

# Worker-Attendance Device of Construction Site

## *Security Control System*

### *Gateway EM ver. – 1.0*

#### *User Manual*



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## User Manual

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## Matters that require attention– Sign explanation, Power supply

### ➤ Sign explanation

❖ Please read this manual and keep the using method because for protecting risks or damages on property by using the product correctly.



**warning**

- This is composed of contents on the possibility of death or serious wound in case of violating instructions.



**caution**

- If violate the instruction, you are vulnerable to wounds or occurrence of property loss.

### ➤ Power supply



**warning**



#### ➤ Please plug into correct place

- In case of unstable situation, it causes fire or electronic shock



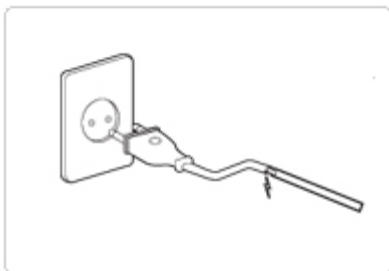
#### ➤ Don't touch the Power supply with wet hand

- It causes fire or electronic shock

## Matters that require attention

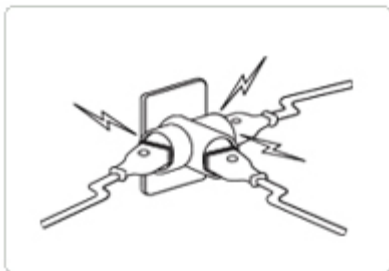


warning



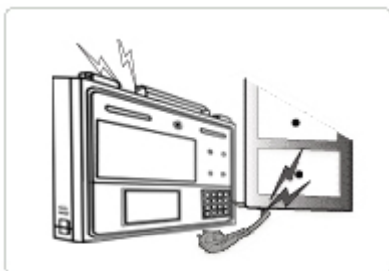
➤ Please don't use a damaged plug or loose outlet

- It causes fire & electronic shock



➤ Please do not use a lot of plugs into one outlet.

- It causes a fire owing to abnormal heat of the outlet.



➤ Don't press the power line with heavy things and bend forcibly or pull it.

- It causes fire & electronic shock



➤ When moving the product, please turn down the switch certainly and then move it after taking out external cable.

- It causes fire & electronic shock

## Matters that require attention

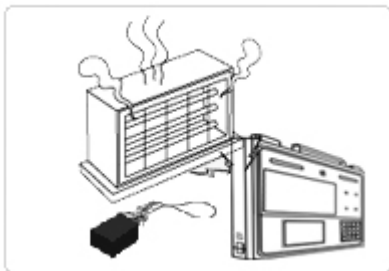


caution



➤ **Don't make DC Power supply (Adapter) device wet & keep away from water**

- It causes fire & electronic shock



➤ **Don't put the Power supply device or Power supply wire around heater.**

- It causes fire



➤ **When you pull out Power supply plug, please use only plug which is not wire. It causes wire problem**

- it causes power switch problem or fire



➤ **when Thunderstorm or lightening situation, please pull out the power supply plug**

- It causes electric shock and fire appliances' abnormality.



Reference

Theses images are just for reference. It can be different from real product appearance

## Product summary

### 1. Summary

- The entry control management using RFID card.
- Real-time confirmation on the entry situation
- It stores output data of workers and has transmitting function to remote- place server by using network

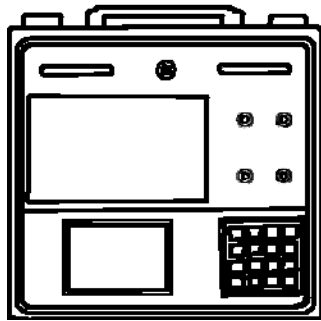
### 2. Feature

- Photographing, external camera input, image output, external RFID device input, external RS-232 device input, sensor input and relay output are available by connecting with various external devices.

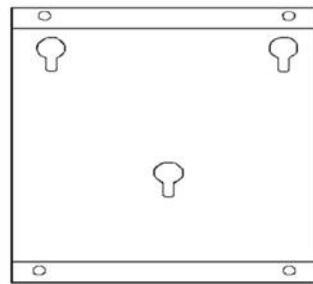
### 3. Interlockable External device

- CCTV Camera, TV Monitor
- Turnstile Gate, Automatic door
- Crossing barrier, Electric sign, Flash light and so on
- 13.56 MHz RFID Reader
- Various Sensor like movement, temperature, humidity, wind direction, wind speed etc

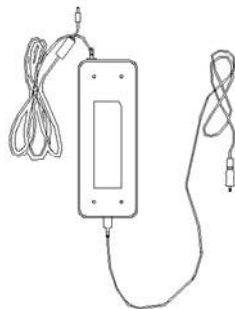
## 1. Composition item check



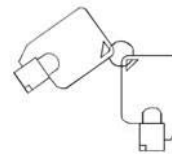
**Gateware EM Main body**



**Main body holder**



**Main body Adapter**



**Main body Key**



**SD Memory**

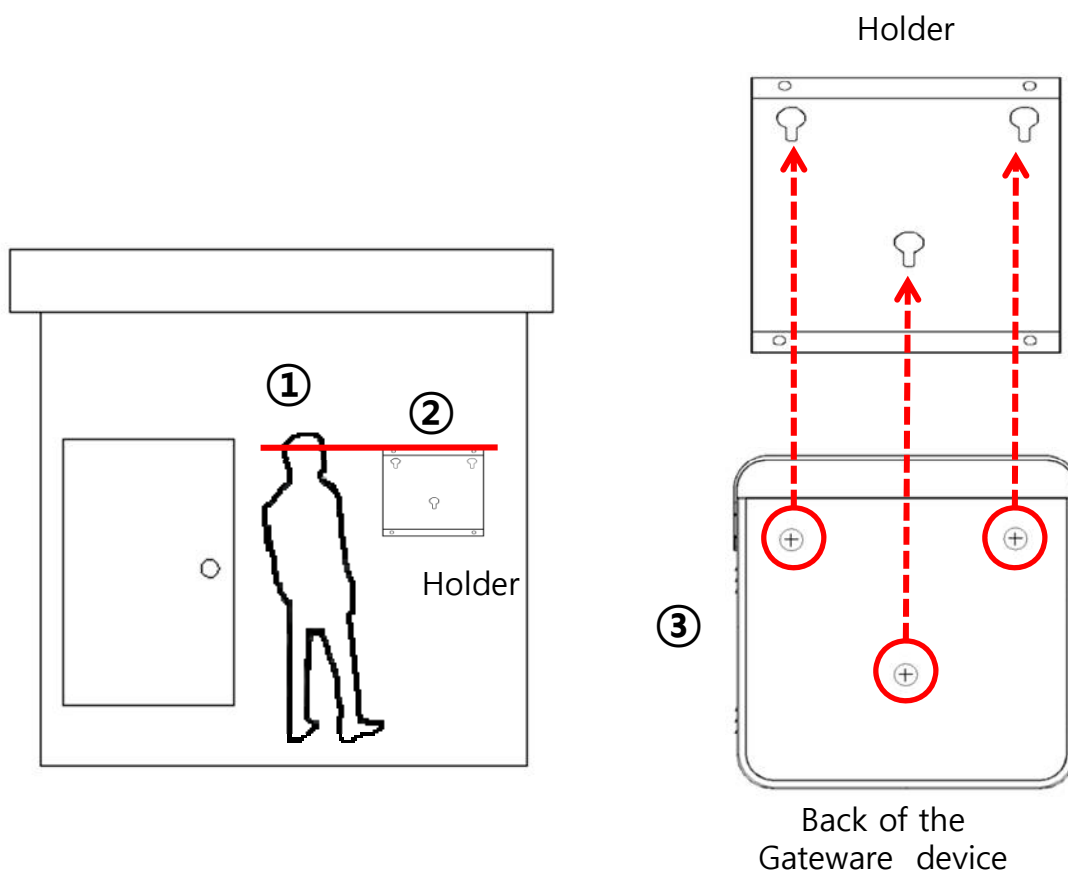


**USB memory**



**User Description**

## 2. Installation method

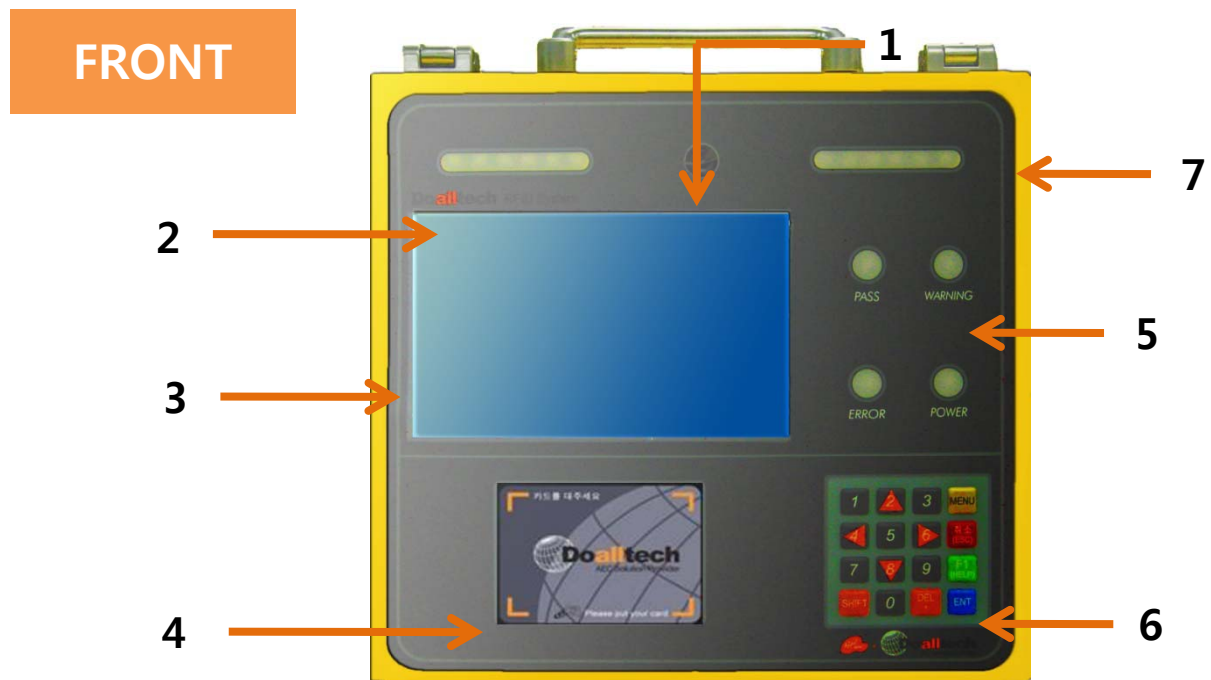


### EX) In case of installing at gate guard post

- ① Please confirm the installation position after matching up per end of the fixing board and eye level of the worker.
- ② Please install the fixing board to installation position by using steel plate screw.
- ③ Hang it by fitting back bolt of the equipment and fixing hole.



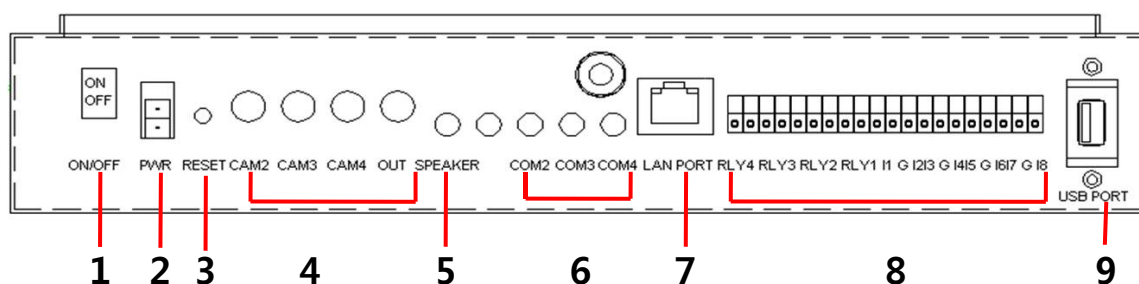
### 3. Each part name & function (Front)



Each part name	Function
<b>1.Camera</b>	When workers scan the card,it takes a photo
<b>2.FLASH</b>	Flash is working as the Time zone of User setting for card check
<b>3.LCD</b>	Camera view & Product status(Reference to 7page)
<b>4.RFID REGISTER</b>	Card check part for worker attendance
<b>5.Status LED</b>	LED shows depending on the Product status
<b>6.KEY PAD</b>	Use Key pad when user set the product setting
<b>7. WIFI ANT.</b>	WIFI Antenna is fixed.

### 3. Each part name & function(Bottom)

#### BOTTOM



Each part name	Function
<b>1.ON/OFF</b>	Product ON/OFF button
<b>2.PWR</b>	Connection terminal of Power supply Adapter
<b>3.RESET</b>	Product default setting
<b>4.Screen in/output terminal</b>	Installation pot of Additional camera (Reference to 14page)
<b>5.SPEAKER output terminal</b>	Installation pot of Additional speaker (Reference to 14page)
<b>6.SERIAL PORT</b>	Installation pot of Additional RFID READER (Reference to 9, 14page)
<b>7.LAN PORT</b>	Internet connection Pot
<b>8.Signal in/output terminal</b>	Installation Pot of RELAY,SENSOR (Reference to 14page)
<b>9.USB PORT</b>	USB connection Pot






## Screen UI Explanation



- ① Company name, construction work, type of occupations, name and information of the card number are marked after card recognitions.
- ② The resident registration number is showed in case of setting keypad input.
- ③ In case of occurring power supply, network and other errors, the contents will be appeared.
  - During Menu setting mode, key pad instruction is displayed
- ④ Current year, month, day, day of the week are displayed
- ⑤ Current Time is displayed
- ⑥ USB Memory, SD Card Memory connection status are displayed
- ⑦ Power supply status is displayed
  - Charging quantity and using time will be appeared in case of battery mode.

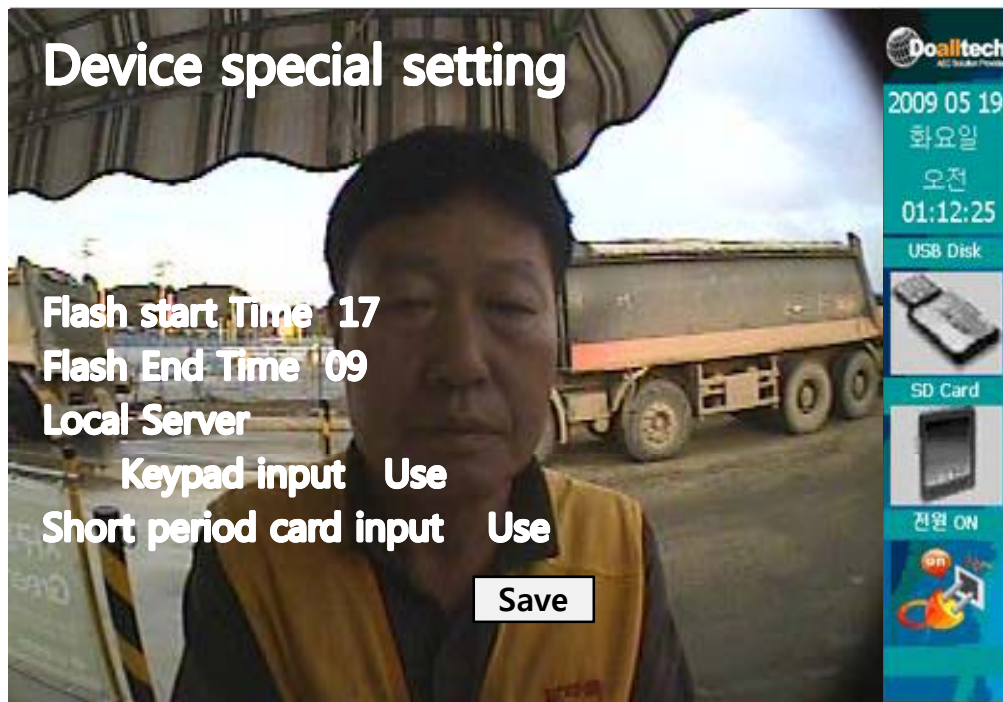
## Keypad control explanation






- ① MENU  This displays button Menu.
- ② Setting Menu is displayed in the default screen. In the Setting menu, please move with the Save button
- ③ ESC  This makes get out of current screen.
- ④ F1  This makes display Help word expression or move previous screen.
  - Usage method is marked at the message window where the Help word is required.
- ⑤ Move to previous screen in Menu setting screen. The focus moves to flash starting Time when located at flash end Time.



## Keypad control explanation











- ① **SHIFT**  This makes the button to next stage.
  - The focus moves to the position of flash end Time when locating in flash start Time. .
- ② **DEL**  This deletes box contents of button text.
  - When there is not contents to be deleted on the IP input text box, this makes movement to previous text.
- ③ **ENT**  Input the figure of button selection.
  - In the Save button, this makes movement to Menu selection page after saving data.
  - In the list box, select previous item.





## Keypad control explanation



- ① When inputting Keypad 1~0 in Menu setting text box, you can input
- ② In main screen, Keypad 2,4   button : Controlling Volume up & down
- ③ In main screen, Keypad 4,6   button Controlling Screen brightness
- ④ In project Code, Keypad 4,6   button 6 Changing English code.
  - Number key 4  Changing English code A to B
  - Number key 6  Changing English code A to Z




## 1. Menu setting – Enter the Menu



- ① This is Main Screen. Camera image is displayed

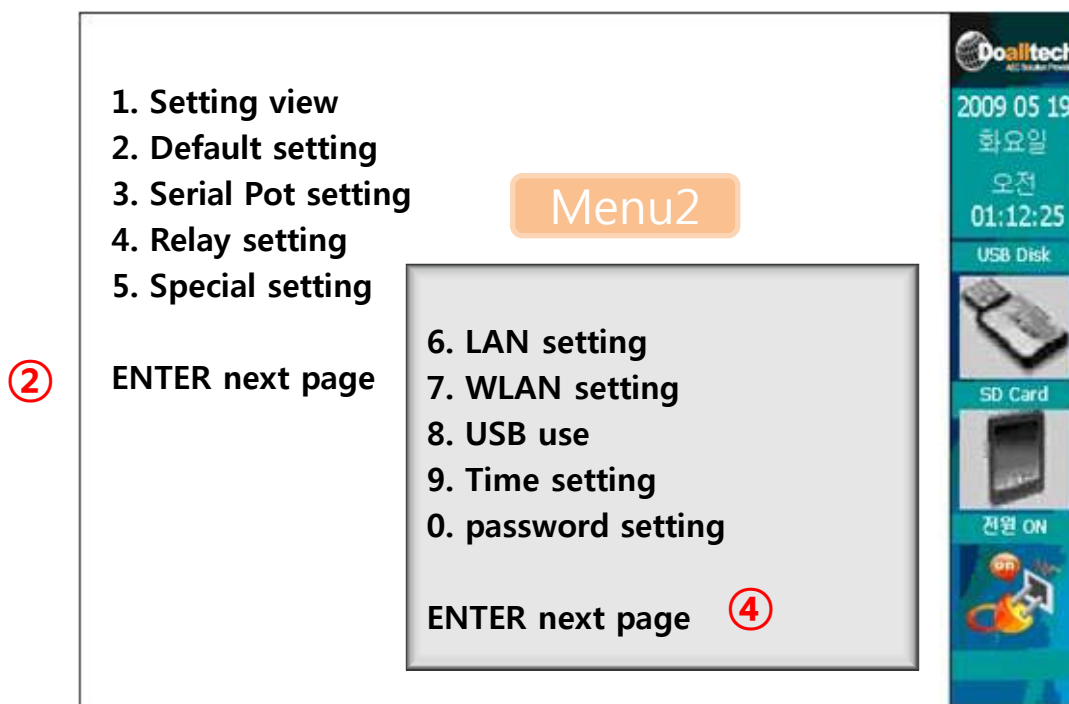
- ② Push the MENU  button


- ③ Password prompt is displayed

- ④ After pushing the Password + ENTER , you can see the Product setting Menu




## 2. Setting Menu – Selecting item



- ① This is product setting Menu page
- ② If you push the ENTER  button, you can move to next page

Menu2



- ③ This is low Menu of the Product setting
- ④ If you push the ENTER  button, you can move to next page
- ⑤ Select the Menu by key pad to move






### 3. Menu setting – Status check

Device Status info,		network status info.	
Project code	IBDD2008	IP use status	DHCP
Attendance	IN/OUT	IP Address	192.168.1.100
Camera use	1 Channel	Default Gateway	192.168.1.1
Pot1	13.56Mhz	Subnet Mask	255.255.255.0
Pot2	Not Use	DNS 1	168.126.63.1
Pot3	Not Use	DNS 2	168.126.63.2
Pot4	Not Use		
Relay1	Not Use		
Relay2	Not Use		
Relay3	Not Use		
Relay4	Not Use		
Flash start	16		
Flash end	09		



- ① Current system status is displayed
- ② If u push the ESC button,  u can return to Menu selection screen



## 4. Menu setting - Default setting

### Device Default setting

Project code IBDD2008


Input data in English


Device number 1

Attendance IN/OUT

Camera use 1 Channel

Save

- ① Default setting Screen of the Product
- ② Enter the project code
  - When inputting English in project code, Move to the project code by using SHIFT  button.

ENTER  in inputting English.

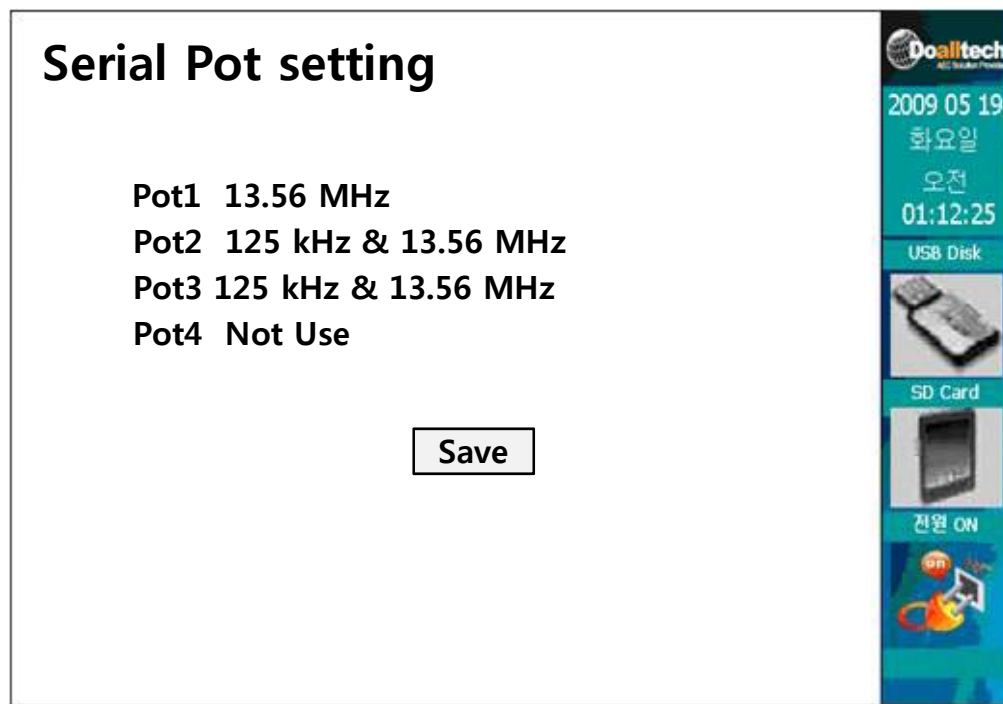
This button is used after changing 4, 6 key of alphabet A indication to English figure.


- ③ Enter the device number
- ④ Set the IN/OUT setting
- ⑤ Set the Camera setting
- ⑥ Push the Save to save setting code
- ⑦ If u push the ESC button, you can return to Menu selection Screen



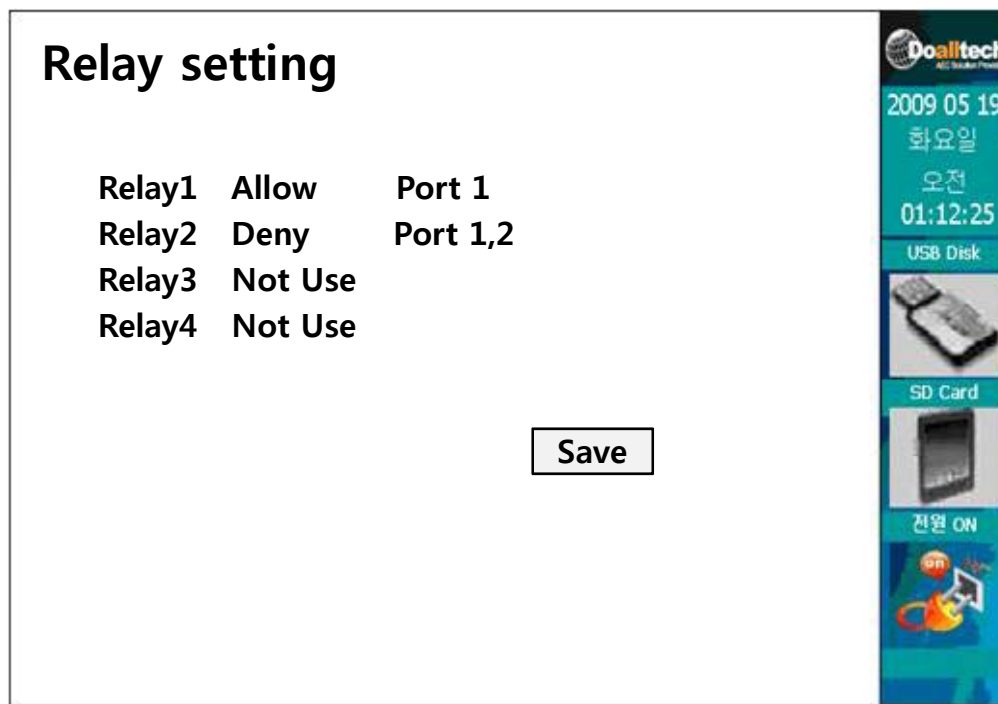
- Project code English input by enter key / setting number by Keypad number
- In case Device number site, If device are 2ea ,please input each 1,2 number


## 5. Menu setting – Serial Pot setting



- ① This is setting Screen of the RFID Serial Pot
- ② Set the RFID Serial Pot
- ③ Pot1 is Internal Pot, Pot2,3,4 are External Pot.
- ④ Set the Additional RFID TYPE.
- ⑤ Save the setting
- ⑥ If u push the ESC  you can return to setting Menu

## 6. Menu setting – Relay setting



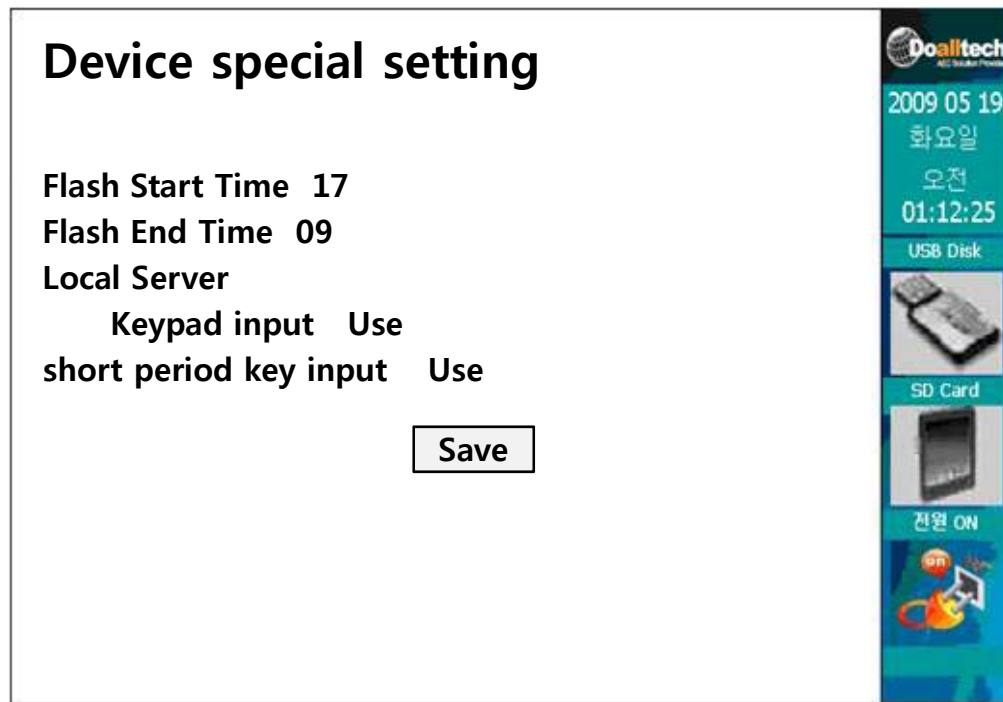
- ① Relay setting Screen
- ② After selecting the Allow(registration), Set the Pot
- ③ After selecting Deny(rejection), Not applied even though set the Pot
- ④ Push the save button for saving setting
- ⑤ If you push the ESC  button, you can return to setting Menu




Reference

- Allow → Enrolling card Data input, Relay works in Serial Pot
- Deny → Unenrolled card Data input, Relay works in Serial Pot,

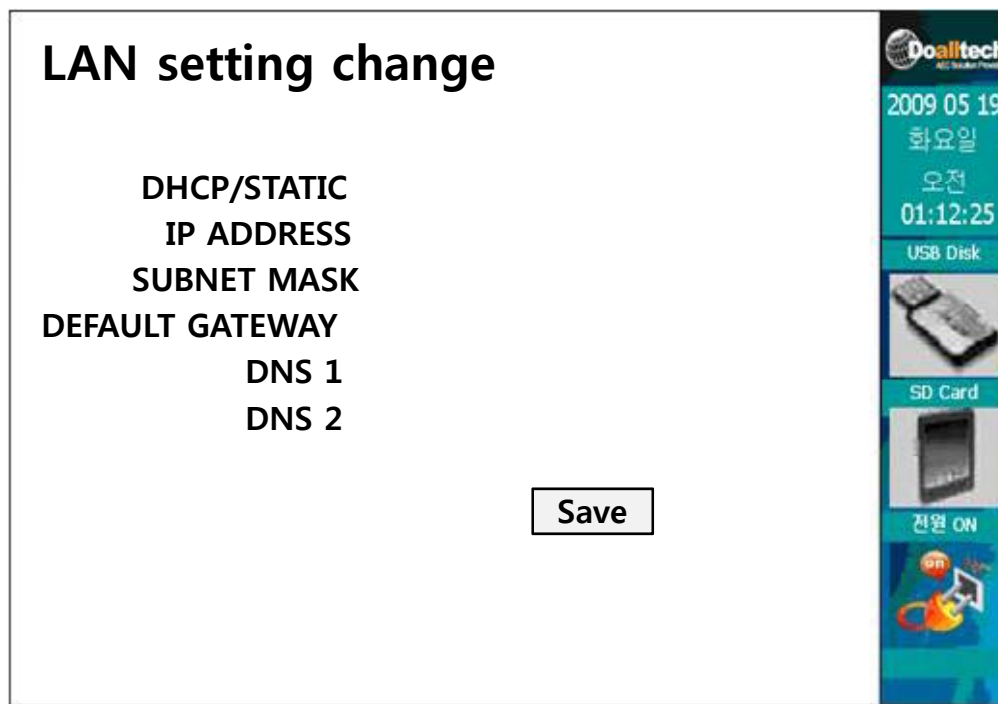
## 7. Menu setting – Special setting




- ① Flash start Time& End Time setting
- ② Enter the IP of Local Server
- ③ **The setting of Keypad input use or not**
  - If it's possible to enter citizen number without card
- ④ Short period card setting
  - After card check, citizen number is entered from Short period worker
- ⑤ Push the Save to save edit code
- ⑥ If u push the ESC  button u can move to next page

- Inputting 24Time way in Flash start Time
- Example) Start Time PM = 17 , End Time AM 9 = 09

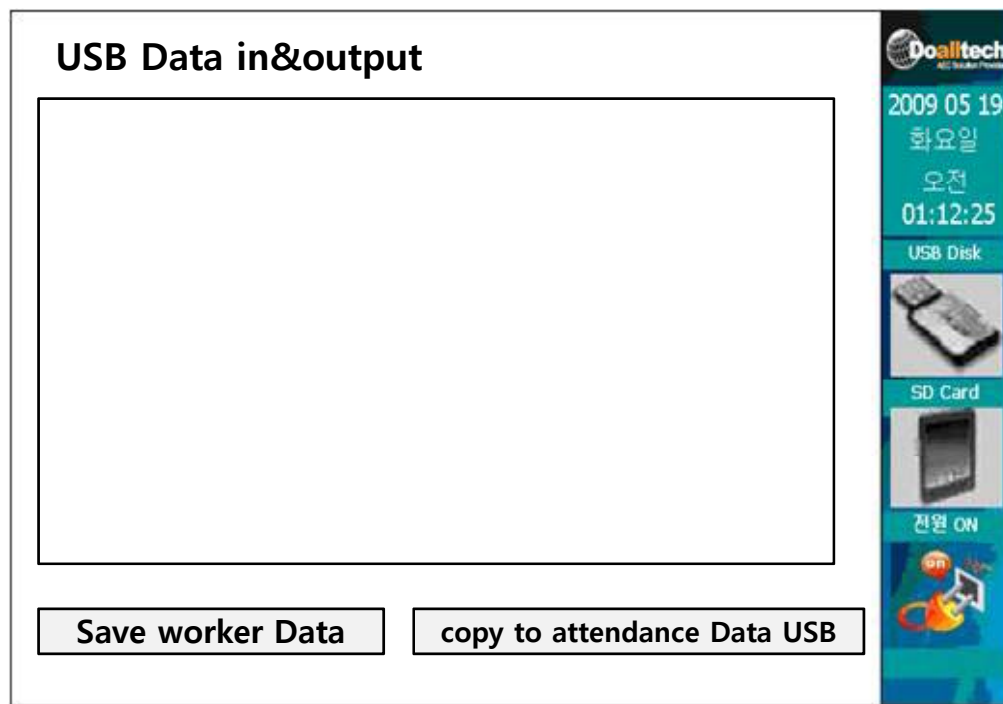
## 8. Menu setting – LAN setting




- ① **Select the DHCP/STATIC use or not**
- ② **STATIC Application situation, set the IP ADDRESS**
- ③ **Set the SUBNET MASK**
- ④ **Set the DEFAULT GATEWAY**
- ⑤ **Set the DNS 1 setting**
- ⑥ **Set the DNS 2 setting**
- ⑦ **Push Save button to save setting Code**
- ⑧ **If you push the ESC  button, you can return to setting Menu.**

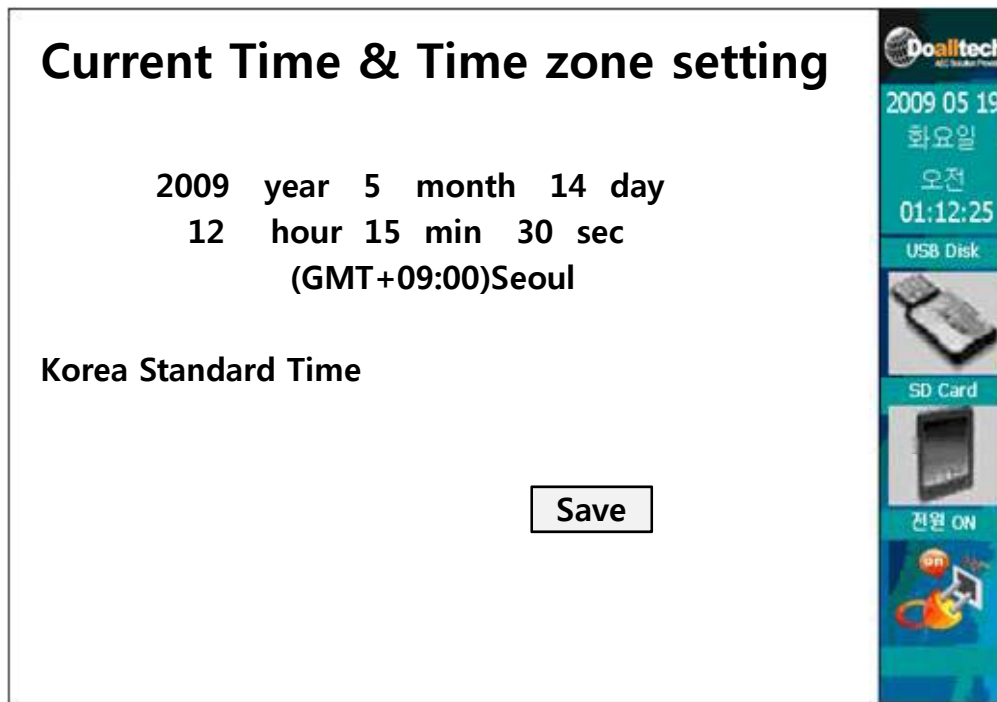



## 9. Menu setting – by using USB



- ① USB application setting Screen
- ② Connect the USB memory to product
- ③ Save the worker data by pushing the Worker data save button
- ④ Select the save button to copy worker attendance data to Attendance Data USB by memory stick
- ⑤ If you push the ESC  button, you can return to setting Menu

## 10. Menu setting – Time setting




- ① Enter the current year, month, day
- ② Enter the current hour, min, second
- ③ Select the Standard Time zone
- ④ Push the Save button for save setting
- ⑤ If you push the ESC  button, you can return to setting Menu



## 11. Menu setting – Password



- ① Product password setting
- ② Pushing the Save button to save the password
- ③ If you push the ESC  button, you can return to setting Menu

## 1. External Interlocking device - Turn-Gate

### Turnstile Gate System



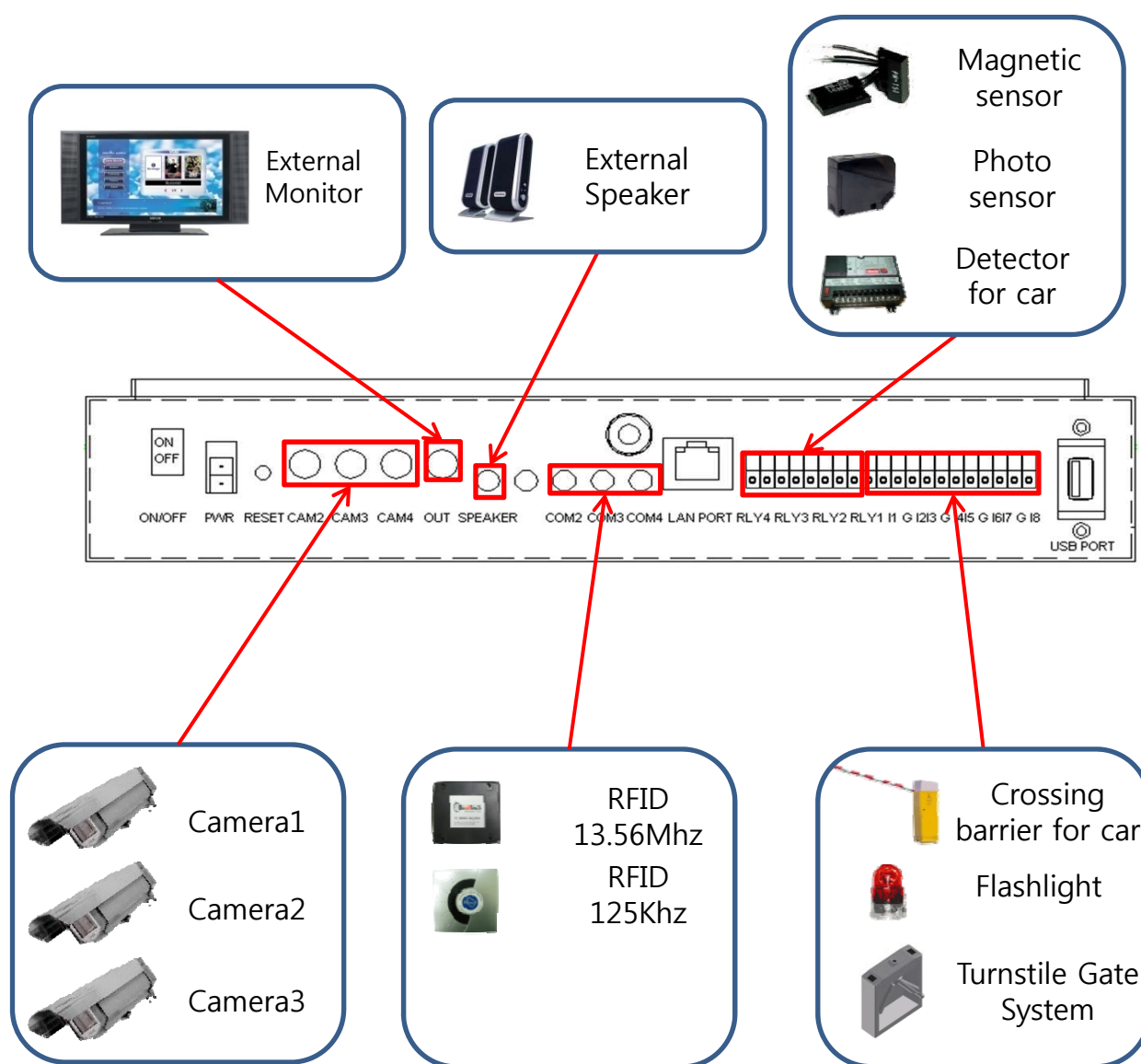
Photo 1 Turnstile Gate System

### Photo 1.

- ① Using Various RFID TYPE(125KHz,13.56MHz) at the same time is available
- ② When worker check the scan card, device takes a picture by Safety CCTV automatically

## 2. External Interlocking device – Composition item

### External Interlocking product



R  
e  
f  
e  
r  
e  
n  
c  
e

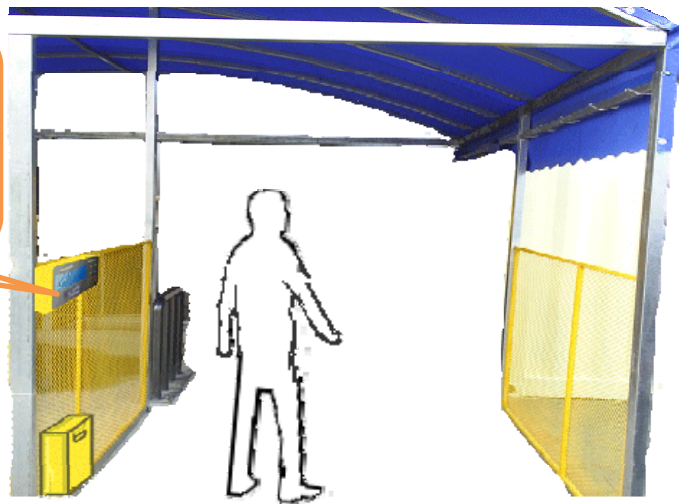
English

## 1. Additional function

### Photo sensor

- **Announcement by Attendant motion sensor**

Here is oo Const. xx Site  
Please make sure to  
wear safety gear  
everyday



- **In case of entering hazardous area, alarming message is indicated by blinker light and speaker.**

This is tunnel gate.  
Please enter the gate  
after wearing safety gear

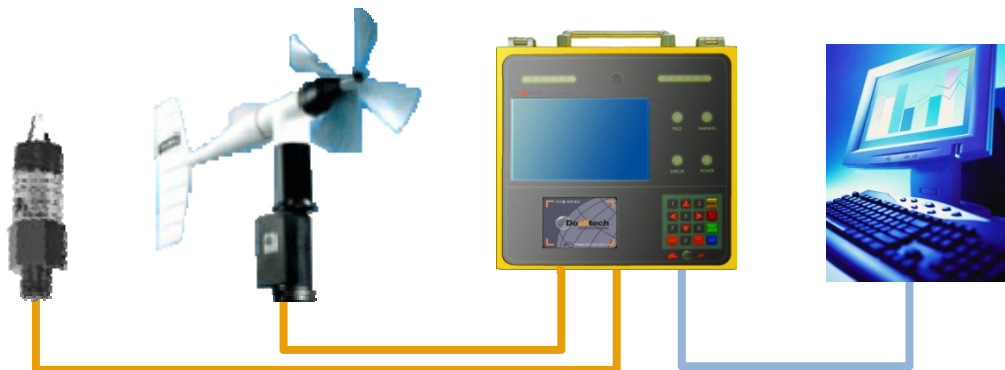


## 1. Additional function

- Transmission of field pictures through network after image capturing of 1/4 channel camera.



- Transmission of Temperature, humidity, vibration, wind direction, wind speed with connection of sensor, Screen displayed & sending network.



## 2. F A Q

### Case 1

System is not working

- Please check the Power supply connection
- Please check the Battery charge status

### Case 2

Data down and upload don't work.

- Please check the internet connection
- Please check the Modem & Network status

### Case 3

Camera is not displayed

- Please check the Camera connection
- Please check the Menu setting

### Case 4

RFID card recognition doesn't work.

- Please check the RFID Reader connection
- Please check the Menu setting

### Case 5

There is no system response. (EX : Time sign stops)

- Please push the RESET button and restart

## 2. F A Q

### Case 6

LCD Screen is monotonous in the state of ash or black color.

- push the RESET or power switch to restart
- When being occurred same symptom after re-start, please contact to Doall tech and then confirm it

### Case 7

There is no sound during working

- Please check the volume button by key pad
- When being occurred same symptom after re-start, please contact to Doall tech and then confirm it.

### Case 8

The battery does not be charged.

- Please check the Power supply cable, Adapter, internal battery terminal connection
- Change the old battery to new battery

### Case 9

There is error message window On the Screen

- Please press the ENT button of keypad.  
(When the program is abnormal, it will be worked again after closing).
- In case the keypad does not be inputted, please start again by using RESET button or power switch.
- When being occurred same symptom after re-start, please contact to Doal ltech and then confirm it.



### 3. Before A/S Request

R  
e  
f  
e  
r  
e  
n  
c  
e

Error type	Cause and Solution
<b>In case of Power supply failure</b>	Please check the Power supply cable.
	Please check the 220 volt as right voltage
	Please check the electronic status of receptacle
<b>In case system is not Working</b>	Please check the System Power supply Cable
	Please check loss of Internal supply item
	Please check Error message from Monitor
<b>In case of Monitor Screen Shutting down by itself</b>	Please check Monitor Power supply cable
	Please check the Monitor Cable connection
	Please Check the system Power supply
<b>In case of Camera screen failure</b>	Please check the Camera cable connection
	Please check the Menu setting

English



### 3. Before A/S Request

Error type	Cause and Solution
<b>In case internet is not working</b>	Please network setting in LAN setting Menu
	Please check LAN cable connection
	Please contact with internet company
<b>In case Router is not working</b>	Please check the router motion lamp, Power supply cable & Adapter
	Please check LAN cable connection
	Please check Router menu setting
<b>In case External Relay is not working (Turn gate,Flash light)</b>	Please check Power supply cable
	Please check the Relay Data cable connection
	Please setting code from Relay setting Menu
<b>In case of not recognizing the RFID tag</b>	Please check the RFID Reader cable connection
	Please check the RFID Reader setting from Serial Pot Menu

### 3. Before A/S Request

R  
e  
f  
e  
r  
e  
n  
c  
e

English

Error type	Cause and Solution
<b>Key pad doesn't work</b>	Please check Key pad cable connection
	Please make sure to push key pad
	Please confirm whether input at current Menu is possible. (There are keys that do not be operated at partial menu)
<b>If flash lamp is not turned on</b>	Please check the Flash cable connection
	Please confirm the setting figure of related flash in the setting Menu
	Please check Flash lamp status
<b>In case power supply and status indication of RFID recognition lamp do not turned on</b>	Please check the Lamp connection cable
	Please confirm whether RFID recognition is correct
	Please confirm whether the system is turned on.
<b>In case other operations are not correct</b>	Please after shutting down, restart
	Please after checking error type, contact with doalltech

## 4. Product Size - Hardware

Hardware		
	CPU	Processor Marvell PXA320-P (ARM11 Core 806Mhz)
Memory	RAM	133Mhz DDR SDRAM 512MByte
	Nand Flash	NAND Flash 128MByte
	EPLD	Lattice isp MACH LC4128V
	Display	800 X 480 (7" Wide TFT Color LCD)
	Touch Screen	Touch Screen Controller
	SD / MMC	SD / MMC 1 Slot
	LAN	10/100 M Ethernet (91C111)
	Wi-Fi	Wireless LAN (Max 56Mbps, IEEE 802.11 b/g)
	Camera	CCD Camera
	Audio	AC97 (WM9712) Internal x 2, External x 1
	UART	Max3232 (Debugger x1, Serial x3)
	Video Controller	Video IN x 3, Video OUT x 1 (Techwell TW2835)
	KEY PAD	4x4 Push Button

## 4. Product Size - Software

RFID		ATMEGA 13.56Mhz Reader
USB	Host	USB 1.1 Host
	Client	USB 2.0 Client
CPU-JTAG		JTAG Emulator – 20pin
E-JTAG		JTAG Emulator – 8pin
Relay		Signal Out Relay x 4
Sensor		Signal Input Sensor x 8
Battery		Li-ion 14V, 8800 mAh
LED		Color LED x 3
Flash		Light Flash x 2

### Software

O/S	Windows CE 5.0 Core
Application	Doalltech GatewareEM / GatewareCS

### Operating Temperature Humidity

Temperature	-20 °C ~ +55 °C
Humidity	Under 95%

## 4. CE INTERFERENCE STATEMENT

- **CE Warning!**
- Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
- **EN Test Regulation Version.**
  1. SAFETY  
EN 60950-1 (EN 60950-1:2001+ALL:2004)
  2. EMC  
EN 301 489-1 (V1.8.1:2008.04)  
EN 301 489-3 (V1.4.1:2002.08)  
EN 301 489-17 (V2.1.1:2009.05)
  3. RADIO  
EN 300 328 (V1.7.1:2006.10)  
EN 300 330-1(V1.5.1:2006.04)  
EN 300 330-2(V1.3.1:2006.04)

### CE MARK

**CE 0678**

## 5. FCC INTERFERENCE STATEMENT

### FCC RF INTERFERENCE STATEMENT

#### NOTE :

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

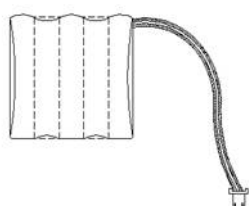
This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures.

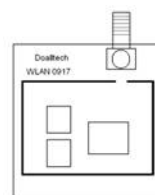
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio, TV technical for help.
- Only shielded interface cable should be used.

Finally, any changes or modifications to the equipment by the user not expressly approved by the grantee or manufacturer could void the users authority to Operate such equipment

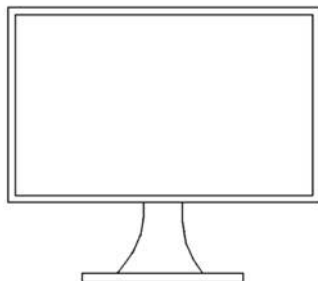
## Additional charge item



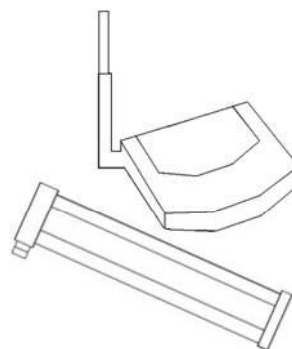
Battery



WLAN Wireless module



AV LCD MONITOR



Wireless transponder system

### Internet homepage

[www.doalltech.com](http://www.doalltech.com)

**DoallRFID™**

### Contact

0707-018-5900  
02) 555-9779

**Ubiquitous team**