

BT04 User Manual V1.12



1 Product overview

BT04 is Bluetooth Low Energy temperature and humidity data logger with the latest Bluetooth 4.1 technology and Nordic NRF51822 chip. It can collect temperature and humidity of the surrounding environment . Such data can be recorded as history data. BT04 can store up to 12000 pieces of the temperature and humidity data. Mobile phone with Bluetooth 4.0 or above can download and install App.It can store and monitor temperature and humidity of the environment comprehensively. Its characteristics are small-sized, low-weighted, easily portable and highly accurate for wide use in cold chain logistics, archives, labs, museums, etc.

2 Product application

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. High accuracy and stability;
2. Bluetooth 4.1;
3. Long distance wireless transfer;
4. Built-in highly sensitive temperature and humidity sensor;
5. Real-time display temperature and humidity;
6. It can store 12000 pieces of temperature and humidity data;
7. You can set the alarm temperature range;
8. Can be set the scope of temperature alarm;
9. Can be set normal storage temperature and humidity data interval and alarm storage temperature and humidity data interval;
10. Can choose time to query data, the stored data can be saved in history;
11. History report can be sent to specified email;
12. By pairing Bluetooth printer to print the data report;
13. Can by OTA update version.

4 Product specification

Item	Specification
Signal transmission frequency	2.400 - 2.4835GHz
Protocol standard	Bluetooth 4.1
Modulation mode	GFSK
Send interval	2S, adjustable
Built in battery	CR2450,620mAh /3V

Output power	-4dBm, adjustable
Communication rate	1Mbps
Transmission distance	55 meters, adjustable
Storage	Can be save 12000 temperature and humidity data
battery life	1.5 years(Depends on the mode of operation, can replace battery)
Net weight	30g
Outline size	50mm*50mm*16mm
Measuring range	Temperature -25°C~ +70°C, Humidity 5~95%RH
Temperature detection accuracy	±0.5°C (-20~40°C), ±1°C (other)
Humidity detection accuracy	±5%RH (10~90%), ±8%RH (other)
Resolution	0.1%RH typically, 0.1°C

5 Caution

1. Being close to a metal object will interfere with the signal, causing the signal to be weakened.
2. Note the distance between BT04 and the receiver to guarantee the accuracy of receiving.
3. Keep away from water and corrosive objects.

6 APP

‘Temp Logger’ is a free mobile applications which provided by our company to the users, can connect the BT04 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 (V25 and above available):

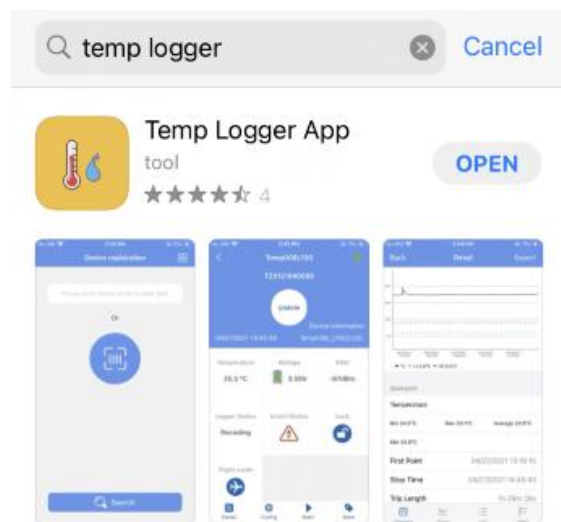
Android download: (Support Android 8.0 or newer)

Method 1: Into Google Play and type "Temp Logger App";

Method 2: Scan the following QR code;

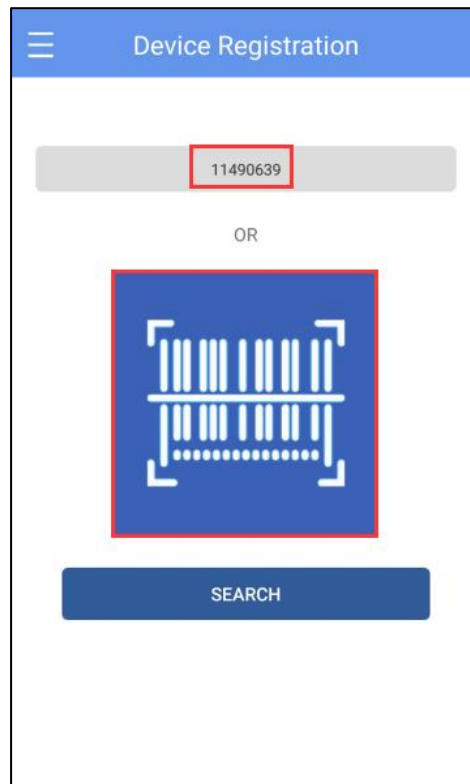


IOS download: Into Apple APP Store and type “Temp Logger App”;
(Support iOS 14.0 or newer)

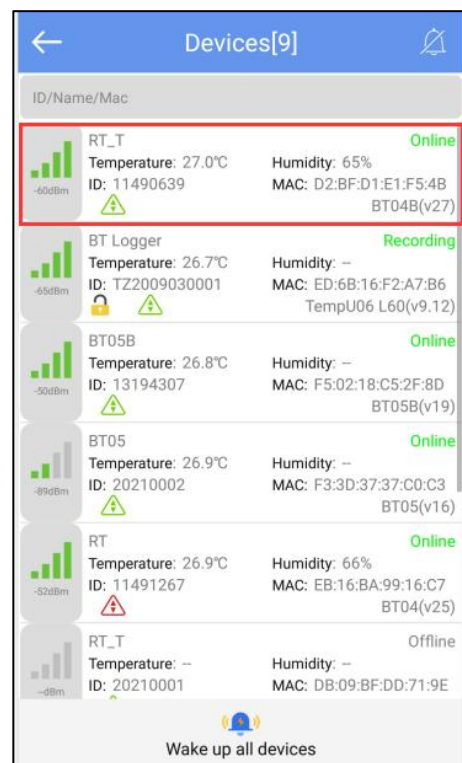
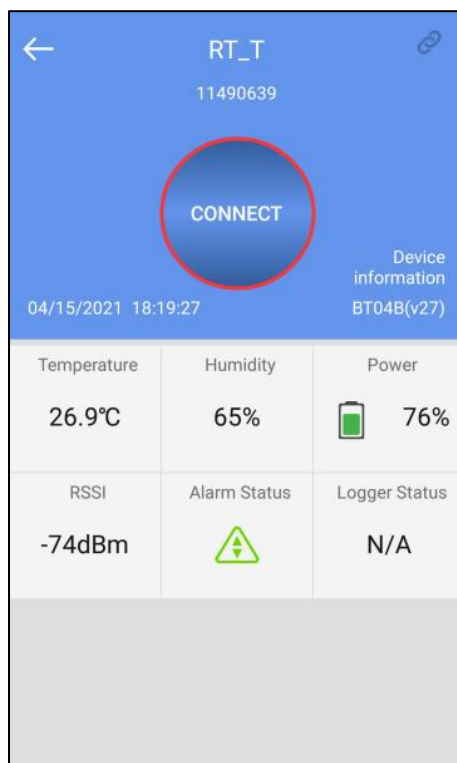


6.1 Device Registration

6.1.1 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 .

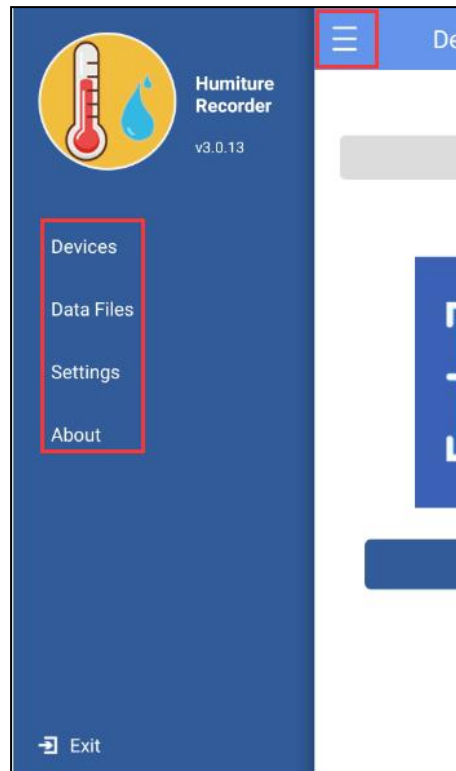


6.2.2 Enter the device connection page and click Connect. After a successful connection, the device ID will be displayed on the "Devices" page, indicating that the device has been registered successfully .

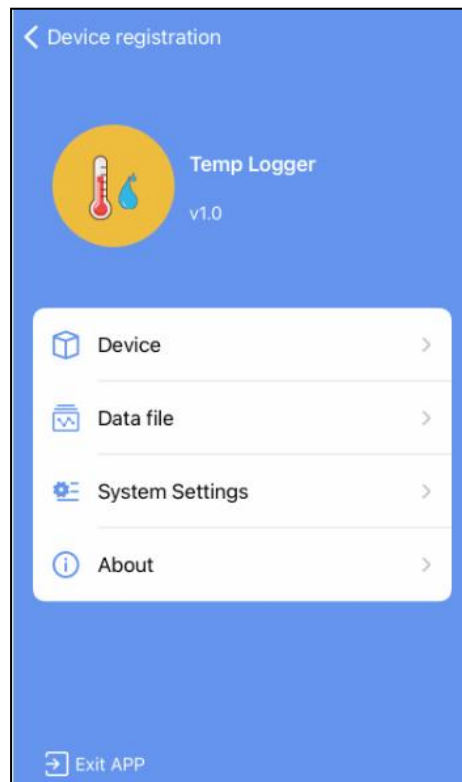


6.2 Device View

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:

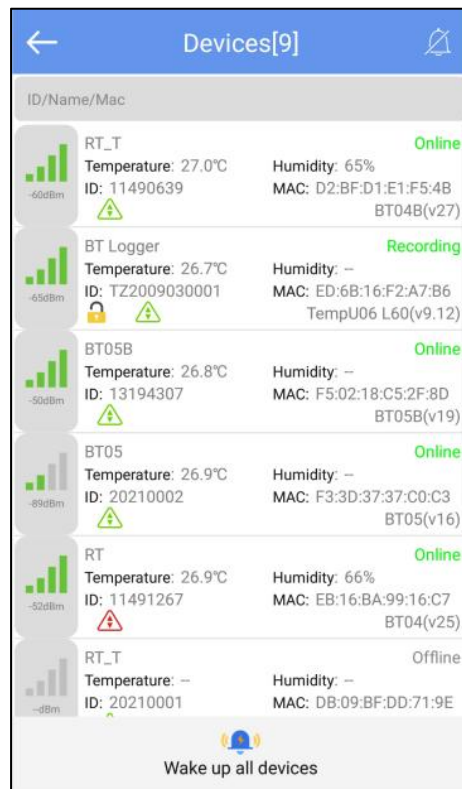


IOS:Click the icon in the upper right corner of the home screen to expand the main menu. You can select the menu function and click “device” to enter the multi device interface. The functions of the device interface are as follow:



6.2.1 To view device information

The name, ID, MAC, temperature/humidity 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.



Devices[9]	
ID/Name/Mac	
 RT_T Temperature: 27.0°C ID: 11490639	Humidity: 65% MAC: D2:BF:D1:E1:F5:4B BT04B(v27) Online
 BT Logger Temperature: 26.7°C ID: TZ2009030001	Humidity: -- MAC: ED:6B:16:F2:A7:B6 TempU06 L60(v9.12) Recording
 BT05B Temperature: 26.8°C ID: 13194307	Humidity: -- MAC: F5:02:18:C5:2F:8D BT05B(v19) Online
 BT05 Temperature: 26.9°C ID: 20210002	Humidity: -- MAC: F3:3D:37:37:C0:C3 BT05(v16) Online
 RT Temperature: 26.9°C ID: 11491267	Humidity: 66% MAC: EB:16:BA:99:16:C7 BT04(v25) Online
 RT_T Temperature: -- ID: 20210001	Humidity: -- MAC: DB:09:BF:DD:71:9E Offline

Wake up all devices

Status description of the device in different symbols:



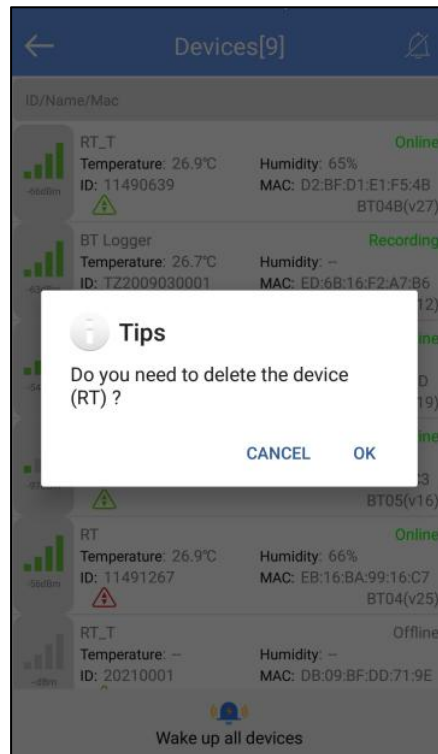
: Temperature normal



: Temperature alarm (including both high and low temperatures)

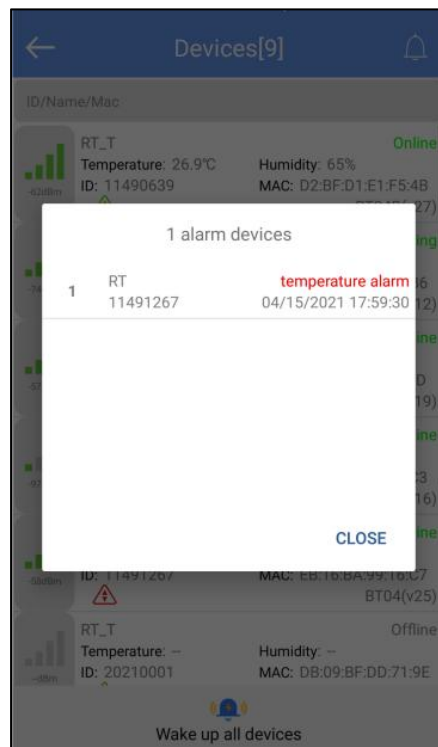
6.2.2 Delete the device:

Long press to delete the device:



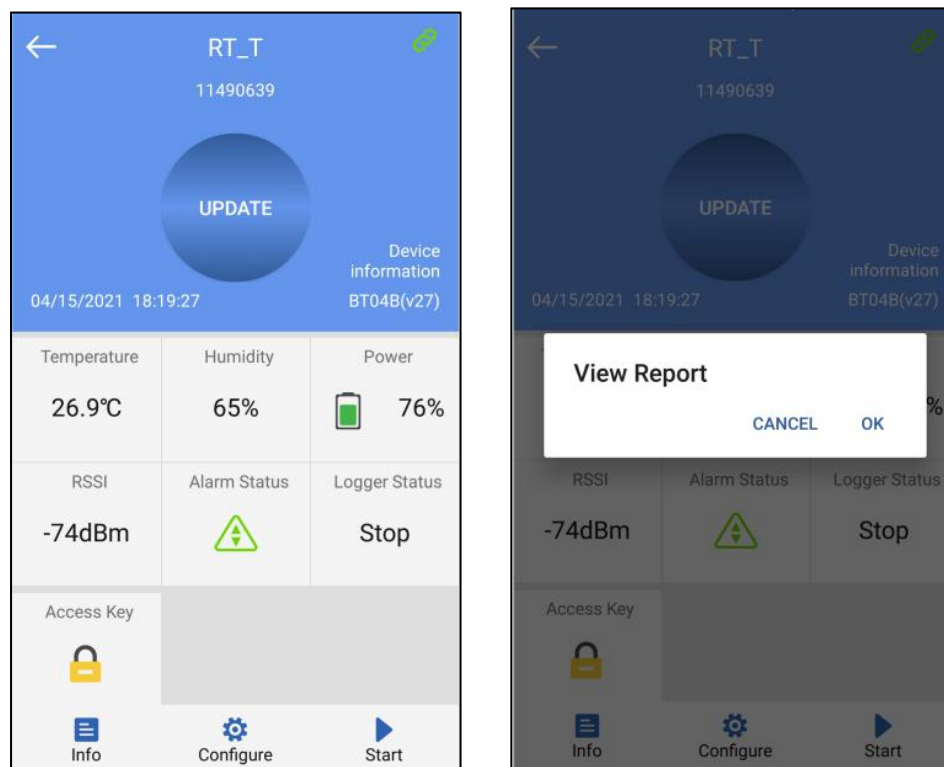
6.2.3 Device alarm:

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.



6.3 Device connection

Click a single device quickly to enter the connection interface. It will display the temperature/humidity, 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.

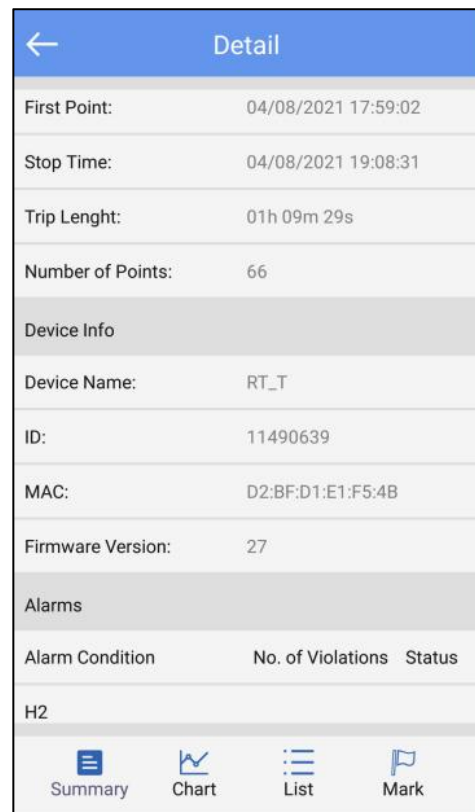
6.3.1 Device access key

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

6.3.2 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



Detail

L1: Below -20.0°C

0

OK

L2

Report Information

Start Delay:

00h 00m 00s

Log Interval:

00h 01m 00s

Start Mode:

--

Stop Mode:

App Stop

Description:

EXPORT

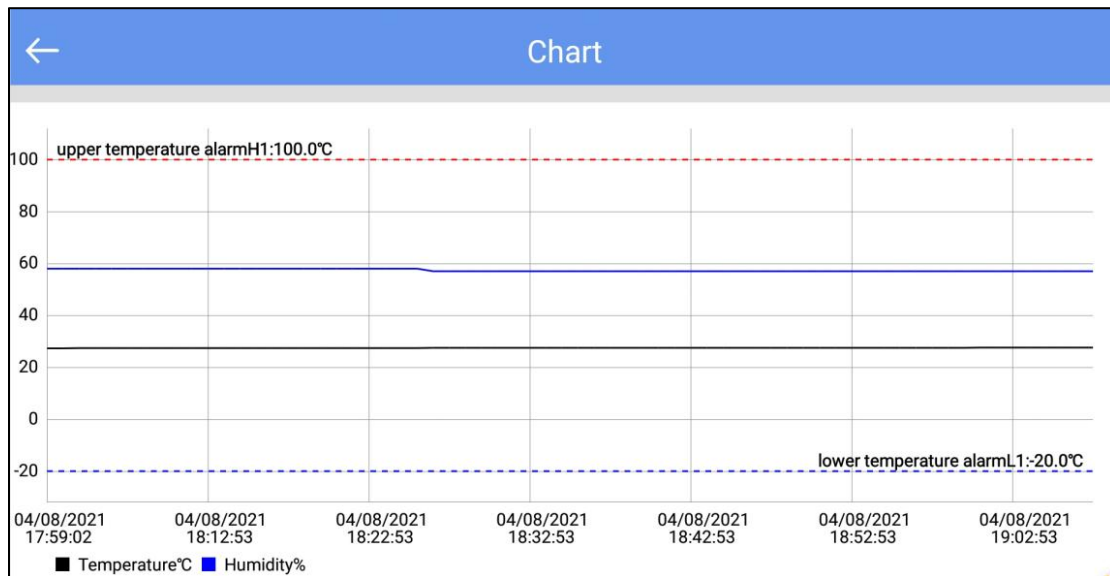
Summary

Chart

List

Mark

B: Chart:



C: List:

List				
NO.	DateTime	Temperature	Humidity	
1	04/08/2021 17:59:02	27.3°C	58%	
2	04/08/2021 18:01:35	27.3°C	58%	
3	04/08/2021 18:02:35	27.4°C	58%	
4	04/08/2021 18:04:59	27.4°C	58%	
5	04/08/2021 18:05:59	27.4°C	58%	
6	04/08/2021 18:06:59	27.4°C	58%	
7	04/08/2021 18:08:53	27.4°C	58%	
8	04/08/2021 18:09:53	27.4°C	58%	
9	04/08/2021 18:10:53	27.4°C	58%	
10	04/08/2021 18:11:53	27.4°C	58%	
11	04/08/2021 18:12:53	27.4°C	58%	
12	04/08/2021 18:13:53	27.4°C	58%	
13	04/08/2021 18:14:53	27.4°C	58%	
14	04/08/2021 18:15:53	27.4°C	58%	
15	04/08/2021 18:16:53	27.4°C	58%	

6.4 Configure device

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

← Configure Device

BT04B 11490639

Device Name: RT_T

Basic Settings

Transmit Power: -4 ▾ dBm

Logging Interval: 00 ▾ H 01 ▾ m 00 ▾ s

Logging Cycle: 8 Day

Advanced Settings

Access Key ON >

Alarms

Low temperature limit: -20 ▾

High temperature limit: 8 ▾

Description

 Save

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

6.4.2 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.

6.4.3 Advanced settings

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

6.4.4 Alarms:

A: Low temperature limit:-25°C

B: High temperature limit:100°C

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

6.4.6 Start or stop

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

6.5 Data files

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

Data Files			
8	TZ2020022500	02/25/2021 12:03:28	☐
9	TZ0120100008	02/22/2021 17:07:30	☐
10	TZ0120010001	02/06/2021 17:31:36	☐
11	20210002	02/06/2021 16:53:44	☐
12	20210003	02/06/2021 16:34:34	☐
13	20210003	02/06/2021 16:28:16	☐
14	20210002	02/06/2021 16:17:29	☐
15	20210002	02/06/2021 15:56:35	☐
16	11491267	02/06/2021 12:26:43	☐
17	13191706	02/06/2021 12:04:48	☐
 Comparison		 Delete	

6.5.1 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.

6.5.2 Chart report comparison supporting up to 5 files

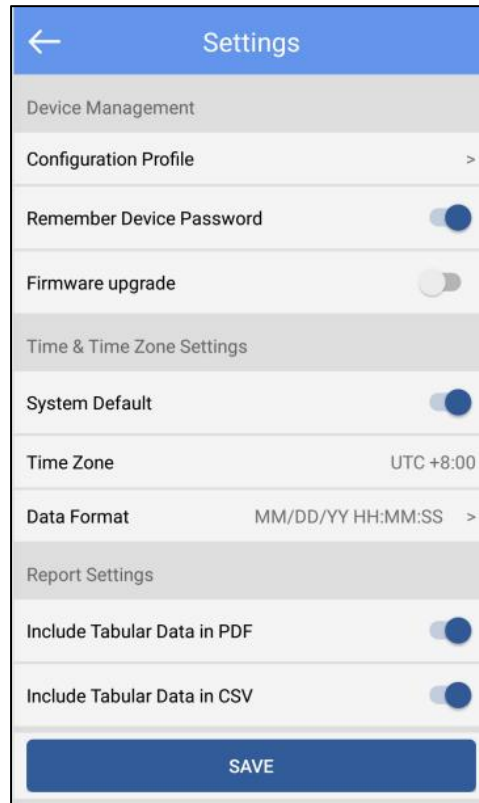
Check the data file and click "Comparison" to compare the temperature chart reports of different data files.

6.5.3 Delete data file

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

6.6 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).