

TZ-BT05

--- User Manual v1.2



1 Product Overview

TZ-BT05 is a low power consumption Bluetooth data logger, using the latest Bluetooth 4.0 technology, Nordic N51822 chip development and design, It can collect temperature of the surrounding environment, and recording and preservation of historical data, can store up to 15,000 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 4.0;
3. The long-distance wireless communication;
4. Built-in high sensitivity temperature sensor;
5. Real-time display temperature;
6. Can store 15,000 temperature data;
7. You can set the alarm temperature range;
8. The temperature graph can be automatically generated in the APP;
9. Every time query of data, the stored data can be saved in history;
10. Temperature data can be generate a PDF report and sent to specified email;
11. By pairing Bluetooth printer to print the data report;

4 Product specification

Item	Specification
Frequency signal transmission	2.400 - 2.4835GHz
Protocol	Bluetooth 4.0
Modulation	GFSK
Transmission interval	2S
Internal battery	CR2450,550mAh/3V
Output power	-4dBm, adjustable
Maximum transmission distance	55 meters (-4db)
Storage	can store 15000 pieces data
Battery life	1 year (depends on working mode,can replace battery)
Net weight	25g
Dimension	50mm*35mm*15mm
Temperature detecting range	-20℃~+60℃
Temperature detecting accuracy	±1℃

5 Caution

- 1,Away from metal objects, not placed in a sealed metal and small space;
- 2,Note that the distance between the TZ-BT05 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

'Temperature data logger' is a free mobile applications which provided by our company to the users, can connect the BT05 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 Android, IOS phone for temperature monitoring.

7.1 Android phone 'temperature data logger' App use.

Client can download App by scan the QR code below:

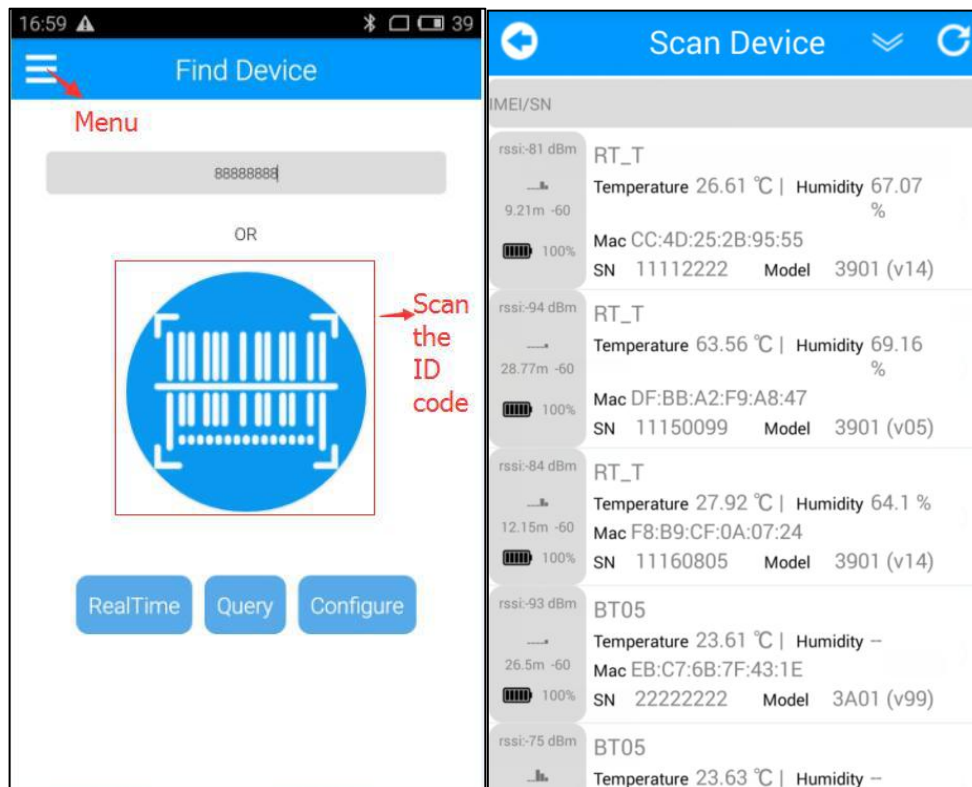


Open the 'Temperature data logger' software, the first to see is the scan code interface; there are three interface buttons, they are 'real time data', 'data extraction', 'Configure Devices'; and the upper-left corner of the menu button. Whether you need to enter which interface of this three interface, devices are required SN code, SN code can be scanned, entered directly using the phone keypad, also can directly click Real time/Query/Configure and see the device list:

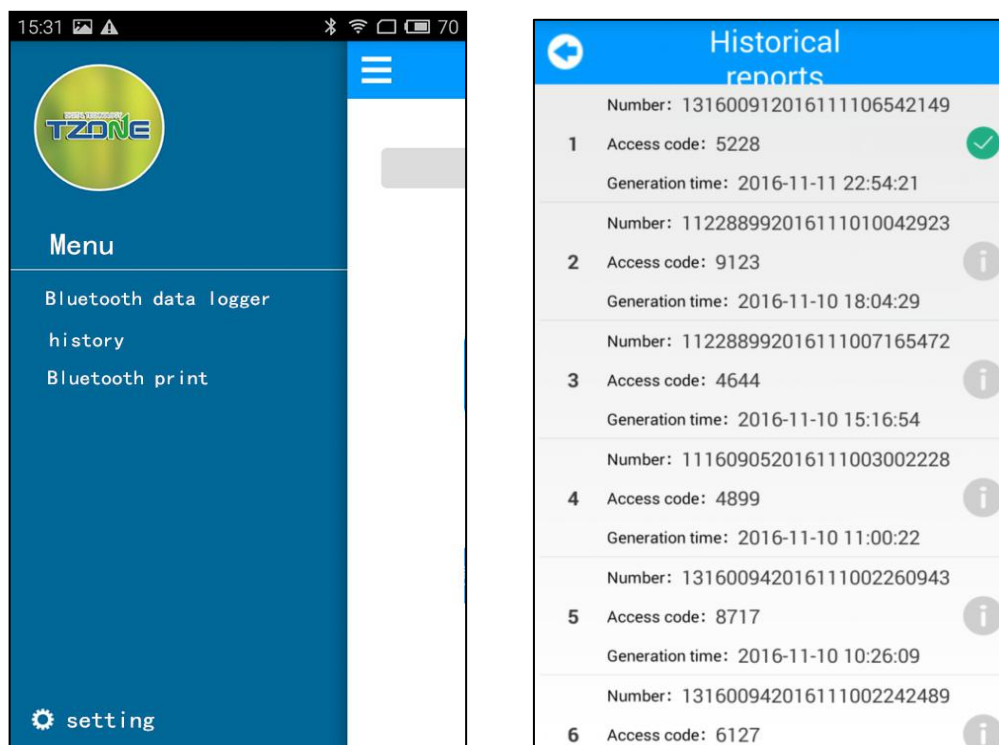
Note: 1. One mobile phone APP only can scan 300 devices;

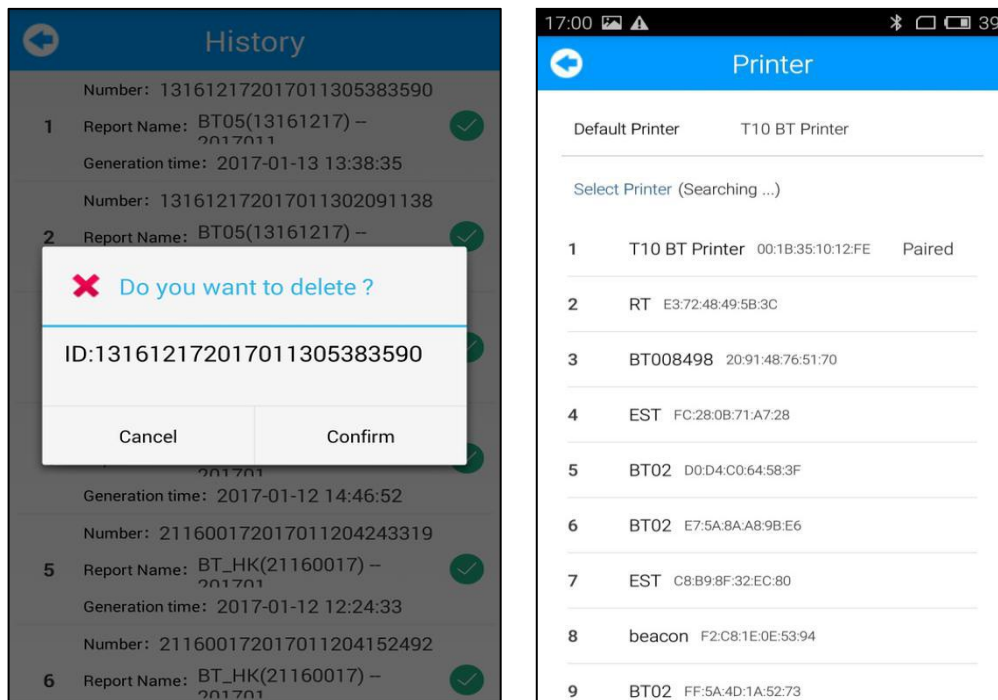
2. The mobile phone size must more than 5.0 and the resolution must more than 1024*720

As shown below picture:



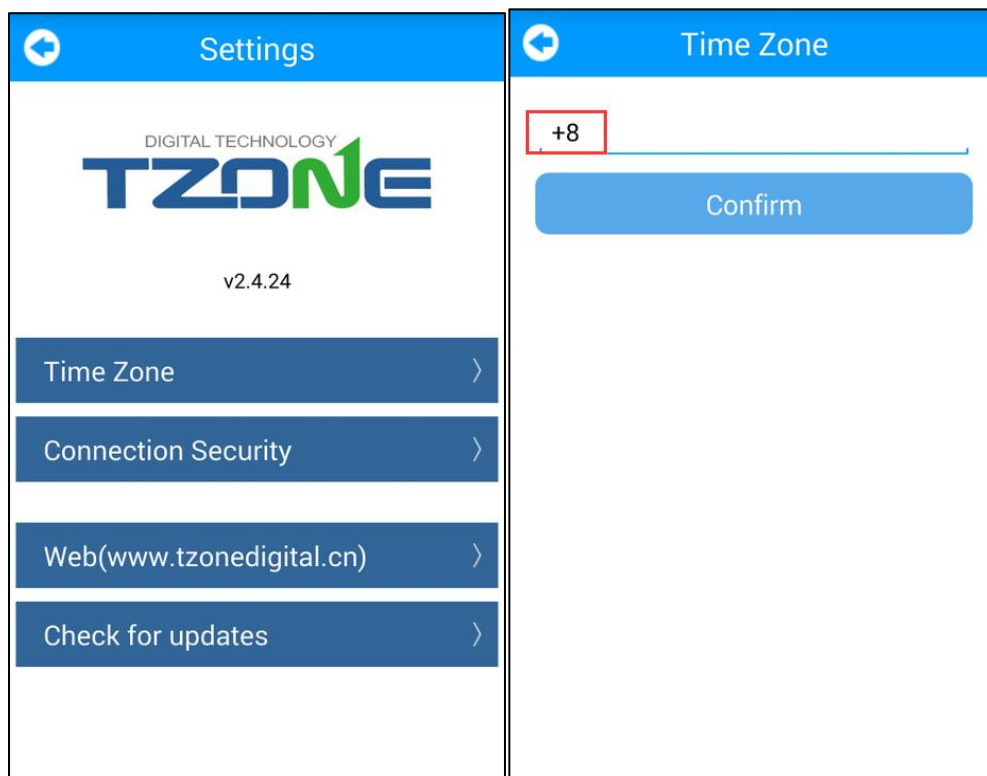
Press the Menu key to query historical data extraction, pairing a Bluetooth printer, etc., as shown below:





you can delete the report when you press the report and hold on for a while.

When configuration the BT, please configure the local time zone in 'Settings', then generate PDF report will become the current time:



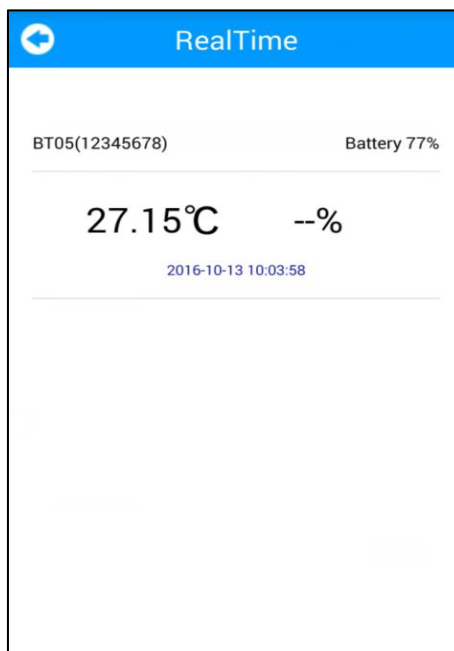
7.1.1 Configure logger

After entering the SN code or scanning device , or directly click ‘Configure Devices’ and select the device, on the home page, or enter the configuration interface, as shown below:

The interface can be configured BT05 password(6 byte), if the default password is 000000, as long as write any 6 digits password can connect successfully, if the transmit power(-20~4dbm), storage space(10~3600s), and the upper and lower temperature limits(-20~60°), empty stored data .The appropriate value of the transmit power can be selected in the drop-down list; storage interval and alarm settings directly enter numbers according to individual needs(the storage time of the default is 30 seconds when alarm); memory is cleared, you can choose to open or close(open will clear historical data). According to individual requirements click Save Settings then can write in, if save successfully, will be prompted the ‘Save Configuration successful.’the‘Default Setting’button will reset the device to default. Note: the above BT05_v6 version can be set device name(no more than 7 byte), note and description(no more than 20byte).

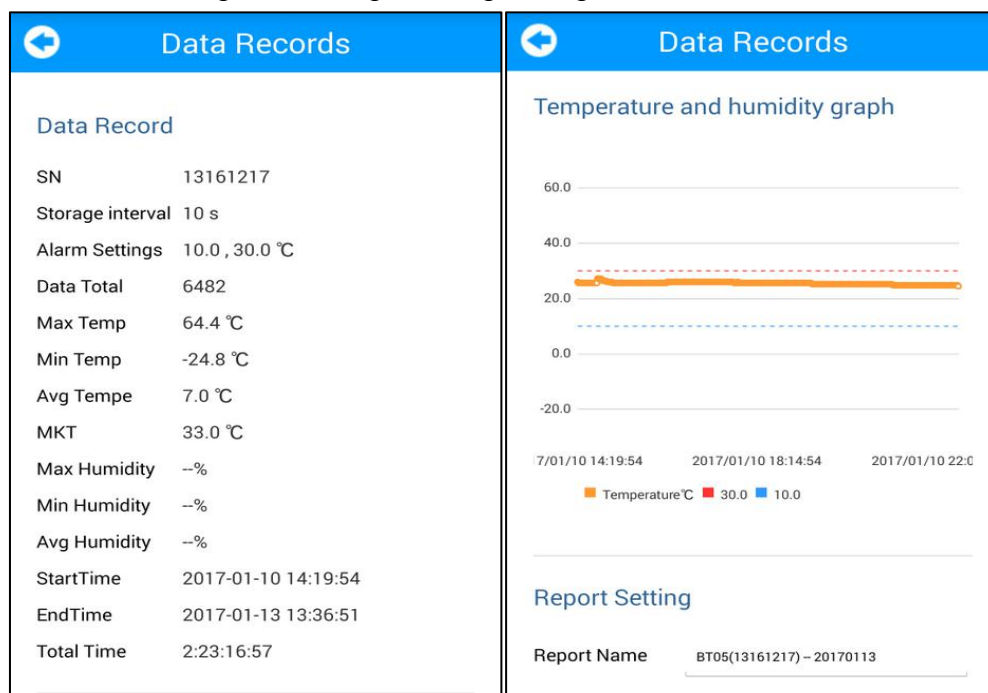
7.1.2 Real time data

‘Real time data’ displays the device name,real-time temperature and power, the interface for viewing real-time temperature, if the temperature exceed the limits then the figure change to be red, or else black font, this interface does not provide editing function . As shown below:



7.1.3 Query data

‘Query Data’ screen, displays SN code,Storage interval,Alarm settings,the total number of data recorded ,the maximum/minimum/Avg/MTK temperature during recording, start time, end time, totoal time,temperature graph and Bluetooth printing, the interface is mainly used for reading temperature data recorded in a specific time period, the same as the historical record,the report includes data report, data record, temperature chart,set report,send report and print report,As shown below:



Data Records

Report Setting

Report Name

BT05(44556677) - 20161201

Note

Description

Save Settings

Send Report

Revice Email

name@example.com

Send

Print Report

7.1.4 History record

Every click on the "query data", the data will be stored in the historical data ,you can into the historical record, the report includes data report, data record, temperature chart,set report,send report and print report, as shown below:

Historical reports

Data Report

Document

445566772016120106262455

Access code

5309

Data Record

SN

44556677

Storage interval

30 s

Total Records

2556

Max Temp

24.1 °C

Min Temp

19.5 °C

Max Humidity

--%

Min Humidity

--%

StartTime

2016-11-30 17:01:04

EndTime

2016-12-01 14:23:23

History

Data Report

Number

131612172017011305383590

Access code

6318

Create Time

2017-01-13 13:38:35

Data Record

SN

13161217

Storage interval

10 s

Alarm Settings

10.0 , 30.0 °C

Total Records

6482

Max Temp

64.4 °C

Min Temp

-24.8 °C

Avg Tempe

7.0 °C

MKT

33.0 °C

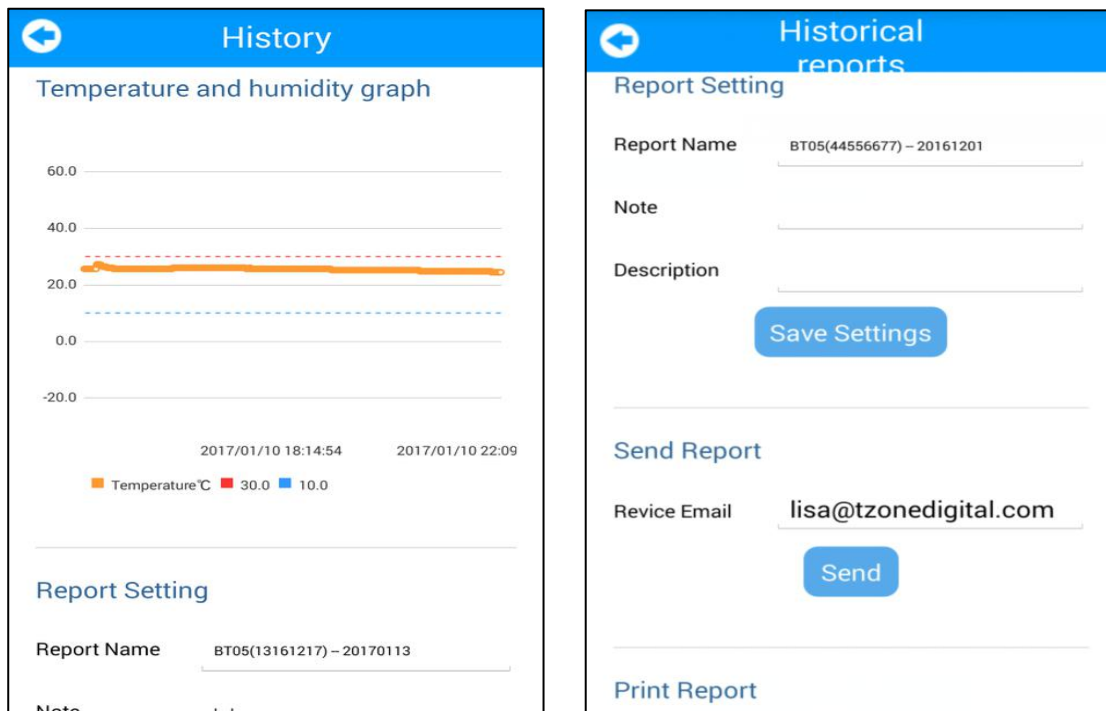
Max Humidity

--%

Min Humidity

--%

Note: **Red line**: high temperature threshold,**blue line**: low temperature threshold



In the report Settings can be set up report name, comment and description,also can be directly set in configure logger, as shown below:

This screenshot shows the 'Historical reports' screen with a red rectangular box highlighting the 'Report Setting' section. The details are as follows:

- Title Bar:** Historical reports
- Section Header:** Report Setting
- Form Fields (highlighted in red box):**
 - Report Name: BT05(44556677) - 20161201
 - Note: room1
 - Description: test
- Action Buttons:** Save Settings (blue button)
- Section Header:** Send Report
- Form Fields:**
 - Revice Email: lisa@tzedigital.com
- Action Buttons:** Send (blue button)

In “send report” can be set up to receive email, the first please set the email account on the mobile,click send,you can change the report start and end time and set the PDF graph scaling,click confirm, it is will generate PDF files and into write email, you can input mail content, red box for sending, click it, the PDF report will be sent to the designated email,as shown below:

Historical reports

Description

test

Save Settings

Send Report

Revice Email

lisa@tzone digital.com

Send

Print Report

Select Printer

T10 BT Printer

Print

Send Email

Set the display time range

2017-01-10 14:19:54 ~ 2017-01-13 13:36:51

Set the PDF graph scaling

60.0

40.0

20.0

0.0

-20.0

7/01/10 14:19:54

2017/01/10 18:14:54

2017/01/10 22:0

Temperature°C

30.0

10.0

Compose

From: lisa@tzone digital.com

To: lisa@tzone digital.com

Cc/Bcc:

Subject: BT05(13161217) -- 20170113

PDF

13161217201...05383590.pdf

87.92KB

×

来自我的华为手机

Attach File

Menu

Can be in the specified mailbox to see to this email and generate PDF report,as shown below:



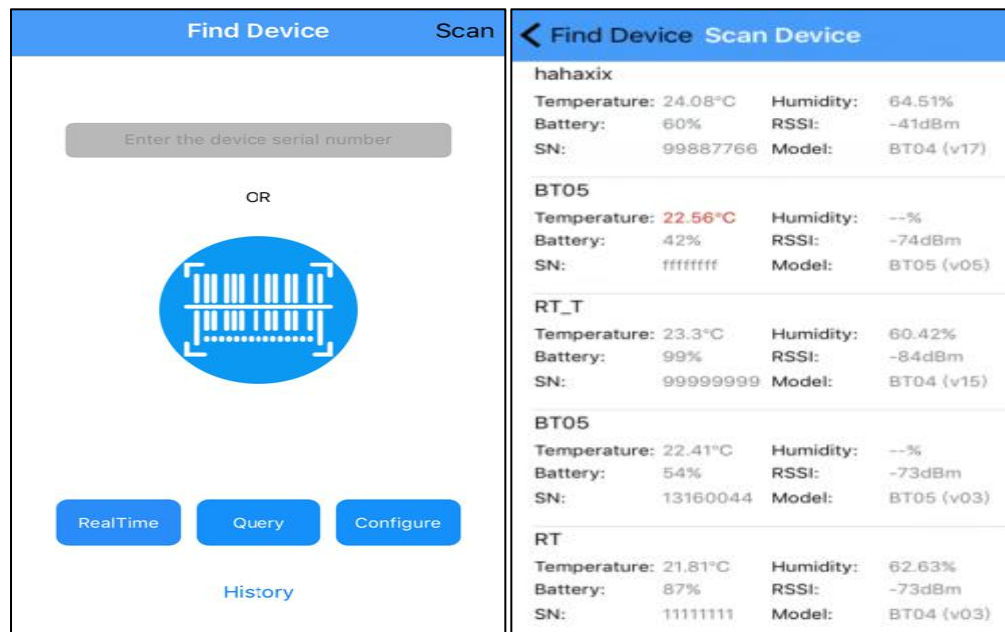
7.2 IOS system ‘temperature data logger’ App use.

Client can download App by App Store :
Search: Humiture Recorder



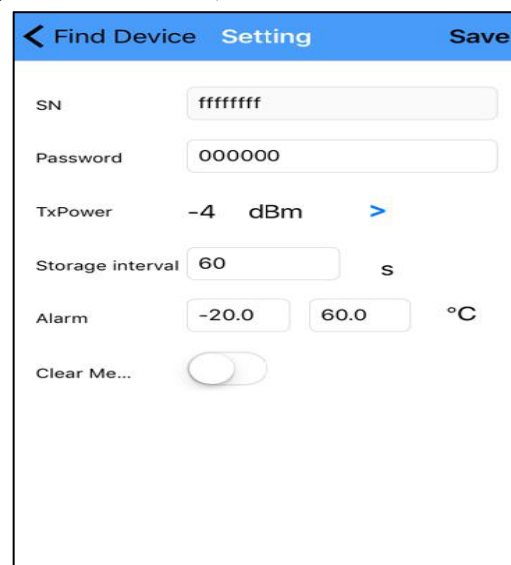
Open the 'Temperature data logger' software, the first to see is the scan code interface; there are three interface buttons, they are 'Real time', 'Query', 'Configure'; and the upper-right corner of the search button. Whether you need to enter which interface of this three interface, devices are required SN code, SN code can be scanned or entered directly using the phone keypad or also can directly see equipment list after clicking on search.

As shown below picture:



7.2.1 Configure logger

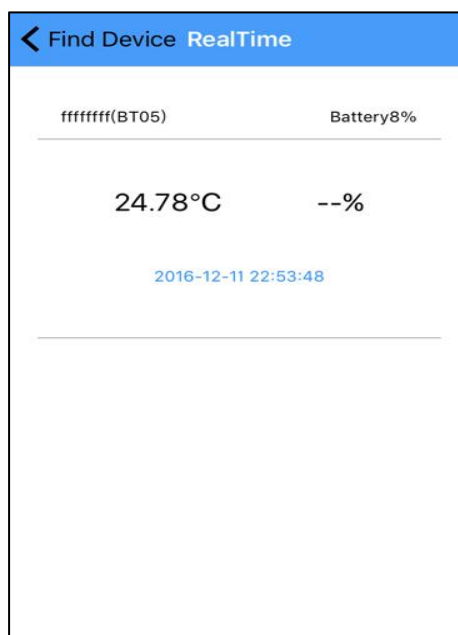
After entering the SN code or scanning device or clicking search on the home page, will enter the configuration interface, as shown below:



‘Setting’ The interface can be configured BT05 transmit power, storage space, and the upper and lower temperature limits, empty stored data .The appropriate value of the transmit power can be selected in the drop-down list; storage interval and alarm settings directly enter numbers according to individual needs(the storage time of the default is 30 seconds when alarm); memory is cleared, you can choose to open or close(open will clear historical data). According to individual requirements click Save Settings then can write in, if save successfully, will be prompted the ‘Save Configuration successful.

7.2.2 Real time data

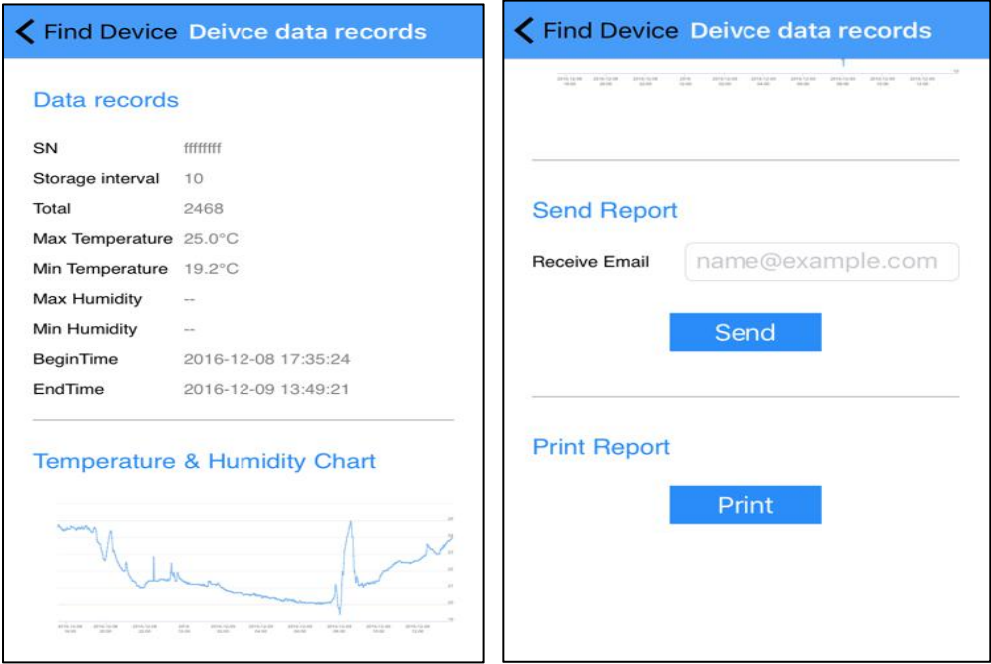
‘Real time data’ displays the device name, real-time temperature and power, the interface for viewing real-time temperature, if the temperature exceed the limits then the figure change to be red, or else black font, this interface does not provide editing function . As shown below:



7.2.3 Query data

‘Query Data’ screen, displays SN code, Storage interval, the total number of data recorded ,the maximum and minimum temperature during recording, start time, end time, temperature chart ,send report and Bluetooth printing, the interface is mainly used for reading temperature data recorded in a specific time period. There have send report and print report function(Please don't let the screen lock screen,or query will

interrupt), As shown below:



7.2.4 History data

Every click query data, stored data will be stored in a history report, can enter the history report to see.

Find Device History	
No:	ffffff20161209135521
Token:	1234
CreateTime:	2016-12-09 13:55:21
No:	9988776620161209075322
Token:	1234
CreateTime:	2016-12-09 07:53:22
No:	9988776620161209001818
Token:	1234
CreateTime:	2016-12-09 00:18:18
No:	9988776620161208174543
Token:	1234
CreateTime:	2016-12-08 17:45:43
No:	8765432120161208174220
Token:	1234
CreateTime:	2016-12-08 17:42:20

And query data, the same history report includes data report, data record, temperature

and chart and send report and print reports, as shown in the figure below:

< History Device data records

Data records

SN	ffffff
Storage interval	10
Total	4283
Max Temperature	30.5°C
Min Temperature	15.4°C
Max Humidity	--
Min Humidity	--
BeginTime	2016-01-01 09:02:01
EndTime	2016-12-08 13:30:15

Temperature & Humidity Chart

< History Device data records

Send Report

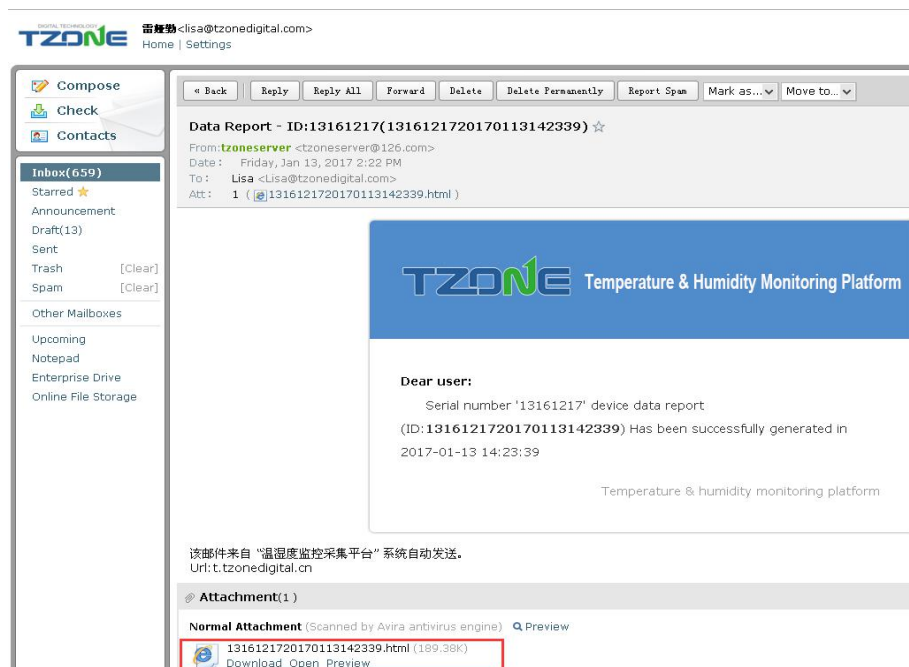
Receive Email

[Send](#)

Print Report

[Print](#)

In sending report can be set receive email, click send, can generate HTML form the report and sent to email address:



Turn on the Bluetooth printer, click print button, can automatically search the Bluetooth printer device name, click the device name, can automatically match and print this data report:

