to Word, Excel, and Web pages, data analysis keep you aware of all information at any time, it automatically analysis data and generated web reports to published in the Internet, the system provides safe and stable database backup solution that allows you to experience human wisdom management.

IC Card Management: Achieve system password management, card issue, permission settings, change the information, loss report functions.

Attendance System: distributed in the office area, to facilitate the punched-card sign in and out, data transmitted to the database to immediately classify statistics, to lookup any conditions upon request and communicate or exchange information with database.

Access system: the in and out punched card for office and other key areas, to control different staff and effectively prevent unauthorized staff from entering, while to trace staff.

System Structure

UHF RFID Industrial Reader

- Read and write identification card database and connect to the background system, to upload the staff information.

UHF RFID Antenna

- Connected with UHF RFID Industrial Reader to read the database of staff access.

Main System

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

UHF RFID Industrial Reader

- ## WS-UHFRFIDANT4 Industrial Reader :

  Size：160*160*55mm (W*D*H)

  Frequency：902~928MHz (Adjustable)

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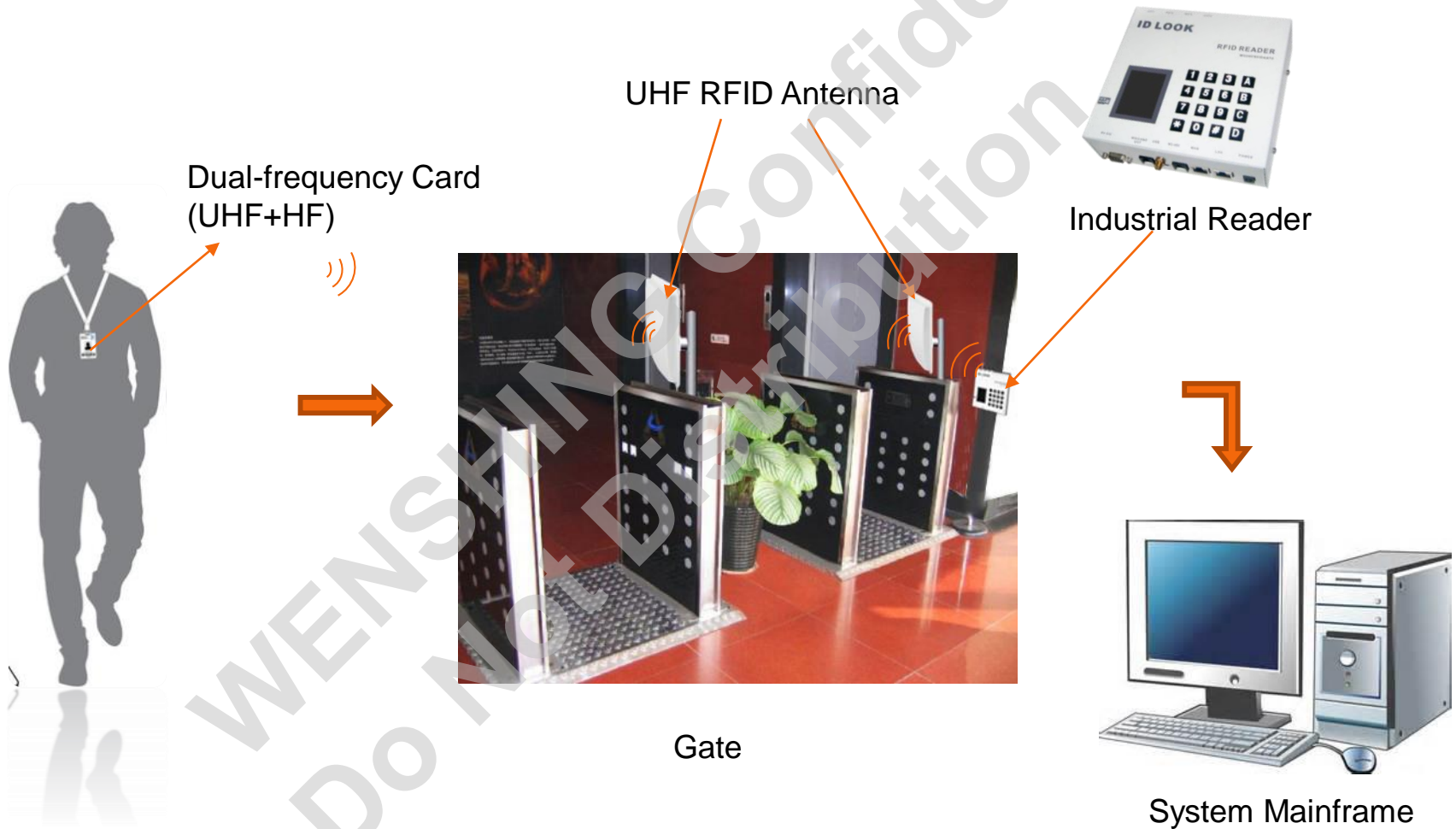
  RF Output power：2W (33dBm)

  Distance：35m (MAX.)

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

  Power supply：DC 12V 1A
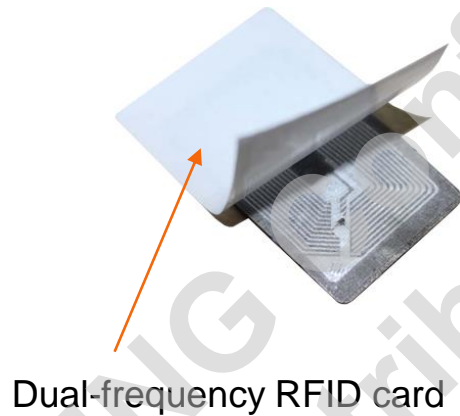
  Protocol：EPC Class 1 Gen 2 ISO18000-6C IS18000-6A/B

  Wi-Fi：IEEE802.11b/g standard

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System Procedure

UHF RFID Antenna

Dual-frequency Card
(UHF+HF)

Industrial Reader

Gate

System Mainframe

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Dual-frequency Card

Staff ID card is a dual-frequency Tag, including LF for access control and UHF. It completely solve the trouble for staff to wearing many cards and as well for cost down.

Dual-frequency RFID card

Staff Access Control

When staff passes through the 【Gate】, 【UHF RFID Antenna】 will read the tag on ID card automatically , then transmit the information(including Name, Dept, date and time) to 【System Mainframe】.

System Mainframe

System Host Computer

To look up the information by opening the database in【System Mainframe】, the system provides very strong data output and analysis function, you can easily output the data in Word, Excel and Web or the other formats based on your request.

	A	B	C	D	E	F	G	H	I
1	Name	Date	Time					3/1	3/2
2	AA	3/1	8:29				AA		
3	AA	3/1	18:19				BB		
4	AA	3/4	8:14				CC		
5	AA	3/4	17:41						
6	AA	3/5	8:28						
7	AA	3/5	18:21						
8	AA	3/6	8:31						
9	AA	3/6	17:54						
10	AA	3/7	8:27						
11	AA	3/7	17:41						
12	AA	3/8	8:28						
13	AA	3/8	17:34						
14	BB	3/1	8:42						
15	BB	3/1	17:45						
16	BB	3/4	8:32						
17	BB	3/4	17:42						
18	BB	3/5	8:38						
19	BB	3/5	17:33						
20	BB	3/6	8:40						
21	BB	3/6	17:38						
22	CC	3/1	8:48						
23	CC	3/1	17:35						
24	CC	3/4	8:47						
25	CC	3/4	17:32						
26	CC	3/5	8:41						
27	CC	3/5	17:31						
28	CC	3/6	8:33						
29	CC	3/6	17:41						

Combine with Cloud Server

Staff Access Record

Main Page

Function Instruction

User Administration

Card Record

Access record

Setting

Columns...

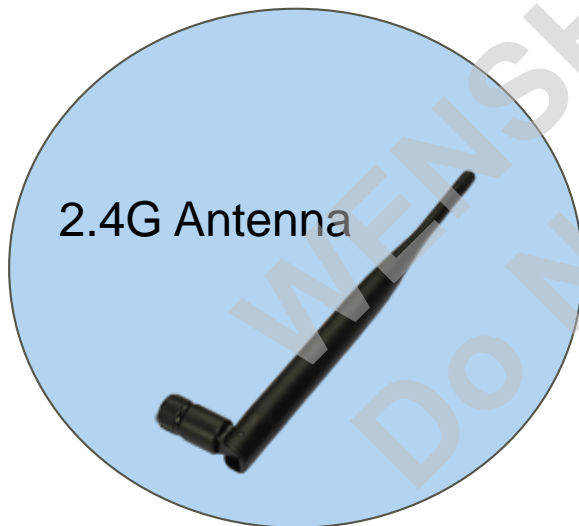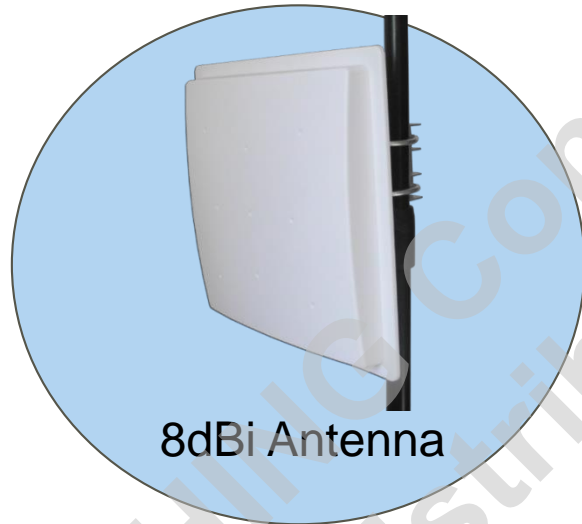| No.	Card Num.	Gate	Check-in	Check-out	Time
1	A0000001	G1	●		20141030 1350
2	A0000001	G1		●	20141030 1650
3	A0000001	G1	●		20141031 1350
4	A0000001	G1		●	20141031 1350
5	B0000001	G2	●		20141101 1350
6	B0000001	G2		●	20141102 1350
7	A0000002	G1	●		20141103 1350
8	A0000002	G1		●	20141103 1550
9	B0000002	G1	●		20141105 1350
10	B0000002	G1	●	●	20141105 1750

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Staff Access Unusual Report

If an unauthorized staff going to the area without permission,【System Mainframe】will receive an unusual report and trigger the alarm, the gate won't open as well.

System Mainframe

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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 !

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