Fingerprint Time Attendance & Access Control

Hardware User Manual

Rev: 1.2

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Chapter 1 Notice for Using

Thanks for purchasing our Fingerprint Time Attendance & Access Control Terminal. Please refer to this user manual carefully before using, which helps you improve the efficiency of using this product.

1.1 Operating Environment

- Avoid installing the device at places where irradiated by strong light directly. The strong light affects the collecting of fingerprints that would lead to the failure of the fingerprint authentication.
- The operating temperature of the device is 0℃ ~ 60℃. Avoid using the device outdoors for a long time. The normal working of the Access Control Device will be affected by the long term outdoor usage. It is suggested that using sunshade or cooling equipment in summer and heating installation in winter to protect the device if it is necessary to use outdoor.

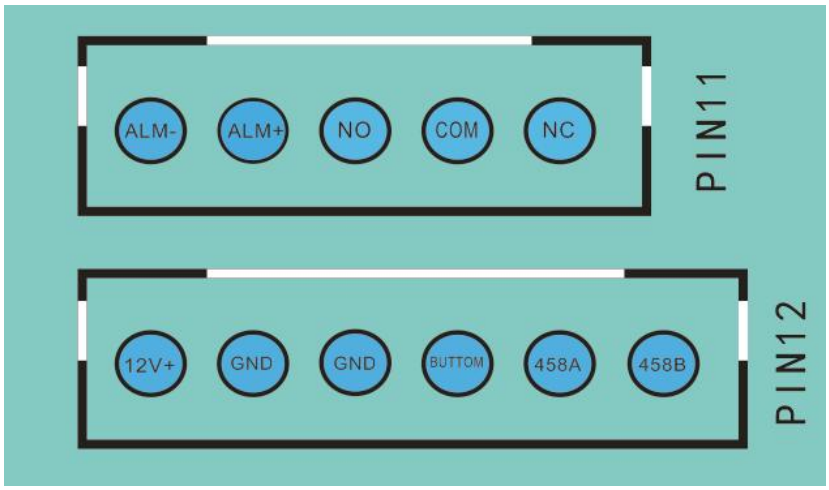
1.2 Notes for Installation

- Please use DC 12V adapter coming with the device.
- Please make sure your power supply is on “OFF” status. Else it may damage the device or the core part of the device if you turn on the power during installation.
- When installing in electrostatic environment or dry weather, please connect to the GND cable first to avoid the device damage from excessive static electricity.
- The core of the cables should not be exposed more than 5MM. It’s better to use the insulating tape on the connection area, and use different color to differentiate the cables.
- Please connect the power cable after connecting all other cables. Once the device cannot work normally, please cut off the power and check all the connection. Note: all wiring operation with live may lead to device damage. Warranty does not apply under this damage.
- If the device is far from the power supply, please do not connect the device to the power supply with an Ethernet cable. Because the long transmission distance might cause the voltage attenuation.
- It’s recommended to install the device on height of 1.4M - 1.5M.
- Please make sure someone is outside the door during testing the door opening function to avoid any accident that you cannot open the door.
- Please strictly follow this “installation manual. Otherwise, any device

damage because of the incorrect wiring is not under the warranty.

1.3 Connector Diagram

The connector is as below:



1.4 Description of Connector

- **PIN11:**

NC, COM and NO: Connecting to the lock

ALARM1+ and ALARM1-: Connecting to the alarm.

- **PIN12:**

12V and GND: DC power input.

Buttom and GND: Connecting to the exit button, which can be installed indoor. The door will open when press this button.

485A and 485B: Connecting to RS485 reader.

Chapter 2 Quick Reference

A-L355 Fingerprint Time Attendance & Access Control Terminal

2.1 Key Button

Keypad Layout is shown as below:

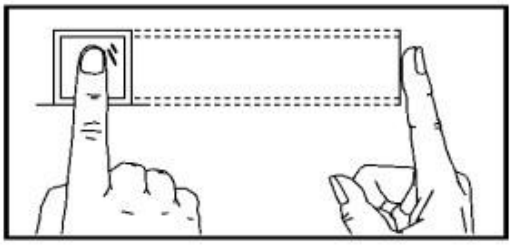
1	2abc	3def	ESC
4ghi	5jkl	6mno	MENU
7pqrs	8tuv	9wxyz	▲
⊙	0	OK	▼

Description of keypad is as below:

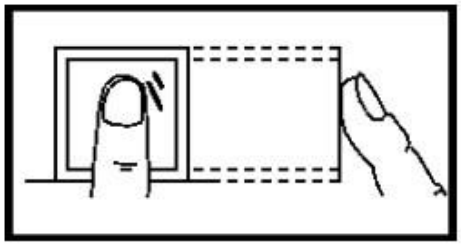
- ESC Exit or cancel
- MENU Enter the main menu
- OK Confirm option
- ⊙ Power on/off
- ▲ Page up
- ▼ Page down
- 0...9 number key

2.2 Method of Pressing Fingerprint

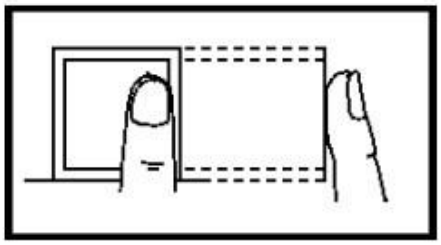
Correct pressing method: Press with your finger right on the fingerprint collecting window, with the fingerprint's center aligning to the center of the gathering window as much as possible. Finger pressing method is as below:



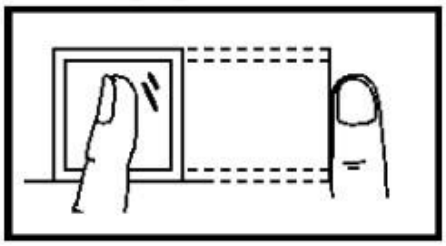
Correct



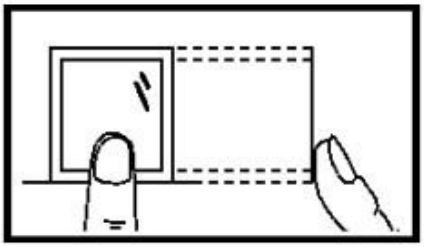
Too Perpendicular



Too Deflected



Tilting



Too Low

2.3 Menu

When the device is standing by, press 【MENU】key to enter the main Menu. If you need to operate specific item, you can press the function key and number key directly so that you could select the menu, input number and so on.

- ❖ [MENU]

The main menu includes seven items: **[User]**, **[LogData]**, **[U-Disk]**, **[Network]**, **[System]**, **[ACS]** and **[About]**.

These seven items include second level menu, third level menu, even the fourth level menu for operating corresponding function.

The main menu is as below:

- **[User]**

It includes three submenus: **[Enroll]**, **[Del]** and **[Edit]**. You could enroll or delete fingerprints, passwords, ID card data, etc. and query user and edit user info.

- **[LogData]**

It includes four submenu: **[ViewLog]**, **[LogSet]**, **[LogInfo]** and **[tSegment]**. You could query log data, set re-verify time, delete log data and so on. More details please check ‘Chapter 4’.

- **[U-Disk]**

It includes **[Upload]** and **[Download]**. You could backup data and restore data. More details please check ‘Chapter 5’.

- **[Network]**

You could set device ID, communication password, local port and so on.

- **[System]**

You could change language, set time and volume, update system, etc.

- **[ACS]**

You could set open delay, tamper alert, relay alarm and so on.

- **[About]**

You could check serial number, date, MAC, software/ firmware version, fingerprint count and so on.

2.4 Basic Operation

- Power on

Plug in and the LCD shows the power on interface with music (the device is defaulted Auto Power On).

Note: The power supply of this device must be DC 12V.

➢ MENU

Press 【MENU】key to enter the main menu. Then you could enter **[User]**, **[LogData]**, **[U-Disk]**, **[ACS]**, or **[About]** menu according to your needs.

Note:

① If the device has been registered admin, users need to be validated when enter the main menu.

② If you could not enter the main menu, you need to connect the device to the software and cancel admin privilege. (The details please check 'Chapter 10'.)

➢ User

Press【MENU】key to enter the main menu, select [User] and press【OK】to enter (or press key 【1】to enter). You could enroll, delete or edit user information.

In **[Enroll]** menu, you could register Enroll ID, Name and Role, and choose to enroll fingerprint, password or ID card.

In **[Del]** menu, input the Enroll ID, then you could delete the information of this user. (The more details please check 'Chapter 3'.)

In **[Edit]** menu, input the Enroll ID and you could query or edit the user information.

Note: When the Enroll ID you input is '0', it shows all users.

➢ Log Data

Press 【MENU】key to enter the main menu → scroll 【▼】or 【▼】key → select **[LogData]** → press【OK】to enter (or press key【2】to enter).

It includes four submenus: **[ViewLog]**, **[LogSet]**, **[LogInfo]** and **[tSegment]**.

[ViewLog]: Press【OK】key or key【1】 to enter, you could query attendance log and admin log. Input the Enroll ID and you could view the log of this user.

[LogSet]: Scroll【▼】or【▼】key → select **[LogSet]** → press【OK】 to enter (or press key 【2】 to enter). You could set the re-verify time and delete the logs.

[LogInfo]: Scroll【▼】or【▼】key → select **[LogInfo]** → press【OK】to enter (or press key【3】to enter). You could view the numbers of all records of the device.

[tSegment]: Scroll【▼】or【▼】key → select **[tSegment]** → press【OK】key to enter (or press key【4】to enter). You could set 24 different duty time for attendance, such 8:00 – 12:00 (Duty on); 13:00 – 17:00 (Duty off).

➢ U-Disk

Scroll【▼】or【▼】key → select **[U-Disk]** → press【OK】to enter (or press key 【3】to enter). It includes two submenus: **[Upload]** and **[Download]**.

You could download Historic Attendance Log, Historic Admin Log and All Enroll Data, upload All Enroll Data.

➢ Network

Scroll【▼】or 【▼】key → select **[Network]** → press 【OK】to enter (or press key 【4】to enter). You could set the Device ID, Communication Password, Local port and so on.

➢ System

Scroll【▼】or【▼】key → select **[System]** → press【OK】 to enter (or press key【5】to enter). It includes 5 submenus: **[Language]**, **[Factory Settings]**, **[Personal Settings]**, **[Time Settings]** and **[System Update]**.

[Language]: You could change the language. After change the language, the system will restart.

[Factory Settings]: You could restore factory settings.

[Personal Settings]: You could set the volume and screen saver timer.

[Time Settings]: You could set system time and alarm.

[System Update]: You update the system after connecting to the USB disk with new firmware.

➢ ACS

Scroll【▼】or【▼】key → select **[ACS]** → press【OK】key to enter (or press key 【6】to enter).

It includes submenus as below:

[Open Delay]: Press【OK】key and you could set open delay time.

[Lock Control]: Scroll 【▼】or【▼】 key → select **[Lock Control]** → press 【OK】key, you could set the status of the lock to Auto, Keep Open or Keep Close.

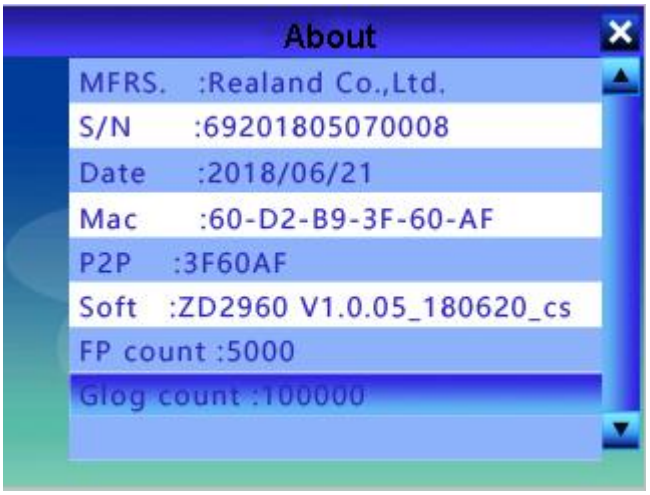
[Relay Alarm]: Scroll 【▼】 or【▼】 key → select **[Relay Alarm]** → press 【OK】key, you could turn on or turn off the relay alarm.

[485 Reader]: Scroll【▼】or【▼】key → select **[485 Reader]** → press【OK】 key, you could turn on or turn off the 485 reader.

[485 Baudrate]: Scroll【▼】or【▼】key → select **[485 Baudrate]** → press【OK】 key, you could set it to 9600, 19200, 38400, 57600 or 115200.

➢ About

Scroll【▼】or【▼】key → select **[About]** → press【OK】key to enter (or press key【7】to enter). It shows as below:



Chapter 3 User Management

When the device in homepage window, press【MENU】to enter the device menu (If admin has been set, you need to be validated before enter the main menu). The main menu is as below:

Scroll【▼】or【▼】key → select **[User]** → press【OK】key (or press key【1】) to enter the menu. Three submenus are under **[User]** menu as below:

3.1 Enroll User

There are three validation methods for the device: fingerprint, password and RFID card.

Each employee can enroll one Enroll ID only. The Enroll ID is the unique marking for the employee. The Enroll ID from the device and the software must be consistent.

3.1.1 Enroll Fingerprint

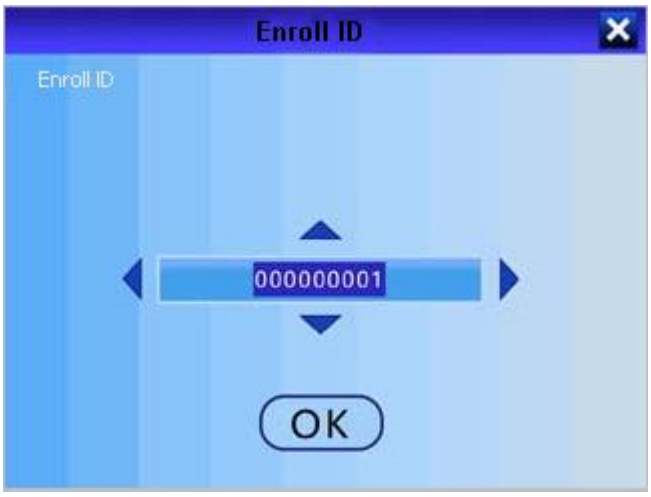
Steps:

Press 【MENU】key to enter the main menu → **[User]** → **[Enroll]** → input Enroll ID → input Name and Role → select Enroll Fingerprint → press the same finger on the sensor for three times → press【ECS】key.

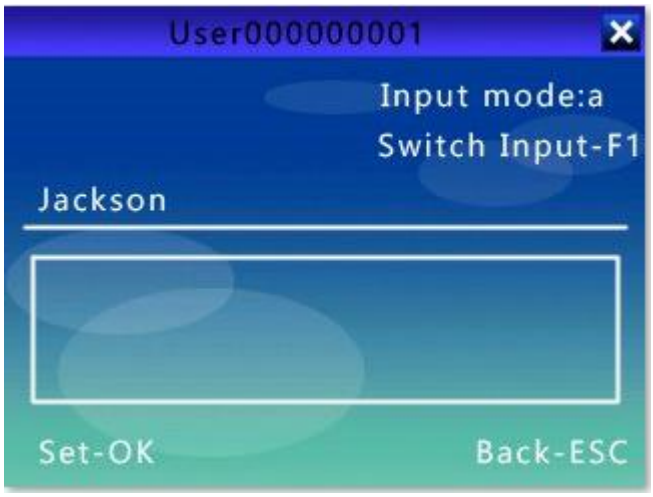
The following details for reference:

1. Press【MENU】key to enter the main menu → **[User]** → **[Enroll]**. The screen shows as below:

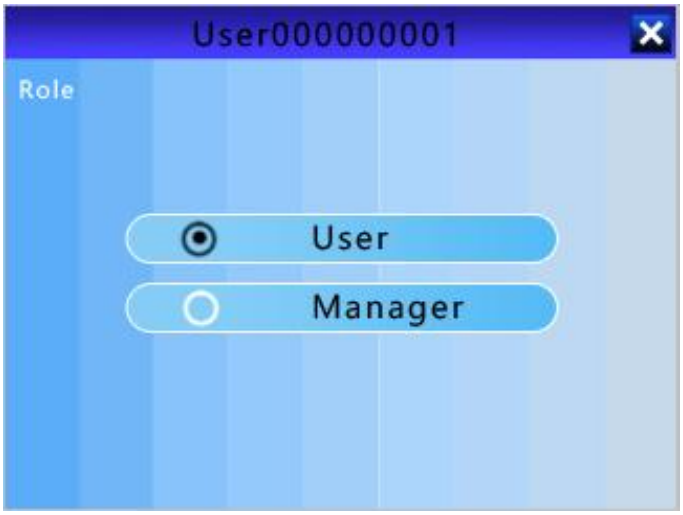
2. ① Scroll【▼】or【▼】key and select **[Enroll]**, then press【OK】key (or press key【1】) to enter the window as below:



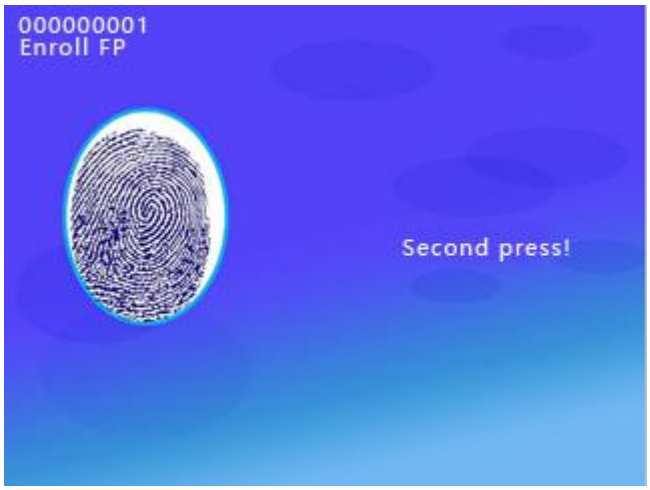
② Input the Enroll ID → press 【OK】 key to confirm. Scroll【▼】or 【▼】key → select Name →press 【OK】key → input user name as below:



③ Press【OK】→ scroll【▲】or 【▼】key → select Role →press 【OK】 key → select User or Manager → press 【OK】key as below:



3. Scroll【▲】or【▼】key → select Enroll Fingerprint → press【OK】key. Press the same finger on the sensor for three times. After the device prompts “Beep Beep Beep” sound, the enrolled info will be saved automatically. It shows as below:

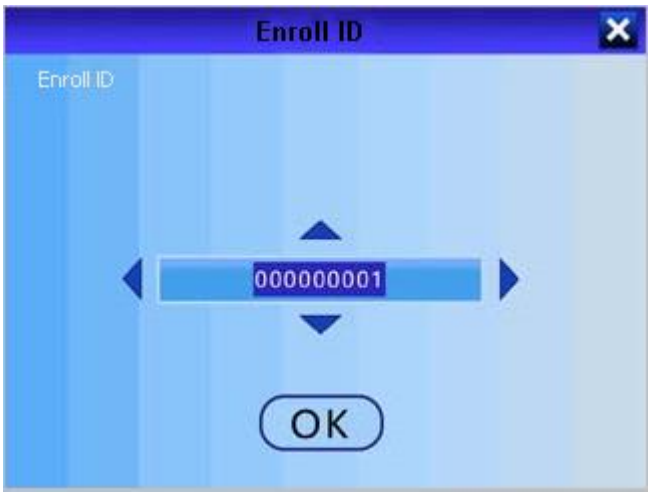


4. Press【OK】key to enroll a new fingerprint, and repeat the steps above. Otherwise, press【ECS】to exit.

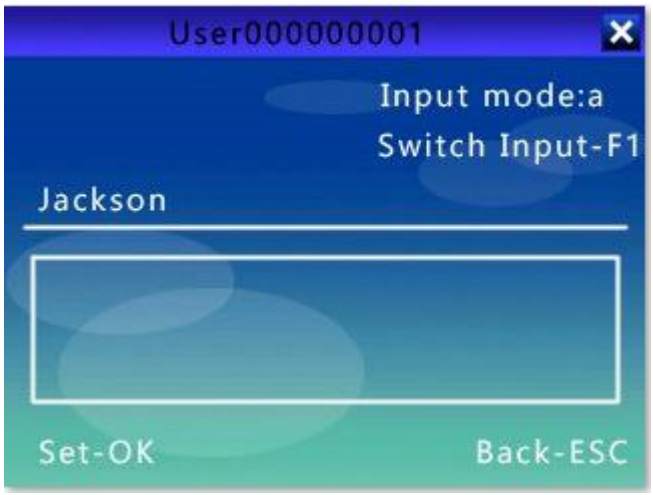
3.1.2 Enroll Password

1. Press【MENU】key → select **[User]** → **[Enroll]**. The screen shows as below:

2. ① Scroll【▲】or【▼】key and select **[Enroll]**, then press【OK】key (or press key【1】) to enter the window. The screen shows as below:



② Input the Enroll ID → press 【OK】 key to confirm. Scroll【▲】or 【▼】key → select Name →press【OK】key → input user name. The screen shows as below:

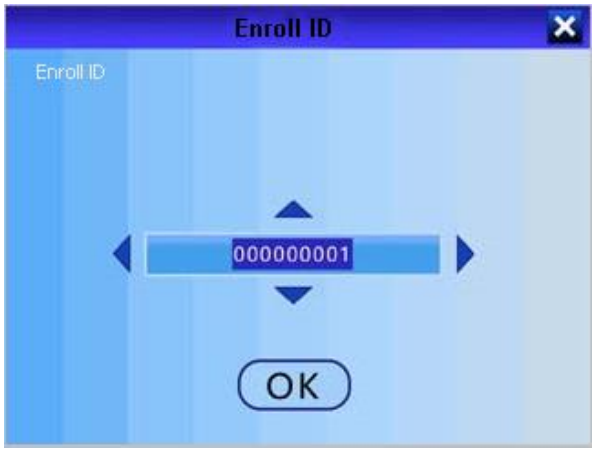


3. Scroll【▲】or【▼】key → select Enroll Password →press【OK】key → input the password → press【OK】key. The screen shows as below:

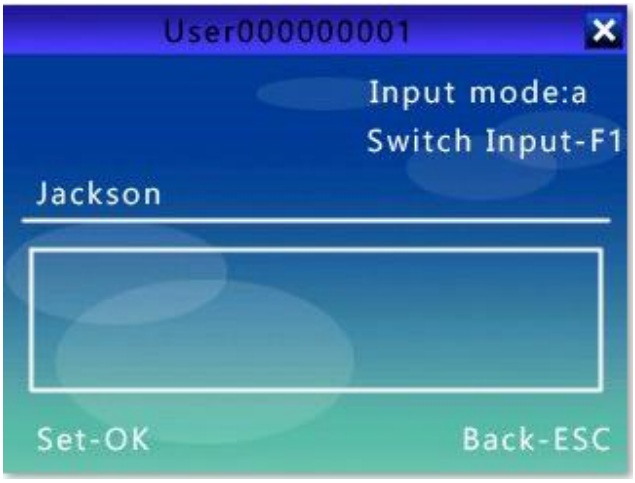
3.1.3 Enroll Card

1. Press【MENU】key to enter the main menu → **[User]** → **[Enroll]**. The screen shows as below:

2. ① Scroll【▲】or【▼】key and select **[Enroll]**, then press 【OK】key (or press key【1】) to enter the window. The screen shows as below:



② Input the Enroll ID → press【OK】to confirm. Scroll【▲】or【▼】key → select Name →press【OK】key → input user name as below:



3. Scroll 【▲】or 【▼】key → select Enroll Card. Put the card on the sensing area, the device detects the card and shows card number. When the prompts 'DDD' sound, it means the device saves the card automatically.

   The screen is as below:

Note:

Any user could enter the menu and change the settings without a registered admin. If an admin is registered to the device, only when the admin is validated, the user could change the settings.

[Manager] has the highest authority, which could operate all the functions of the device.

When query registered Enroll ID, you just need to input the latest non-zero number(s). For example, ID 0000000050, you could just key in "50".

3.2 Delete Enroll

Tips: The device has the max capacity for the fingerprint enrollment. When it comes to the max, there is a warning from the device. When the employee resigns, please delete his/her enroll info.

1. Press【MENU】key to enter the main menu → **[User]** → **[Del]** → press 【OK】key. The screen shows as below:

2. ①Scroll【▲】or 【▼】key and select **[Del]**, then press【OK】key (or press key【2】) to enter.

   ② Input the Enroll ID you need to delete.

   ③ Scroll【▲】or 【▼】 key → select the info you need to delete → press 【OK】 key → done → press【ECS】key. You could delete fingerprint, password, card and so on.

3.3 User Authentication

- **Fingerprint verify**

Verify the fingerprint in 1: N mode. Press the finger on the sensor correctly.

When verify successfully, device prompts “Thank you” and displays “Success” on the screen. If fail, it prompts and displays “Press again”.

- **Password verify**

Input the Enroll ID on the main interface → press 【OK】key → input the password.

When verify successfully, device prompts “Thank you” and displays “Success” on the screen. If fail, it prompts and displays “Incorrect password”.

- **Card verify**

Put the card on the sensing area.

When verify successfully, device prompts “Thank you” and displays “Success” on the screen. If fail, it prompts and displays “Invalid card”.

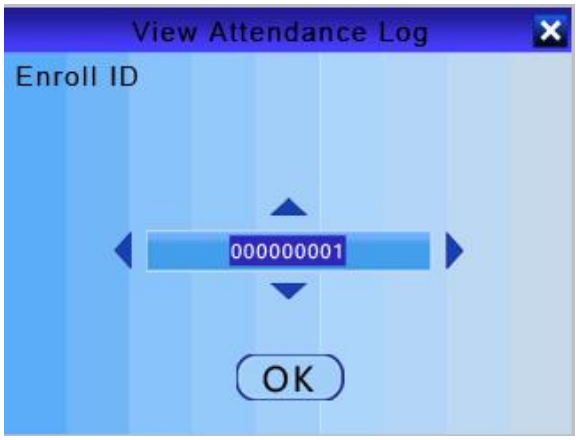
Chapter 4 Log Management

4.1 [ViewLog]

Press【MENU】 key, then select **[LogData]** and press 【OK】key (or press key 【2】) to enter the menu as below:

1. Press【MENU】key → **[LogData]** → **[ViewLog]** → scroll【▲】or【▼】key to view the attendance log or admin log. The screen is as below:

2. Press 【OK】 key → input the Enroll ID → press【OK】key to confirm. The screen shows as below:



3. The steps of viewing admin log are the same as viewing attendance log.

   Note: Admin Log is the admin's operating data. Each time the admin enter the menu or change the settings, a record of this operation will be saved.

Description of the Attendance Log

Item	Description	Item	Description
V-F	Fingerprint Verify	**OI**	Over time IN
V-P	Password Verify	**OO**	Over time OUT
V-C	Card Verify	**O**	OUT
N	Attend	**I**	BACK
CI	Clock In	**U1**	Definition 1
CO	Clock Out	**U2**	Definition 2

4.2 [LogSet]

1. Press 【MENU】key to enter the main menu → **[LogData]** → **[LogSet]**.
2. The **[LogSet]** menu is as below:

3. Select Re-Verify(Min.) → press【OK】key. (Scroll【▲】] or【▼】] key or input number to set the re-verify time.)
4. Scroll【▲】] or【▼】] key → select the item you need to delete → press【OK】key. You could delete attendance log, admin log and enroll data.

Note:

Item	Description
Re-Verify(Min.)	Time interval for the same Enroll ID to take the attendance. It's defaulted to 3 minutes. The max is 480 minutes. For example, if you set it to 3mins, you cannot

	take the attendance more than once in 3 minutes.
Delete Attendance Log	Delete all attendance records in the device. Please backup the data by USB flash drive or software before deleting.
Delete Admin Log	Delete all the admin MENU operation records.
Delete Enroll Data	Delete all enroll info on the device, including fingerprints, passwords and so on.

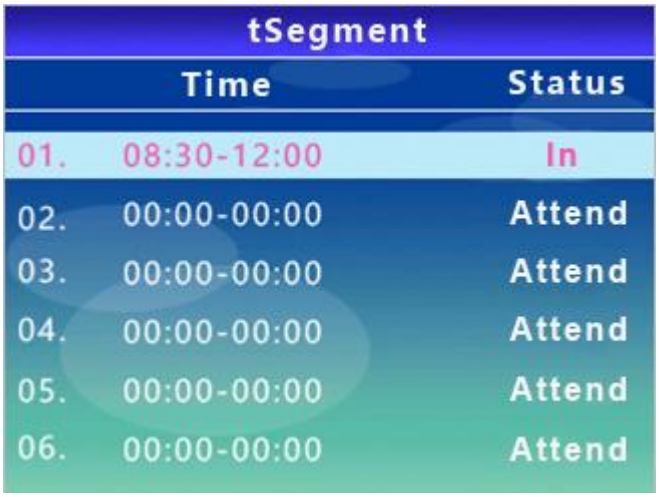
4.3 [LogInfo]

1. Press【MENU】key to enter the main menu → **[LogData]** → **[LogInfo]** → press【OK】key to view the log information. The screen shows as below:

- **User**: user amount that already enrolled in the device and user capacity.
- **Admin**: admin amount that already enrolled in the device and admin capacity.
- **Fingerprint**: fingerprint amount that already enrolled in the device and fingerprint capacity
- **Password:** fingerprint amount that already enrolled in the device and password capacity.
- **Card:** card amount that already enrolled in the device and card capacity.
- **Attendance Record:** attendance record amount and attendance log capacity.
- **Admin Record:** admin operation record amount and admin log capacity.

4.4 [tSegment]

1. Press 【MENU】 key → **[LogData]** → **[tSegment]** → select the group you need to set → scroll【▲】 or【▼】key or input number to set the time → press 【OK】 key → scroll 【▲】 or 【▼】 key to select the status → press 【ECS】 key and you could set the next one → all the groups are set → press【ECS】key → press 【OK】 key → the tSegment you set are saved.
   The screen shows as below:



tSegment is set for the status (Duty On, Duty Off, In, Over Time In, etc.) shown on the homepage. This status will be along with the attendance records on the software. The homepage is as below:

Noted:

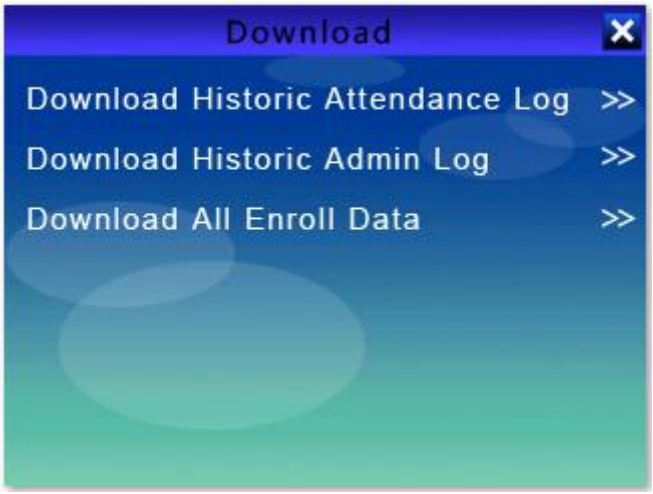
1. You could set 24 groups of tSegment in this device.
2. The status includes User Def1, User Def2, In, Out, Over Time On, Over Time Off, Duty On and Duty off.

Chapter 5 U-Disk

Plug the USB flash memory to the device → press【MENU】key → scroll【▲】or【▼】key to select **[U-Disk]** and press【OK】key to enter (or press key 【3】to enter). The **[U-Disk]** window shows as below:

5.1 [Download]

Select **[Download]** and press【OK】key (or press key 【1】key to enter). The window shows as below:



1. Download Historic Attendance Log

Download all the attendance records stored in the device. There is a folder named “LogData” on the USB flash drive when finished downloading. And there is a file named “HisGLog_0001_20190101.csv”, of which is named according to the date you download.

2. Download Historic Admin Log

Download all the admin menu operation logs stored in the device. There is a folder named “LogData” on the USB flash drive when finished

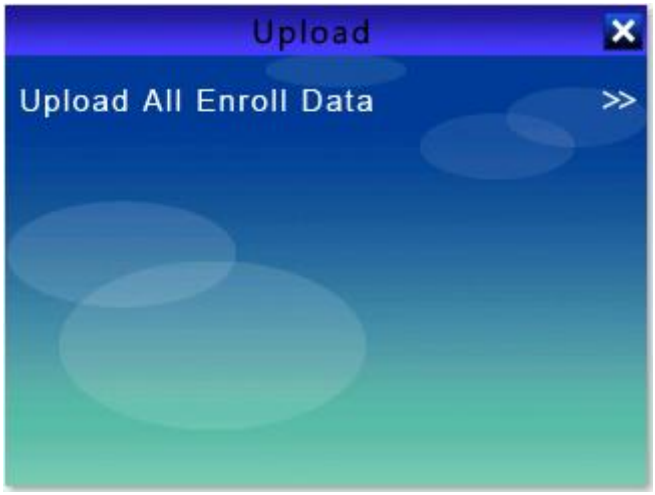
downloading. And there is a file named “HisSLog_0001_20190101.csv”, of which is named according to the date you download.

3. Download All Enroll Data

Download all the enrolled information in the device, including all the fingerprints, passwords, card numbers, etc. There is a folder named “UserData” on the USB flash drive when finish downloading. And there is a file named “AllEnrollData.fps.

5.2 [Upload]

Select **[Upload]** and press 【OK】key (or press key【2】key to enter). The window shows as below:

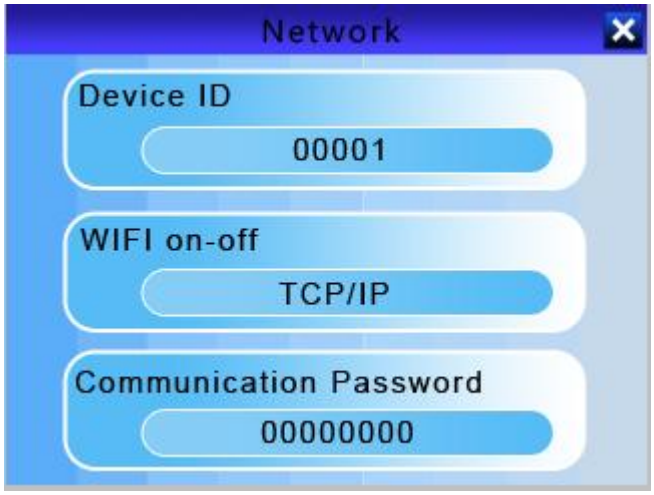


1. Upload All Enroll Data

Upload all the enroll info on the USB flash drive to the device.

Chapter 6 Network Setting

When the device in homepage, press【MENU】key to enter the main menu → scroll 【▲】or【▼】key to select **[Network]** and press 【OK】 key (or press key 【4】) to enter. The **[Network]** menu shows as below:



1. Device ID

Item	Description
1~65536	Set the identification number of the device.
Default	1

Note: Device ID is the unique mark for different Access Control Devices. When you need to connect more than one device to the software, the Device ID is the unique mark to differentiate the data and records from different devices.

2. WIFI on-off

Item	Description
WIFI on-off	You could set the communication to TCP/IP or WIFI.
Default	TCP/IP

Note: When switch to WIFI, select the WIFI you need and press【OK】key, then input the password and press【OK】key. The standard is TCP/IP and WIFI need to be customized.

3. Communication Password

Item	Description
0~99999999	Set TCP/IP communication access password.
Default	0

4. DHCP

When turn on the DHCP, the device will obtain an IP address automatically and you cannot set the IP Address manually.

Item	Description
DHCP	Set if enable the device obtains IP address automatically.
Default	On

5. Local port

Item	Description
1~65534	Set TCP/IP communication port.
Default	5500

Note: When you connect the device to the software, you need to input this port to the software connecting setting. Otherwise, you cannot connect successfully.

6. IP Address

Item	Description
192.168.1.224	Set the IP address for TCP/IP communication.
Default	192.168.1.224

Note: The IP address of the device must be unique on your local LAN.

7. Subnet Mask

Item	Description
255.255.255.0	Set the subnet mask for TCP/IP communication.
Default	255.255.255.0

8. Gateway

Item	Description
192.168.1.1	Set the gateway for TCP/IP communication.
Default	192.168.1.1

Note: The subnet mask and default gateway must be consistent with those on your local LAN.

9. DNS

Item	Description
DNS Server	Set network address resolution of the device for TCP/IP communication when accessing the external network.
Default	000.000.000.000

10. Real Time Push

Item	Description
Push Function	Set if the device is enabled real-time push.
Default	On

11. Server

Item	Description
Server IP	Set the background address of the device to be accessed during real-time push.
Default	S0.weixinac.com

12. Server Port

Item	Description
Server Port No.	Set the port no. of the device's background address to be accessed during real-time push.
Default	5055

13. P2P Service

Item	Description
P2P Comm. Service	Set if the device enables P2P communication service.
Default	On

14. P2P Server

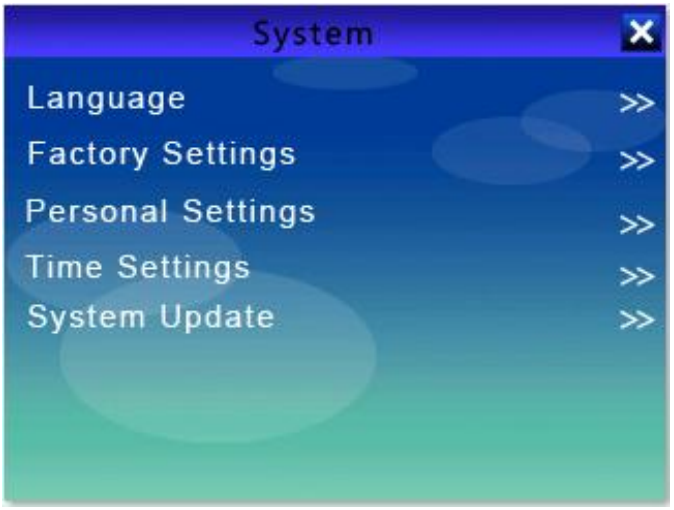
Item	Description
P2P Server IP	Set the address to access P2P server.
Default	Sl.weixinac.com

15. P2P Port

Item	Description
P2P Port No.	Set the port no. of the device's background address to be accessed during P2P communication.
Default	5505

Chapter 7 System

When the device in homepage, press【MENU】key to enter the main menu → scroll 【▲】or 【▼】key to select **[System]** and press【OK】key (or press key 【5】) to enter. The **[System]** menu shows as below:



Note:

①You could scroll【▲】or【▼】key and press【OK】key to change the settings

② You could scroll【▲】or【▼】key or number keys to change the settings.

1. Language

   You could scroll【▲】or【▼】key to select the language you need.

2. Factory Settings

   Initializing the device, it will empty all enrollment, records and restore all settings.

3. Personal Settings

Item	Description
Volume	Set the volume level of the device from 0 to 6.
Default	3
Screen Saver Timer	Set time period for the device to enter screen protect state. You could turn off it and set it to 1min, 5mins, 10mins or 30mins.
Default	Off

4. Time Settings

   You could set system time and alarm.

   System Time: You could set Time, Date, Date Format, Date Separator and Time Separator in this menu.

   World Map: You could set the time zone.

   Alarm: You could set Daily Alarm Type, Daily Alarm Time, Weekly Alarm Time and Weekly Alarm in this menu.

5. System Update

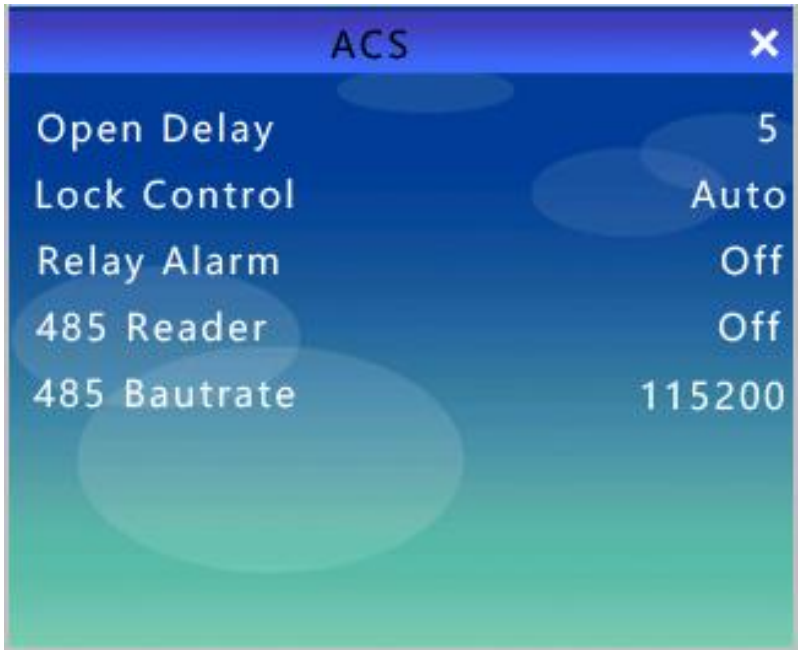
   Upgrade firmware of the device via USB flash drive. Before upgrade, please backup all enroll info and attendance records of the device. This action may cause the device clear up all the info on the device.

Attention:

There is risk for upgrade the firmware. Non-professionals are not suggested to operate. Do not unplug the USB flash drive and enter or exit the menu, and make sure power support is consistent while upgrading. Otherwise, it will damage the device and cause failure to boot.

Chapter 8 ACS Management

When the device is in homepage, press 【MENU】key to enter the main menu, then scroll【▲】or 【▼】key and press 【OK】key (or press key 【6】) to enter **[ACS]** menu. The **[ACS]** menu is as below:



1. Open Delay

Item	Description
1~240	You could set the open delay value from 1 to 240. The device sends out the close door signal after this value.
0	Device sends out the close door signal immediately after sending out the open door signal.
Default	5

2. Lock Control

Item	Description
Lock Control	There are three door status: Auto, Keep Open and Keep Close.
Default	Auto

3. Relay Alarm

Item	Description
On	When the timing bell is activated, a signal will be sent to the connected external bell and the external bell will be activated at the same time. Meanwhile, the relay alarm connected to connector 'ALARM2' rings.
Off	When the timing bell is activated, the connected external bell won't alarm.
Default	Off

4. 485 Reader

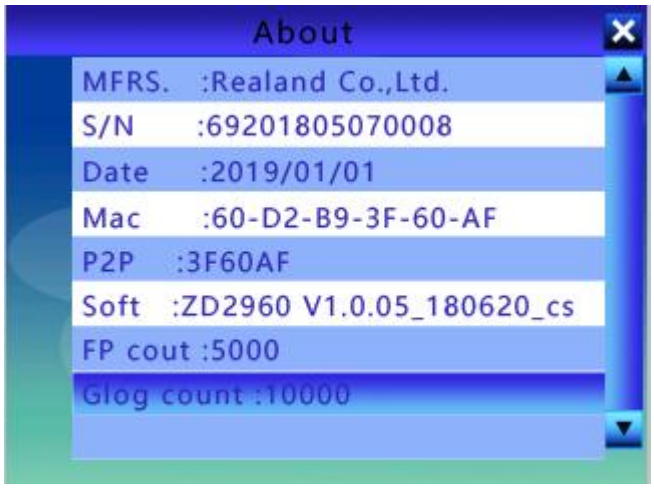
Item	Description
On	Enable RS485 communication.
Off	Disable RS485 communication.
Default	Off

5. 485 Baudrate

Item	Description
9600	Set the Baud rate to 9600bps.
19200	Set the Baud rate to 19200bps.
38400	Set the Baud rate to 38400bps.
57600	Set the Baud rate to 57600bps.
115200	Set the Baud rate to 115200bps.
Default	115200

Chapter 9 Device Information

Scroll 【▲】or 【▼】 key and select (or press key 【7】) in the main menu window. The **[About]** menu is as below:



Item	Description
MFRS.	Manufacturer
S/N	Serial number
Date	Date of manufacture
Mac	Media Access Control Address
P2P	P2P No.
Soft	Firmware version
FP count	Fingerprint capacity
Glog count	Transaction

Remove Admin Access

1. Remove by Software

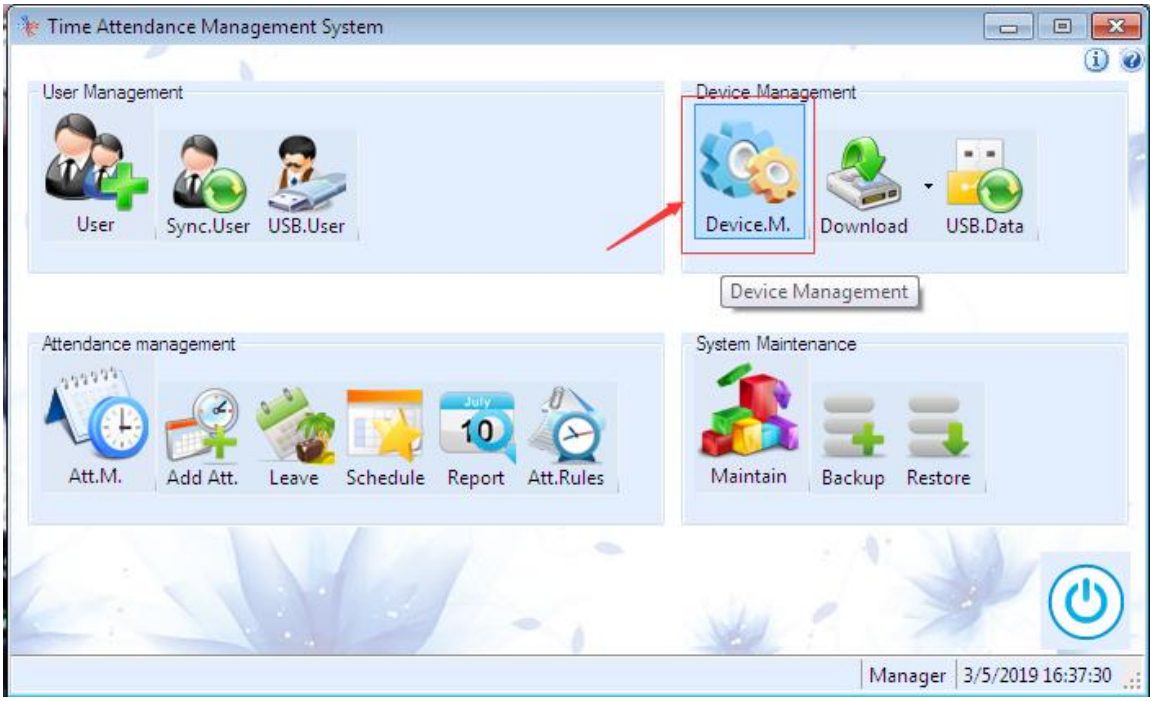
   It's suggested to enroll at least two admins in the device. When an admin is unable to operate the device, another admin can be verified.

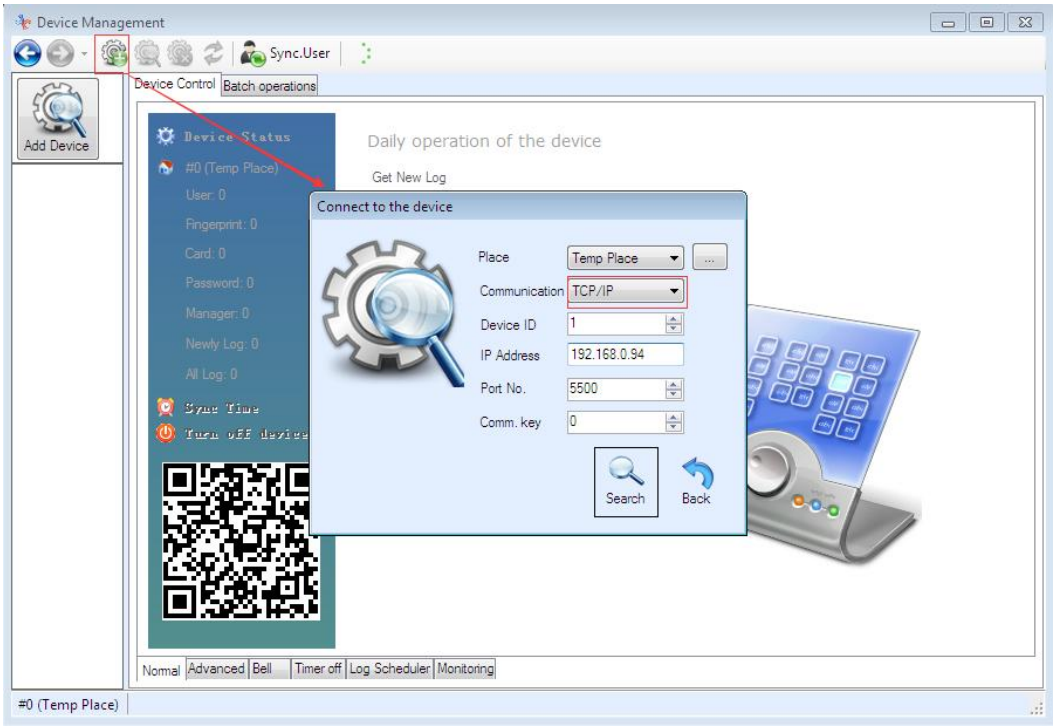
   When the only one admin cannot enter the main menu, please connect the device to the software and cancel the privilege on the software.

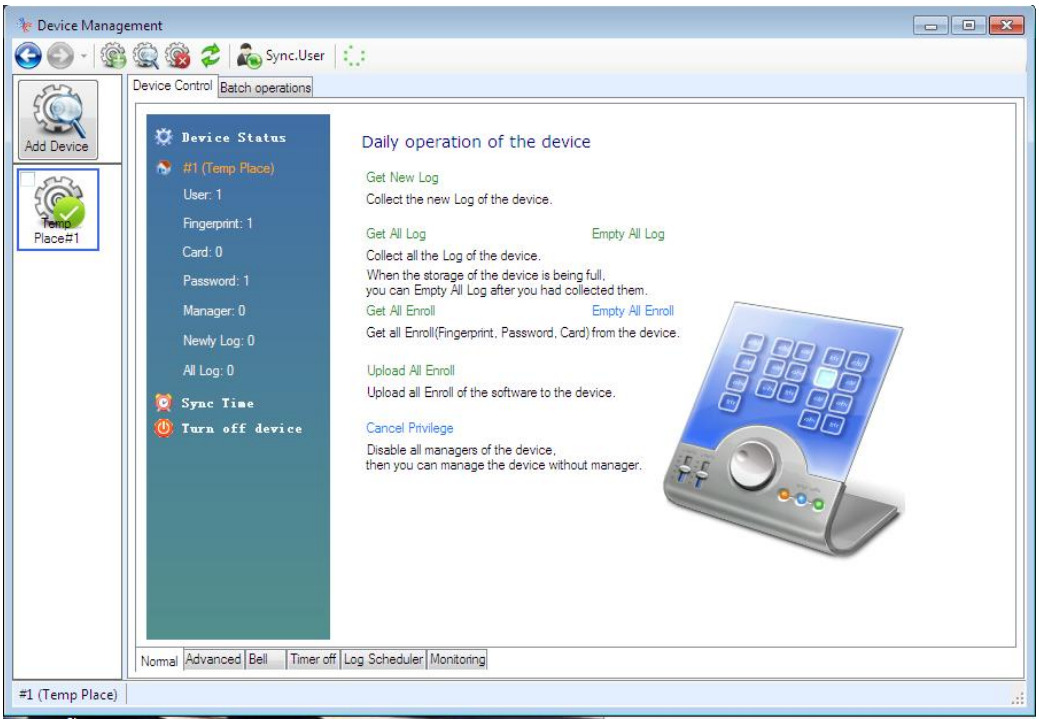
   Steps:

   ① Connect the device and PC to the same LAN. (Please choose TCP/IP communication.)

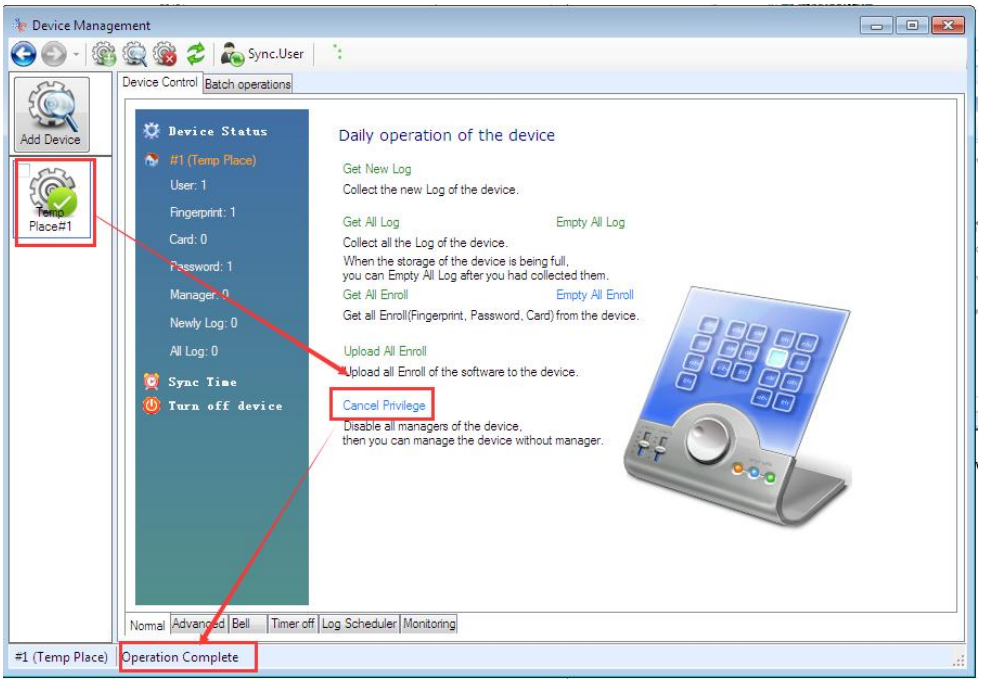
   ② Open the RAMS software → select [Device Management] and add the device as below:







③When the device connected to the software successfully, click “Cancel Privilege”. If the bottom left shows “Operation Complete”, the admin is removed.



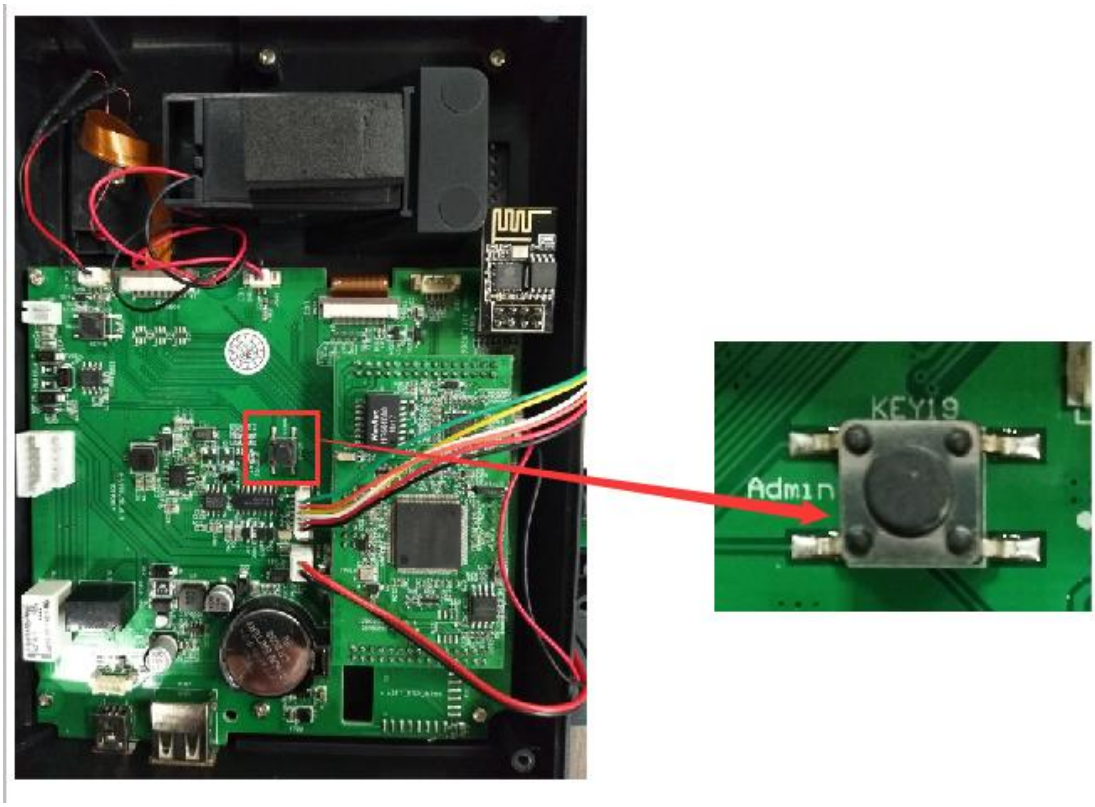
④ If you need you enroll a new admin, please refer to the enrollment details above.

2. Remove by Hardware

   You could remove the admin privilege by pressing a key on the mainboard.

   Steps:

   Turn off the device → Disassemble the device → Plug in and power on → Press the button 'ADMIN' on the mainboard → press 'OK' button as below:


KEY19
Admin

Welcome!
Clear Admin?
Yes
No
1
2 abc
3 def
ESC
4 ghi
5 jkl
6 mno
MENU