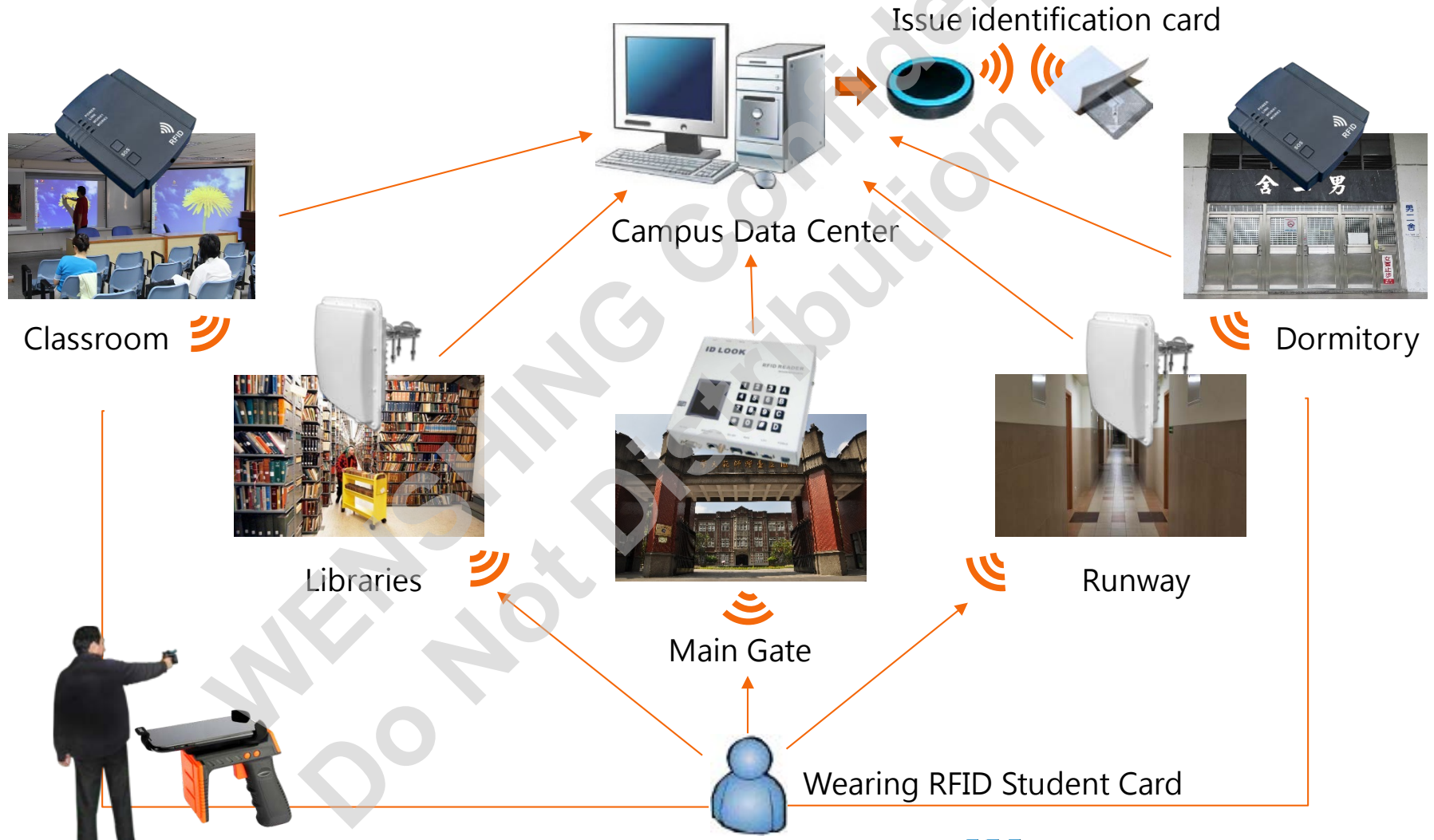




UHF RFID System Construct Presentation

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Do Not Distribute

System Procedure



Teacher/Student Data export

On the integration host, enter the teachers'/ students' data into the system. The system has strong data export and data analysis functions, where data export allows data information export easily to Word, Excel, Web pages and other formats, which is very easy to access.

The screenshot displays a software interface with a top navigation bar containing icons for file operations (save, back, forward, search, zoom, print) and a user profile icon. Below the navigation bar are four tabs: 'អង្គលេខ' (ID), 'អង្គលេខផ្នែក' (Department ID), 'ឈ្មោះ' (Name), and 'លេខទូរស័ព្ទ' (Phone Number). The main form contains the following fields:

- អង្គលេខ: 00002
- អង្គលេខផ្នែក: 00002
- ឈ្មោះ: ហ៊ុន អ៊ុន 曾金英
- ថ្ងៃកំណើត(dd/MM/yyyy): 30/01/0196
- លេខទូរស័ព្ទ: 012 918398
- អាសយដ្ឋាន: ក.ទ ស.ក អ.ប្បស្សី ខ.វ.កម្ពុជា ភ្នំពេញ (金邊市)
- អាសយដ្ឋានបច្ចុប្បន្ន: ក.ទ ស.ក
- អង្គការ: 010190
- កន្លែងសុំវិញ្ញាបនបត្រ: ភ្នំពេញ

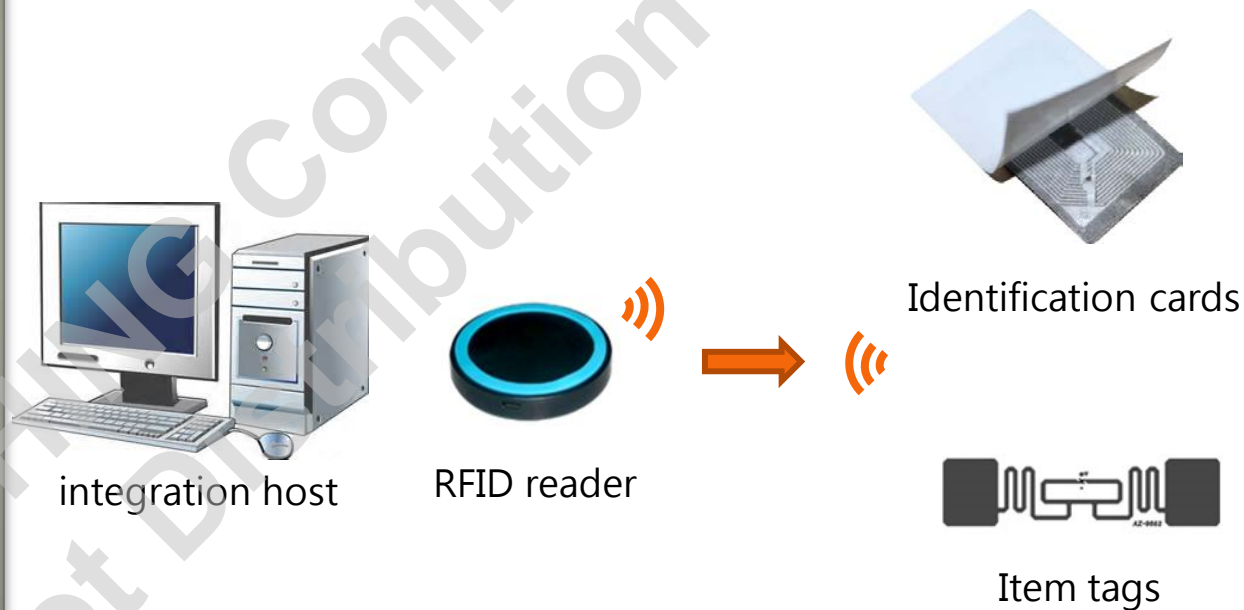
Below the form is a table titled '人事資料檔' (Personnel Data File) with columns: '人員工號' (Employee ID), '部門工號' (Department ID), '姓名' (Name), and '考勤卡號' (Attendance Card Number). The table contains one record for Luong Nhat Mai.

人員工號	部門工號	姓名	考勤卡號
00002	A0001	Luong Nhat Mai 梁选梅	090967629

Additional fields on the right side of the interface include checkboxes for gender, marital status, and various employment types, along with a photo upload section and a list of contract details.

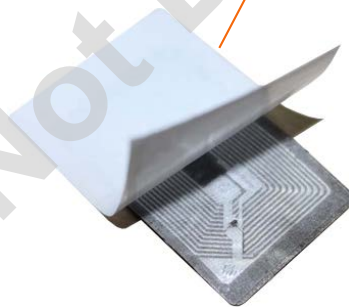
Dual-frequency Card

After registering, we can issue dual-frequency identification card to teachers and students. The identification card uses UHF RFID UHF frequency and low-frequency for access control at the same time. One single card with dual-uses, eliminating the needs of bringing more than one card, which allows students and teachers to save costs and easy to use as well.



Dual-frequency Card illustrate

The ID card can be placed in a shirt pocket, and it can even react static electricity on human body, which is very convenient.



Identification card



UHF RFID reader/writer

Access Control System

The access control system is composed of one main RFID reader/writer and four UHF RFID antennae. When people pass the main gate, the antennae will automatically read the data of the identification cards. If the data is correct, it will record the event, have the door opened, and display the card holder's data on screen which can prevent strangers from breaking in.

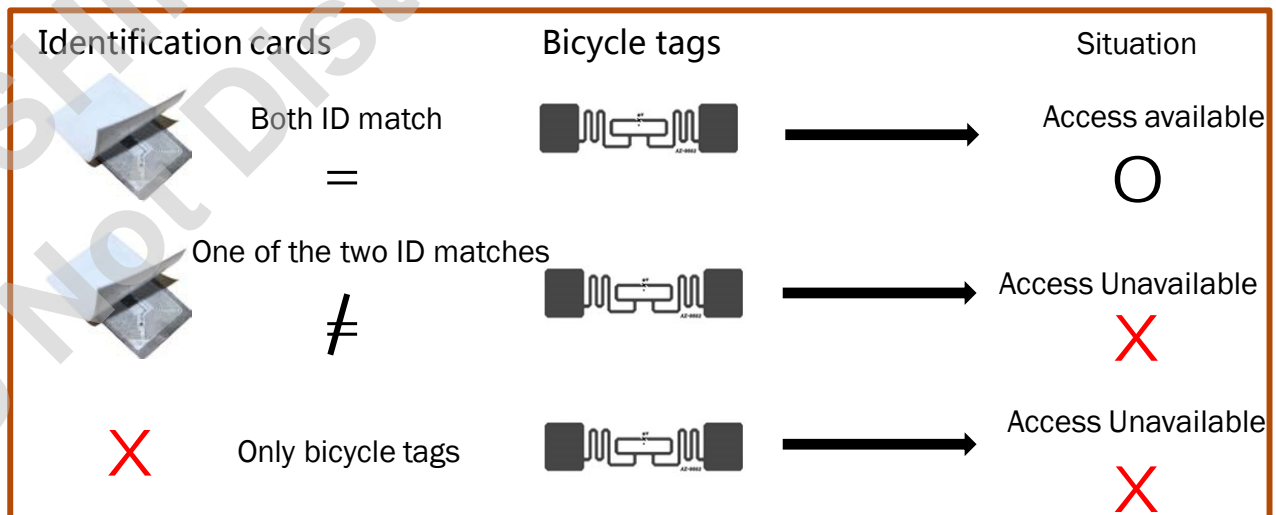
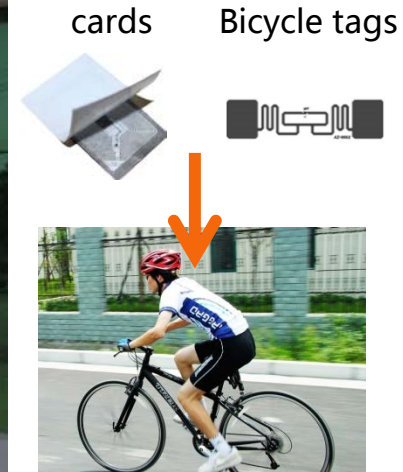


Display screen



Bicycle Management System

Bicycle management system combine with Industrial Reader and 4 piece UHF RFID Antennas. When teachers and bicycle pass through the gate, the Industrial Reader reads the information of Tag and quickly verify and record, check correct to release or error to alarm.



Access Records

Main Page

Function Instruction

User Administration

Card Record

Access record

Setting

Staff Access Record

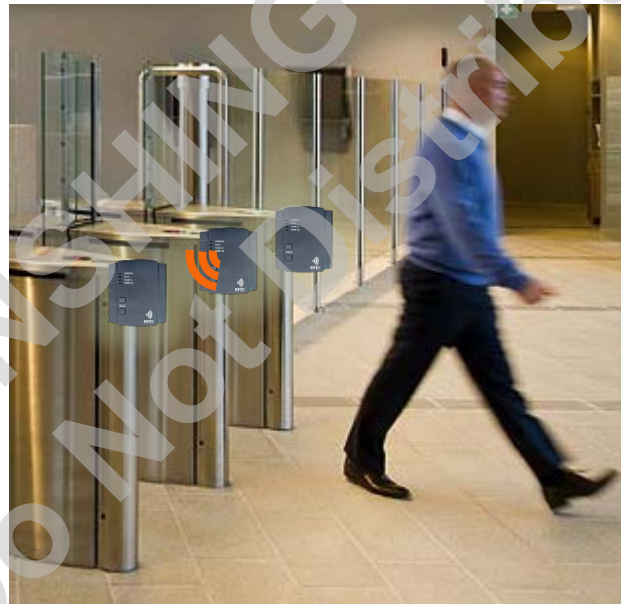
Columns...

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

Classroom Access Control

The classroom access control is composed of one RFID Access Control Reader. When the student passes the door, it can automatically read the information of Tag and instantly verify the ID, and display the card holder's data on the screen, as well as the student list and number.

The display screen for teachers to monitor.



Patrol Checks

The manager can use the RFID Handheld reader with a smart phone to accomplish patrol checks. When walking outside the classroom, the handheld reader will automatically read the ID's data and display on the smart phone instantly. It will show "O" as students' and teachers' presence, and "X" if absence.



Manager can check students' and teachers' presence instantly.



Library Management

The library management system is composed of RFID Industrial Reader and RFID Produce Reader. Given one tag on every book in the library, if the book is missing from the shelf, the manager will be notified on screen instantly.



Book tag



Name : RFID
ID : 02145



Screen displaying the missing book

Library Access Control

The library access control is composed of one RFID Access Control Reader. When the student/teacher enters/leave the library, it can automatically read the information of Tag and instantly verify the ID, and display the card holder's data on the screen.



Dormitory Access Control

The dormitory access control system is composed of one RFID Access Control Reader. When people pass the main gate, it will automatically read the data of ID cards. If the data is correct, it will record the event, have the door opened, and display the card holder's data on screen which can prevent strangers from breaking in. It can also prevent the wrong sex from entering the dorm.



ID information will display on the manager's screen.



Aisle Safety Management

The Aisle Safety Management system is composed of RFID Integration Reader and Infrared Body Detection Device . When people pass through the aisle, it will automatically read and record the data of ID cards, as well as display the card holder's data on screen for the securities to monitor.



Display card holder's data instantly.

Aisle Safety Alert

The Aisle Safety Management system will instantly record when it detects an unauthorized user, and display alert messages on screen to notify the securities, which can prevent strangers from breaking in as well as students sneaking out.



Alert messages will display on screen.

List of Items to Import the System

UHF RFID
Industrial
Reader



Installed at
the main
entrance

UHF RFID
Desktop
Reader



For card
issuing

UHF RFID
Combined
Reader
Writer



Installed on
the aisle
and in the
library

UHF RFID
Handheld
Reader



For the
managers
and patrol
checks

UHF RFID
Access
Control
Reader



Installed at
classroom
and
dormitory
entrances

9dBi
Antennae



Installed at
the main
entrance

List of Items to Import the System

UHF RFID Tube
Antenna



Installed on
book shelves

Infrared Body
Detection Device



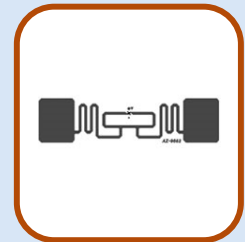
Installed on
aisles

Identification Cards



For users

Item Tags



Bicycles

Books

UHF RFID Industrial Reader

- **WS-UHFRFIDANT4**

Size : 160*160*55mm (W*D*H)

Frequency : 902~928MHz (adjustable)

Sensitivity : -90dBm

RF Output power : 2W (33dBm)

Distance : 35m (MAX.)

Interface : Weigand 26/34 、 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



UHF RFID Desktop Reader

- **WS-UHFRFIDUSB**

Working Frequency : 902~928MHz

Protocol : ISO18000-6B,ISO18000-6C(EPCGEN2)

Reading modes : Timed automatic tags reading, external trigger reading or reading triggered/controlled by software. Reading modes can be adjusted.

Power : 27dBm (Adjustable by software)

Range : Distance adjustable, 0 to 3 meters.

Reading time : Single Tag 64 bytes, Reading time < 6ms

Interface supported : USB

Voltage : DC 5V

Working temperature : -20°C~+80°C

Storage temperature : -30°C~+125°C

Humidity : 20%~95%(non-condensing)

Size : Diameter of 69.5mm, 11mm thick



UHF RFID Combined Reader Writer

- **WS-RFIDALL1**

Working Frequency : 902~928MHz

Protocol : ISO18000-6C (EPC G2) or ISO-18000-6B

Antenna : Built-in 8dBi, Support up to 3 additional PORT

Output Power : 10~33dBm

Interface : Weigand 26/34/42 、 RJ45 、 RS232 、 RS485

Reading Range : 1~20m (depends on the environment and the tag's function)

Operating Mode : GPIO 4 RELAY control point 4 triggers the signal input point

Serial Communication Speed : Support up to 115200BPS

Operating temperature : -10°C to +60°C

Size : 260x260x110 mm

- **Characteristics**

Built-in gyroscope

Built-in thermometer

Built-in altimeter

Built-in 8dBi, Support up to 3 additional PORT



UHF RFID Handheld Reader

- **WS-LOOKID**

Working Frequency: 902~928MHz

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

Antenna: circular polarized antenna (RHCP)

RF Power: 1W (30dBm)

Reading Range: able to reach 7 meter (depends on environment tag size or function)

Display: OEL Display 96x39 pixels

Memory device: Micro SD

Blue tooth: Bluetooth V2.1+EDR Class2

Wi-Fi: IEEE802.11b/g standard

Wi-Fi Encryption and Authentication: WEP64/WEP128/ TKIP/

CCMP(AES) OPEN/WPA-PSK/WPA2-PSK

Adaptor: DC 5V/1A

Battery: Build-in 3.7 v 3000 mAh Li-ion Rechargeable Batteries

Operating temperature: 0°C to +50°C (+32°F to +122°F)



UHF RFID Access Control Reader

- **WS-UHFREADT**

Working Frequency: 902~928MHz

Protocol: ISO18000-6B,ISO18000-6C(EPCGEN2)

Hopping: Broad-spectrum frequency hopping (FHSS) or fixed frequency set by software.

Reading modes: Timed automatic tags reading, external trigger reading or reading triggered/controlled by software. Reading modes can be adjusted.

Power:20~30dBm (Adjustable by software)

Range: Distance adjustable. Ranging 0 to 3 meters.

Voltage: DC 12V

Reading time: Single Tag 64 bytes. Reading time < 6ms

Working temperature: -20°C~+80°C

Storage temperature: -30°C~+125°C

Humidity: 20%~95%(non-condensing)

Size: 125*107.75*23.70mm



902~928MHz 9dBi RFID Antenna

- **WS-ANT925SMA-5**

Frequency : 902~928MHz

Bandwidth : 26 MHz

VSWR : ≤ 1.25

Gain : 9dBi

Max Input Power : 100W

Input Impedance : 50Ω

Polarization Type : Circular polarization

Beam Width E-Plane : 60

Beam Width H-Plane : 60

Than before : 20dB

Connector : SMA

Antenna Length : 280*280*40mm

Radome Material : ABS



900MHz UHF RFID Tube Antenna

- **WS-Tube Antenna**

Frequency : 900~960MHz

Bandwidth : 26MHz

Input impedance : 50 Ohm

VSWR : < 2.5

Max Input Power : 5W

RF connector : SMA Female 180 degree






Outline dimension : 980mm x 55.4mm x 25mm

Temperature : -40°C to +85°C


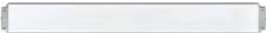

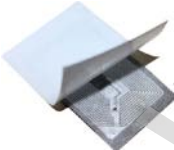

Humidity : 10% to 95% RH



Demo Site

Item Look	Name	Model	PCS
	UHF RFID Desktop Reader	WS-UHFRFIDUSB	1
	UHF RFID Handheld Reader	WS-LOOKID	1
	UHF RFID Industrial Reader	WS-UHFRFIDANT4	1
	UHF RFID Combined Reader Writer	WS-RFIDALL1	1
	UHF RFID Access Control Reader	WS-UHFREADT	1

Demo Site

Item Look	Name	Model	PCS
	9dBi UHF RFID Antenna	WS-ANT925SMA-5	1
	UHF RFID Tube Antenna	WS-Tube Antenna	1
	Infrared Body Detection Device		1
	Identification Card	W-F54	1
	Item Tag	W-0773	1



Thank for your attention and your faithful support !