TZ-BT05B

--- User Manual V1.8

1 Product Overview

TZ-BT05B is a low power consumption Bluetooth data logger, using the latest Bluetooth 4.1 technology, Nordic NRF51822 chip development and design, It can collect temperature of the surrounding environment and recording and preservation of historical data, can store up to 12000 pieces temperature data, Bluetooth 4.0 can be downloaded over the phone APP configuration tools,to achieve full stage real-time temperature recording. It has the small size, light weight, easy to carry, high accuracy and other characteristics, widely used in various other areas of refrigerated storage and transport, archives, experimental (test) rooms, museums and other temperature testing.

2 Applications

1. Refrigerated storage and transportation;
2. Archives;
3. Experimental (test) rooms;
4. Workshop;
5. Museums;
6. Pharmaceutical environment;
7. Fresh transport.

3 Product Features

1. The high precision and high stability;
2. Bluetooth 4.1;
3. The long-distance wireless communication;
4. External high sensitivity NTC temperature sensor;
5. Real-time display temperature;
6. Can store 12000 temperature data;
7. You can set the alarm temperature range;
8. The temperature graph can be automatically generated in the APP;
9. Can choose time to query data, the stored data can be saved in history;
10. Temperature data can be generate a PDF/CSV report and sent to specified email;
11. By pairing Bluetooth printer to print the data report;
12. Can by OTA update version.

4 Product specification

Item	Specification
Frequency signal transmission	2.400 - 2.4835GHz
Protocol	Bluetooth 4.1
Modulation	GFSK
Transmission interval	2S
Internal battery	CR2450,620mAh/3V
Output power	-4dBm, adjustable
Maximum transmission distance	55 meters（-4dbm）
Storage	can store 12000 pieces data
Battery life	1.5 year (depends on working mode,can replace battery)
Net weight	25g
Dimension	66mm*48mm*10mm
Temperature operating range	-25℃~ +60℃
Temperature detecting range	-40℃~+80℃(Just for the temperature sensor)
Temperature detecting accuracy	±0.5℃(-20℃~+40℃),±1℃(Other temperature)

5 Caution

1,Being close to a metal object will interfere with the signal, causing the signal to be weaken;
2,Note that the distance between the TZ-BT05B and the receiver to ensure the reception accuracy;
3, Away from water and corrosive materials.

6 Switch Instructions

Device status	Operation	LED light instruction	Instructions
Turn on	Under unopened state, long press button for 3 seconds	Flashes continuous 3s on, then flashes once every 10 seconds	Data logger starts, start the real-time temperature record

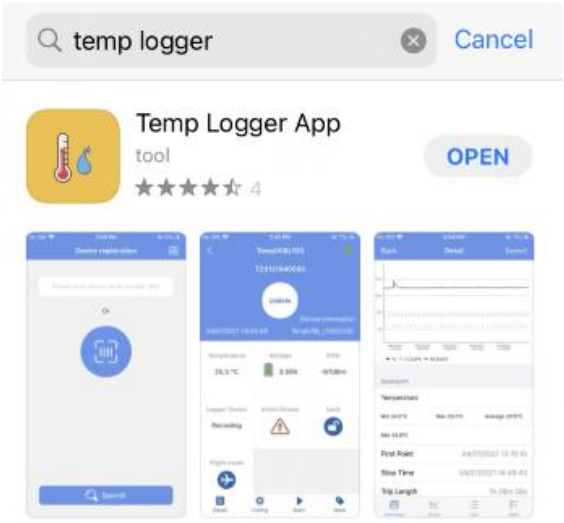
Turn off	Open state, long press the button for 3 seconds	Flashes 5 times, then off	Close data logger, keep record of temperature data

7 APP software

'Temp Logger' is a free mobile applications which provided by our company to the users, can connect the BT05B through the Bluetooth of the mobile devices and do the settings, data transmission, recording, synchronization, send to email. Apply the Bluetooth BLE way, so you can use phone for temperature monitoring.
Client can download App by scan the QR code below(V13 and above available):

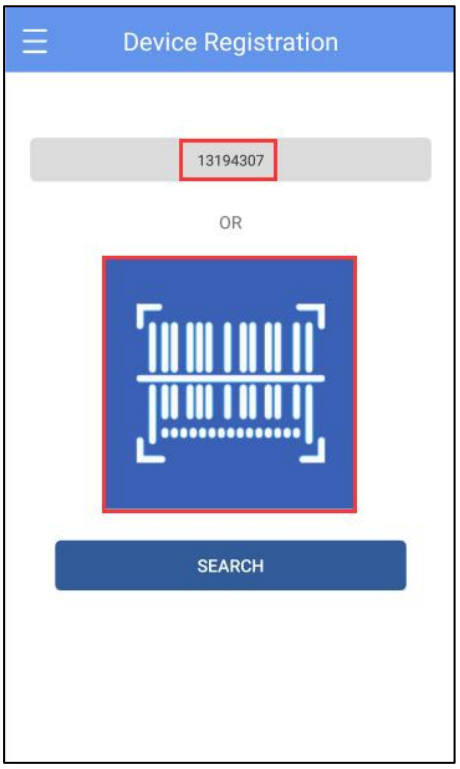
Android download: Scan the following QR code;

IOS download:Into Apple APP Store and type " Temp Logger App" ;

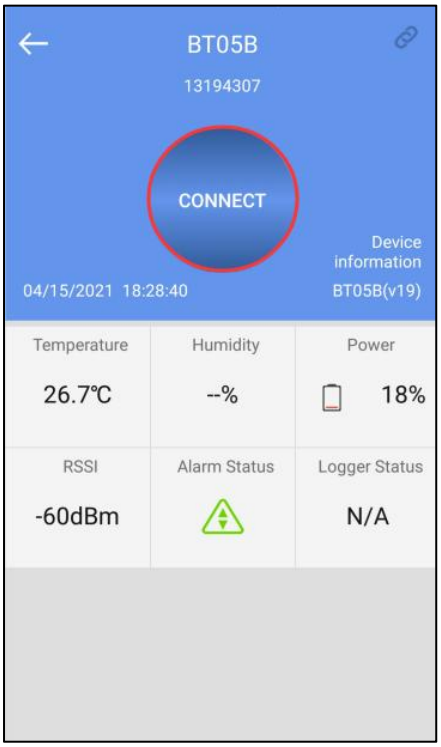


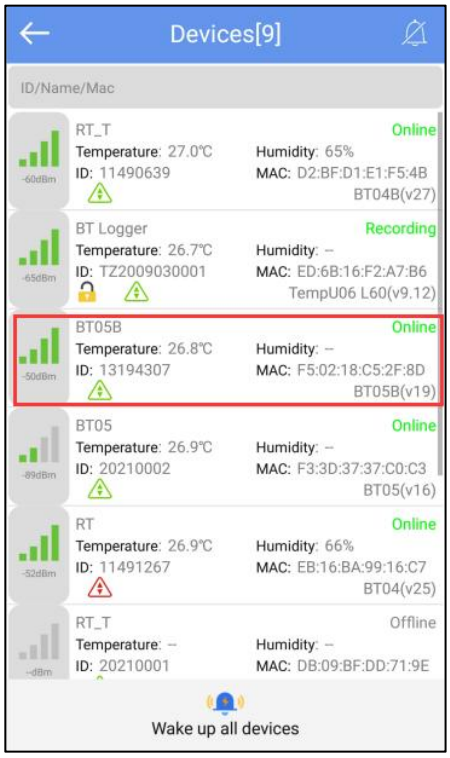
7.1 Device Registration

7.1.1 Open the APP, enter the device ID directly to register on the homepage, or scan the QR code to get the device ID, or do not enter any ID and directly click search to find the device .



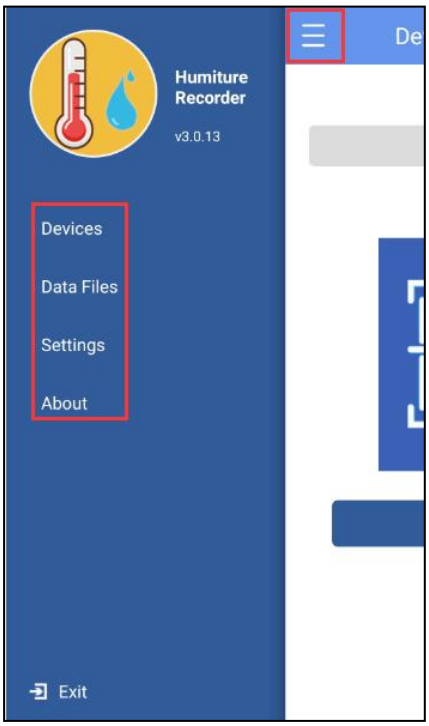
7.2.2 Enter the device connection page and click Connect. After a successful connection, the device ID will be displayed on the "Devices" page, indicating that the device has been registered successfully .



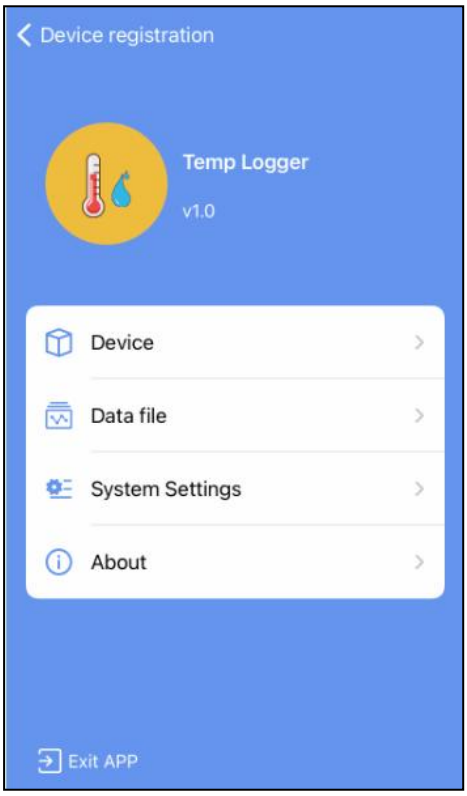


7.2 Device View

Android:Click the icon in the upper left corner of the home screen to expand the main menu. You can select the menu function and click “device” to enter the multi device interface. The functions of the device interface are as follow:

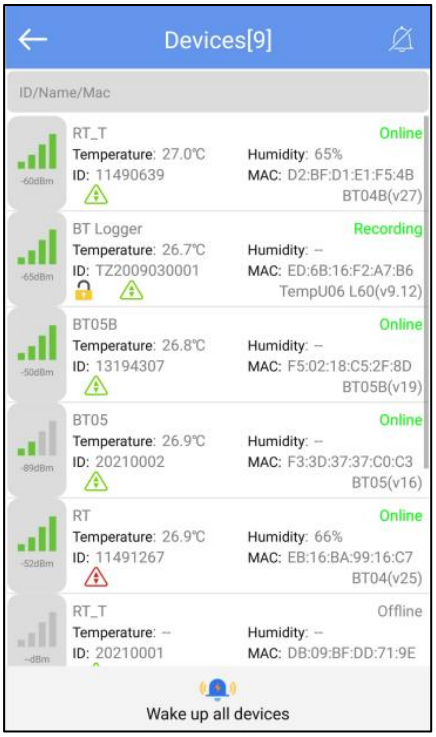


IOS:Click the icon in the upper right corner of the home screen to expand the main menu. You can select the menu function and click “device” to enter the multi device interface. The functions of the device interface are as follow:



7.2.1 To view device information

The name, ID, MAC, temperature data, model, and status of all the current devices can be viewed, or you can view the specific device information by ID, name, and MAC.



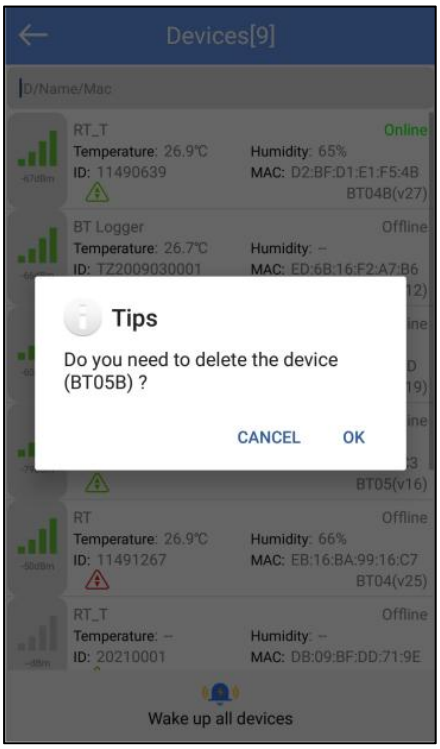
Status description of the device in different symbols:

 : Temperature normal

 : Temperature alarm (including both high and low temperatures)

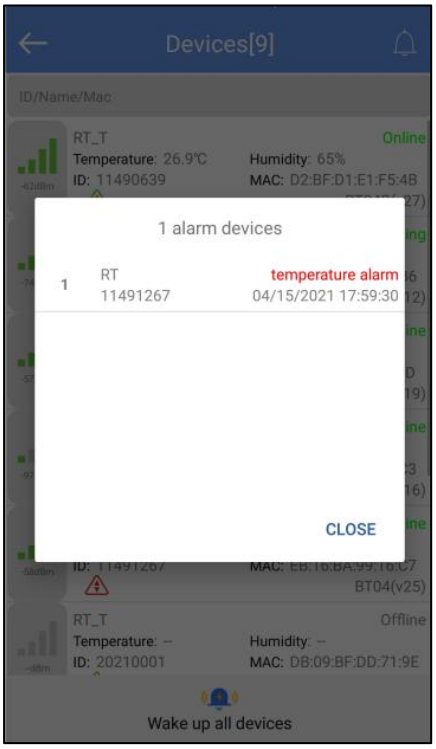
7.2.2 Delete the device:

Long press to delete the device:



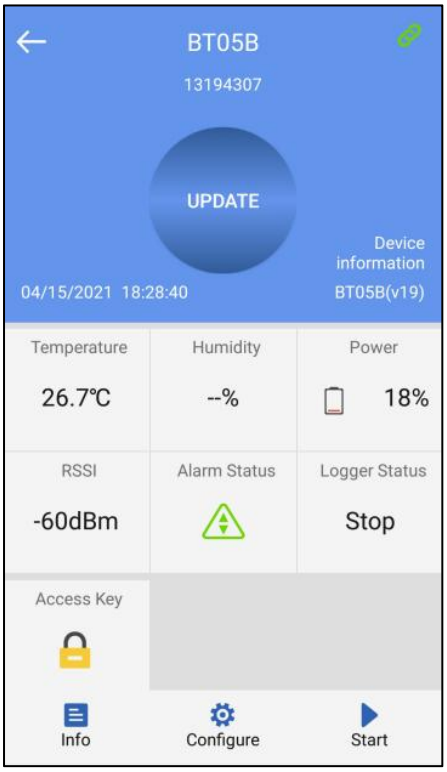
7.2.3 Device alarm:

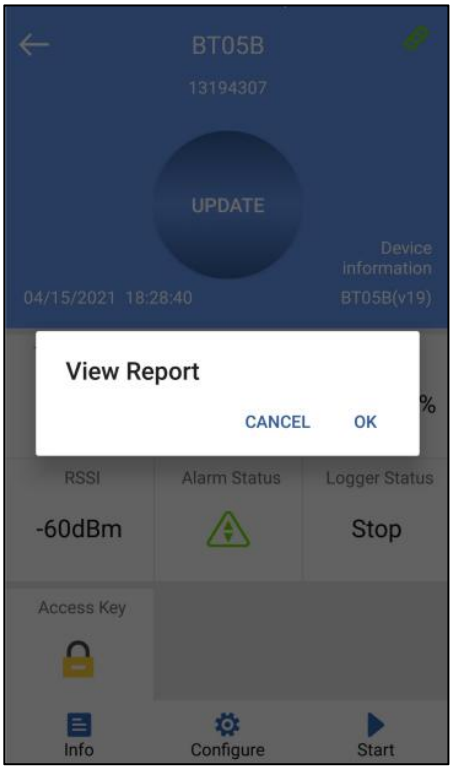
When the device exceeds the preset upper or lower limit, the alarm information will be displayed, and the alarm bell will ring. Clicking "CLOSE " to turn off the alarm information and alarm bell.



7.3 Device connection

Click a single device quickly to enter the connection interface. It will display the temperature, voltage, RSSI, alarm status and logger status of the device. Click "CONNECT," and jump to update after the connection is successful, indicating that the device has been successfully connected and read the current data content. After the connection is successful, it will prompt you whether to view the report, or the access key and flight mode of the device will be displayed. Four buttons will be displayed at the bottom of the interface:





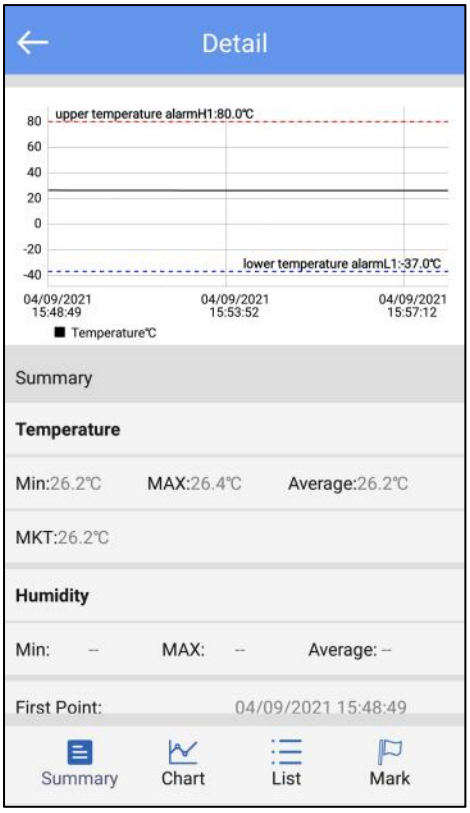
Note: The device will not update the data in the connection process. By default, the device will be disconnected after 1 minute and the four buttons at the bottom will become gray and cannot be clicked again.

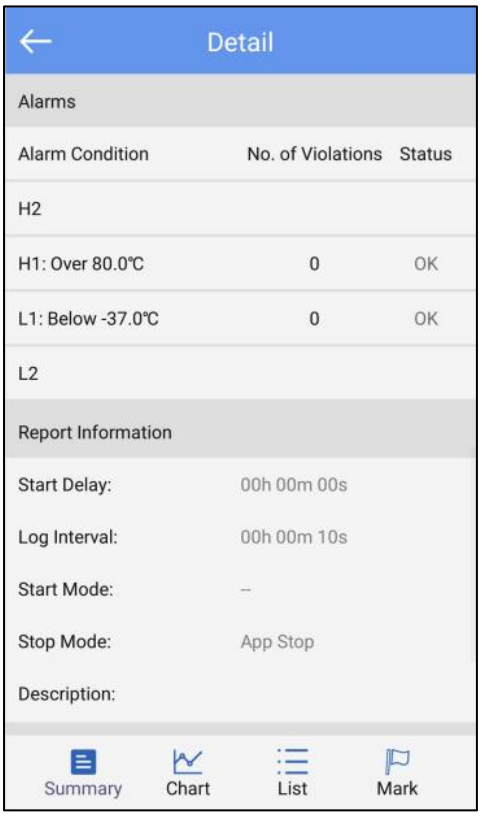
7.3.1 Device access key

Click "Access Key" to encrypt the device, and set the level-1 and level-2 access keys.

7.3.2 Detail and email function

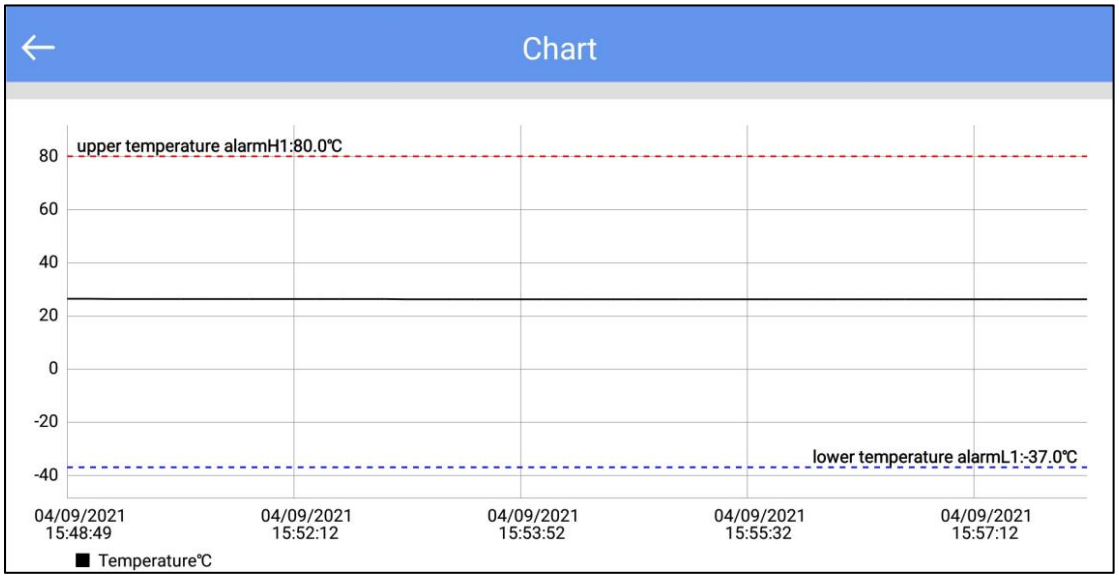
Click "Detail" to view all information reports of the device. Click "EXPORT" to generate PDF and CSV reports, and send the reports to the designated mailbox by email.
A:Details summary





Note: The smartphone must have a mailbox APP and login account to send email.

B: Chart:

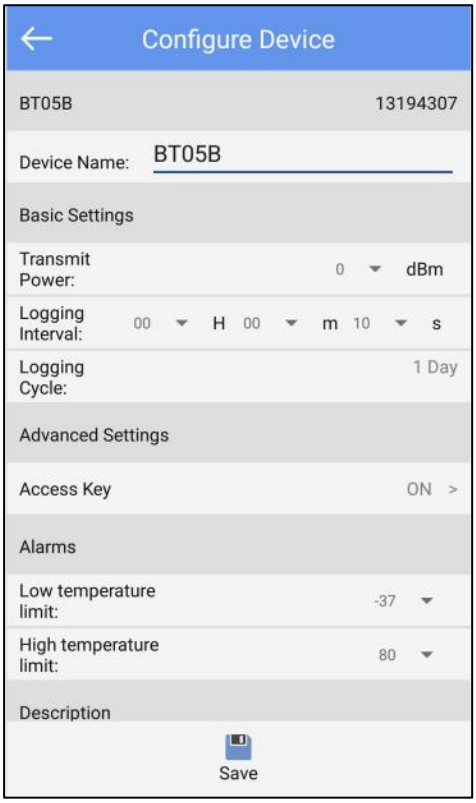


C: List:

NO.	DateTime	Temperature	Humidity
1	04/09/2021 15:48:49	26.4℃	–
2	04/09/2021 15:48:53	26.4℃	–
3	04/09/2021 15:49:03	26.3℃	–
4	04/09/2021 15:49:27	26.3℃	–
5	04/09/2021 15:49:37	26.3℃	–
6	04/09/2021 15:49:47	26.3℃	–
7	04/09/2021 15:49:57	26.3℃	–
8	04/09/2021 15:51:42	26.3℃	–
9	04/09/2021 15:51:52	26.3℃	–
10	04/09/2021 15:52:02	26.3℃	–
11	04/09/2021 15:52:12	26.3℃	–
12	04/09/2021 15:52:22	26.3℃	–
13	04/09/2021 15:52:32	26.3℃	–
14	04/09/2021 15:52:42	26.3℃	–
15	04/09/2021 15:52:52	26.3℃	–

7.4 Configure device

After connection, when the device does not start recording, you can click "Configure" to set the device.



7.4.1 Device name: The device name can be modified (up to 7byte) by users.

7.4.2 Basic settings:

A: Transmission power: The device transmission power(range:-30dbm~4dbm, default:-4dbm)

B: Logging interval: Record time of the stored data (range:10s~1h, default:1mins).

C: Logging cycle : It changes with the logging interval.

7.4.3 Advanced settings

A: Access key: Must be enable,default: 000000.

7.4.4 Alarms:

A: Low temperature limit:-25℃

B: High temperature limit:60℃

7.4.5 Description: You can set a description for this device (up to 56 characters).

7.4.6 Start or stop

You can set whether the device starts or stops through the APP.

7.5 Data files

Click the "Data Files" menu bar to enter to the data files interface. The functions of the device interface are as follows:

7.5.1 To View a single data file

The time displayed in this file is the time when the device data is read for the first time. The information will be updated after each read until the machine stops recording.

7.5.2 Chart report comparison supporting up to 5 files

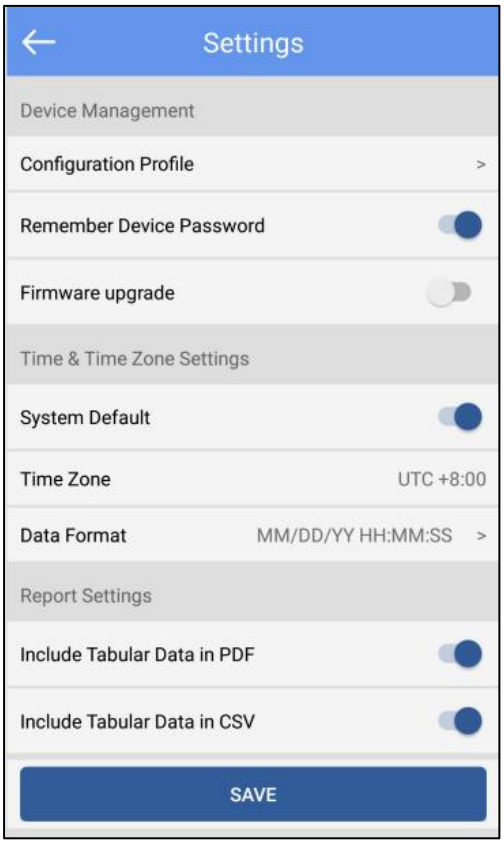
Check the data file and click "Comparison" to compare the temperature chart reports of different data files.

7.5.3 Delete data file

Check the data file and click "Delete" to delete the data file.

7.6 System setting

Click the "System setting" menu bar to enter the system setting interface. The functions of the system setting interface are as follows:



7.6.1 Device Management:

1. Configuration file:You can view the configuration file saved in "Configure".

2. Remember the device access key:

Don’t turn on the switch: enter the access key every time you connect the device

Turn on the switch: when connection the device, you only need to input the access key once (default: remember the key)

3. The firmware update:

Don’t turn on the switch: Firmware upgrades are not allowed

Turn on the switch: After connection, there is firmware upgrade function(default)

7.6.2 Time&Time zone Setting(Only for generating reports through the APP):

1. System default/Time Zone:

Don’t turn on the switch: is UTC time zone or another time zone as you choose

Turn on the switch:is the current time zone of the system (default: system default)

2. Data Format: MM/DD/YY HH:MM:SS(default) or DD/MM/YY HH:MM:SS

7.6.3 Report settings(Only for generating reports through the APP):

1. Include Tabular Data in PDF: Select include or exclude (default: include).

2. Include Tabular Data in CSV: Select include or exclude (default: include).