



# UHF RFID Road Bike Access 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.

# System Introduction

WENSHING electronics applies the UHF RFID technology into “RFID Road Bike Access 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 Out-door Reader

- **WS-RFIDIP6 Out-door Reader:**

Size : 215\*175\*75mm (W\*D\*H)

Frequency : 902~928MHz (Adjustable)

Sensitivity : -86dBm

RF Output Power : 1W (30dBm)

Distance : 30m (MAX.)

Interface : Weigan26/34 、 RS485 、 RJ-45 、 Wi-Fi

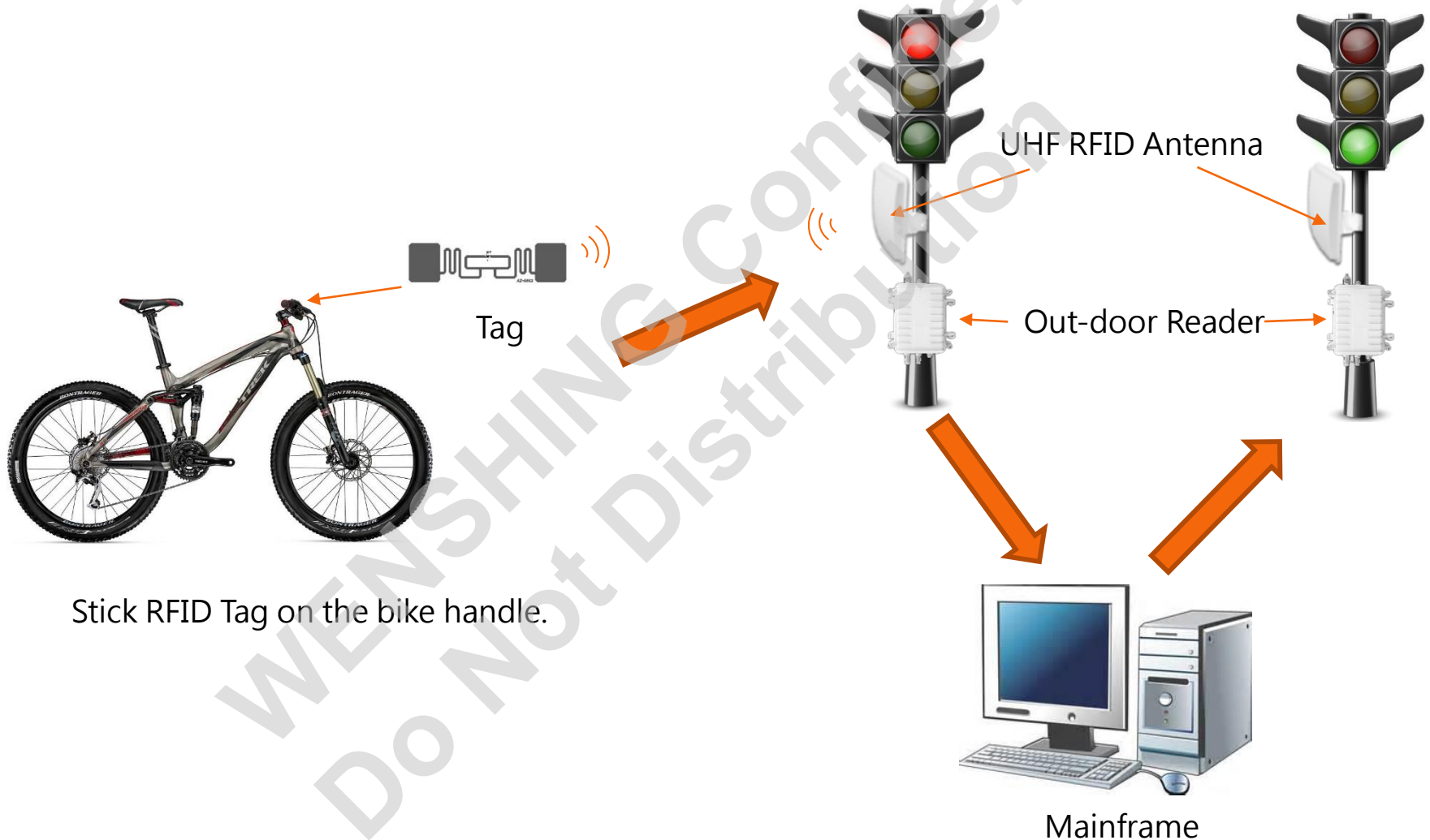
Power Supply : DC 12V 1A

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

Bluetooth : Bluetooth V2.1+EDR Class2

Wi-Fi : IEEE802.11b/g standard

# System Procedure



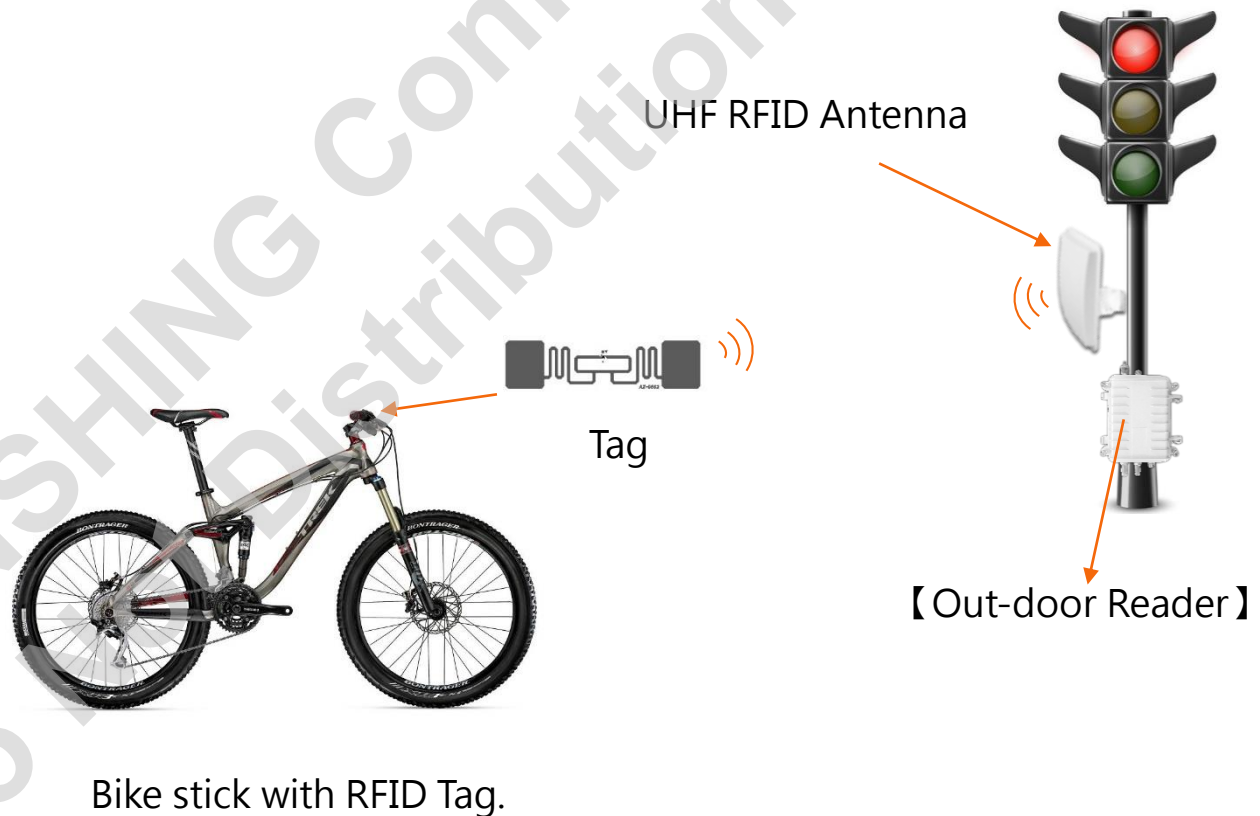
# System Procedure

Out-door Reader will read the information from the RFID Tag which stick on the bike handle and upload to System Mainframe and allow to pass.



# System Procedure

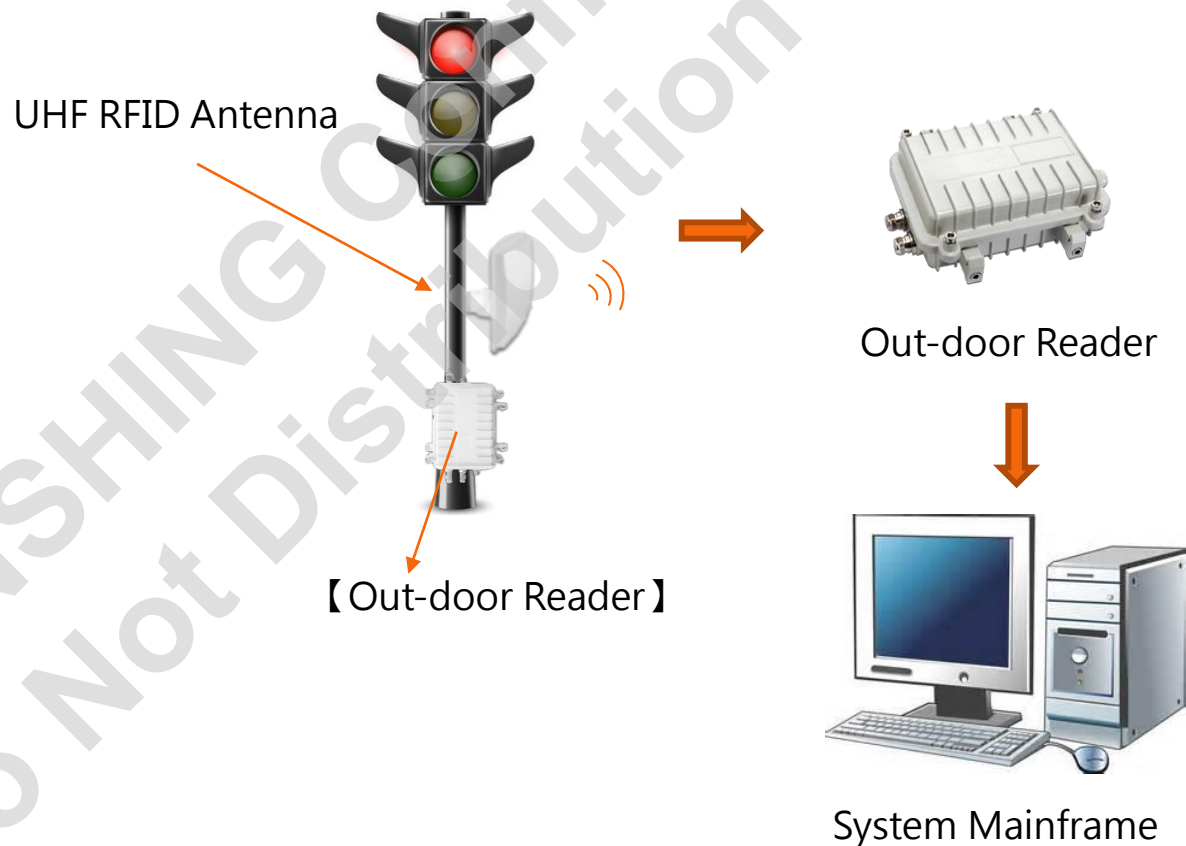
When road bike pass through the crossroads equipped with Out-door Mainframe, UHF RFID Antenna will read the tag information automatically.





# System Procedure

Out-door Reader automatically upload the tag information to the System Mainframe.



# System Procedure

Main Page

Function Instruction

User Administration

Card Record

Access record

Setting

## Road Bike Management System

Columns...

No.	Card Num.	Gate	Check-in	Check-out	Time
1	<a href="#">A0000001</a>	G1	•		20141030 1350
2	<a href="#">A0000001</a>	G1		•	20141030 1650
3	<a href="#">A0000001</a>	G1	•		20141031 1350
4	<a href="#">A0000001</a>	G1		•	20141031 1350
5	<a href="#">B0000001</a>	G2	•		20141101 1350
6	<a href="#">B0000001</a>	G2		•	20141102 1350
7	<a href="#">A0000002</a>	G1	•		20141103 1350
8	<a href="#">A0000002</a>	G1		•	20141103 1550
9	<a href="#">B0000002</a>	G1	•		20141105 1350
10	<a href="#">B0000002</a>	G1	•	•	20141105 1750

# System Procedure

After System Mainframe record Tag information, it instructs to the Out-door Reader, and the LED light turn to green represent pass.



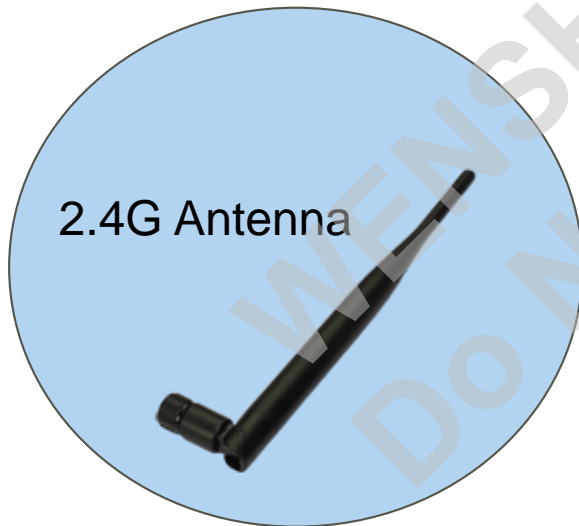
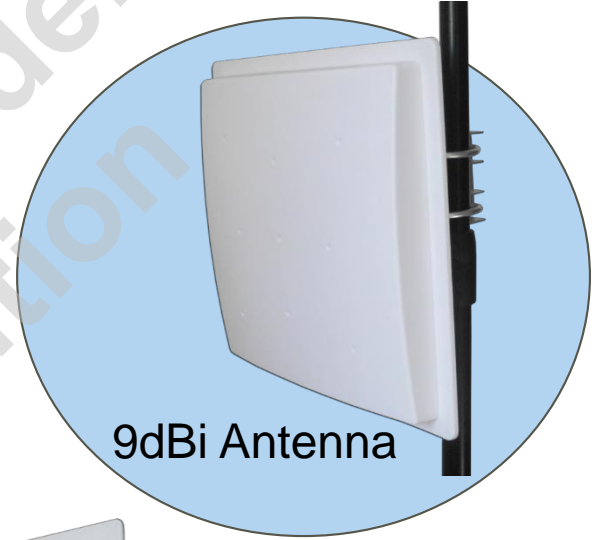
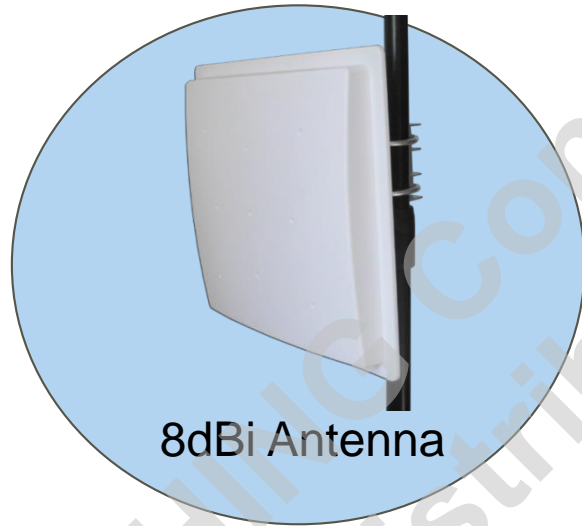
System Mainframe



【Out-door Reader】



# Accessory



# Directional Antenna 8dBi

Technical Specifications	
Frequency (MHz)	902~928
Bandwidth (MHz)	26
Voltage Standing Wave Ratio (VSWR)	$\leq 1.25$
Antenna Gain (dBi)	8
Antenna Length (mm)	225*225*30
Polarization	Circularly polarized
Maximum Power (W)	100
Input Impedance ( $\Omega$ )	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 ( $\Omega$ )	50
Vertical Lobe width ( $^{\circ}$ )	60
Horizontal Lobe width ( $^{\circ}$ )	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
Radome Material	ABS

**Thank for your attention and your faithful support !**

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