TT19
4G Real-Time Temperature and Humidity Data Logger

User Guide V1.1

1. Product overview

TT19 is a global 4G real-time temperature and humidity data logger with high-quality sensitive components and high measurement accuracy. It is embedded with 4G modules, GPS modules and WiFi modules. The data is sent to the cloud through the 4G network for monitoring and analysis, and it's also with the function of automatically generating PDF reports. With 4000mAh large capacity battery and low power consumption design, once charge, TT19 can work for a long time, it's greatly adapt to different transportation temperature monitoring requirements.

Considering about the data security, TT19 not only uploads data to cloud, but also stores data into flash. And for emergency use, the user can easily connect the USB C port to automatically generate PDF report. With a complete cold chain visibility, traceability monitoring (temperature, humidity, light, shock, location) system, the TT19 is helping customers digitize their supply chain, prevent the loss of shipments with in-transit visibility and alerts, automate and increase compliance, and speed up product release, extremely improve transportation efficiency and reduce product losses.

2. Product features

1. Global use, support LTE with 2G fallback.

2. Real-time monitor temperature, humidity, light, shock and location.

3. Multi-use, with 4000mAh rechargeable battery.

4. High accuracy SHT30 digital temperature and humidity sensor with NIST traceable calibration.

5. Support GPS, WiFi and LBS multiple positioning, positioning accuracy up to 2m.

6. IP64 waterproof design adapt to harsh environments.

7. Two button design with large LCD display, friendly use and easily operate.

8. Automatically generate PDF report via USB C port for emergency use.

3. Product specifications

Items	Details
Monitoring information	Temperature, humidity, location, light, vibration
Temperature and humidity sensor	Sensirion SHT30
Temperature measurement range	-20℃~+60℃
Temperature accuracy range	±0.3℃ (0℃ ~ +60℃); ±0.5℃ for other range
Humidity measurement range	5%~95%RH
Humidity accuracy range	±3%(10%~90%RH); ±5% for other range
Light sensor range	0-64000lux
Vibration sensor range	0-16G
Minimum unit	0.1℃/0.1%RH/1 lux/0.001G
Position type	GPS position, WiFi position, LBS base station position
Memory capacity	17,000
Network system	Global LTE 4G, with 2G fallback
Recording interval	Default 60min, configurable
Reporting interval	Default 60min , configurable
Usage time	Once fully charged, it can be used for 60 days based on reporting interval of 60 min and GPS turned on.
Battery specification	Bulit-in3.7v/4000mAh Lithium rechargeable
USB interface	USB-C
Usage type	Multiuse+rechargeable
Waterproof level	IP64
Dimension	100mm*66mm*29mm
Weight	165g

4. Product description

| Items	Functions
OK Light	Indicate device status
Alarm Light	Indicate device status
LCD Screen	Display screen
START/STATUS Button	Turn on/View Machine Status/Send Data
STOP Button	Turn off/View Machine Status
ID	Device ID number
Light Sensor	Light sensor
USB-C	USB-C interface, for charging or automatically generating PDF report. The two LED will be on during charging and off when fully charged.

5. LCD display instructions
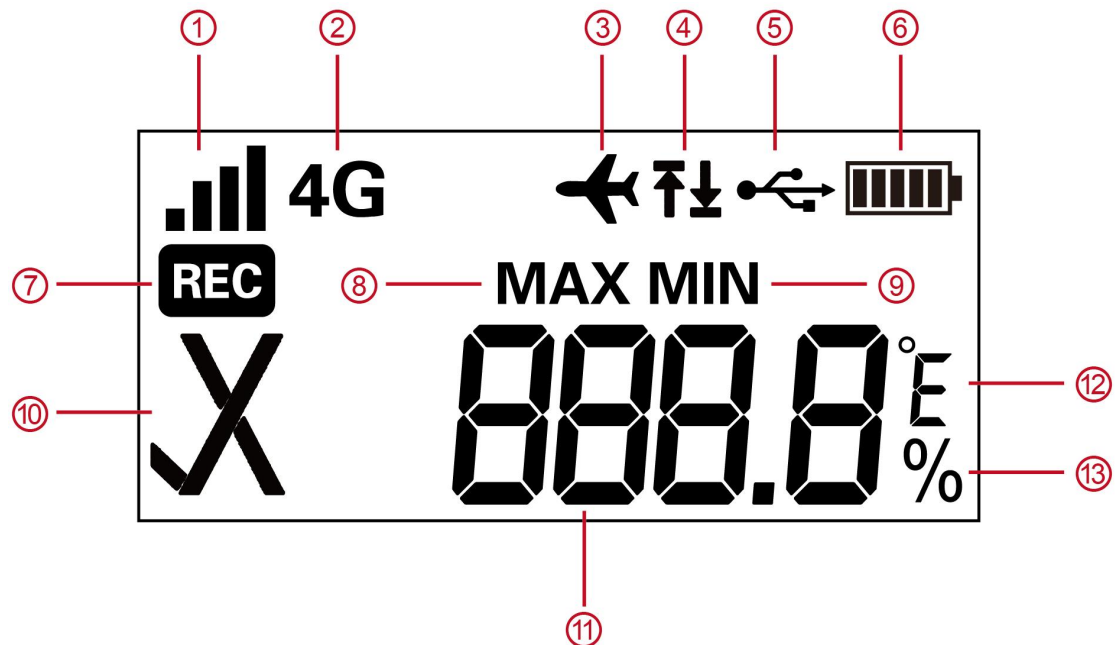
Serial Number	Functions	Explanation
1	Network signal strength icon	Indicating signal strength, the more signal bars, the better signal strength.
2	4G network icon	Indicate the device connected with 4G network.
3	Flight mode icon	It means the device has entered into flight mode, and it will only store data but not transmit.
4	Temperature and humidity exceeding the limits	Exceed the upper limit：↑ Exceed the lower limit：↓ Both exceed：↑↓
5	USB icon	Indicate the USB connected and battery charging, when full charged, the USB icon will not display.
6	Battery status	The higher the number of grids, the higher the electricity. Please charge immediately when there is only 1 grid or space.
7	Record icon	It means that device is in a record state, displayed after turn on.
8	Maximum icon	Display the maximum temperature and humidity value.
9	Minimum icon	Show the minimum temperature and humidity value.
10	Temperature and	Normal：√ Alarm：×

	humidity alarm icon	
11	Temperature and humidity value	The resolution of temperature and humidity is 0.1. When the sensor is abnormal, it will display -------
12	Temperature unit icon	Temperature unit, optional "℃" or "℉" display
13	Humidity unit icon	Humidity unit is "%".

6. Device operation and status

6.1 Turn on

In off state，press the "START" button more than 3 seconds, the "OK" LED will light in green, and the LCD display will show temperature values which means you've turned on the device,and device will upload a data to cloud immediately.

Long press
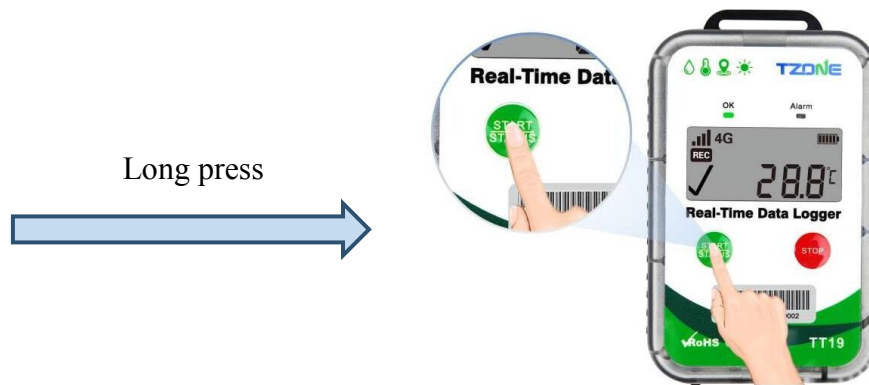
6.2 Turn off

In on state,press the "STOP" button more than 3 seconds, the "Alarm" LED will light in red and the LCD display will be off, which means you've turned off the device,and device will upload a data to cloud immediately.

Long press

6.3 No alarm

After turning on without alarm, the "OK" led will flash in green once every 10 seconds.

6.4 Alarm

6.4.1 Temperature and humidity alarm

After turning on, if temperature or humidity alarm, the "Alarm" led will flash in red once every 10 seconds and the LCD will display the temperature and humidity alarm mark, device will upload a data to cloud immediately.

6.4.2 Shock alarm

After turning on, If shock alarm, device will upload a data to cloud immediately.

6.4.3 Light alarm

After turning on, If light alarm, device will upload a data to cloud immediately.

Note: Each type of alarm will be triggered only once in every data recording cycle.

6.5 Query status

After turning on the device, if short press the "START" button, the device will be awakened and immediately send a data to cloud. If no alarm, the "OK" LED will flash in green, if alarm, the "Alarm" LED will flash in red. Continuously pressing the button will toggle the display screen, in the order of "temperature value→humidity value → maximum temperature value → maximum humidity value → minimum temperature value → minimum humidity value."

Note：When toggling the display screen, short press the "STOP" button to toggle directly to the "temperature value"display screen. If there is no operation within 10 seconds, the LCD display will be off.

Short press

Short press
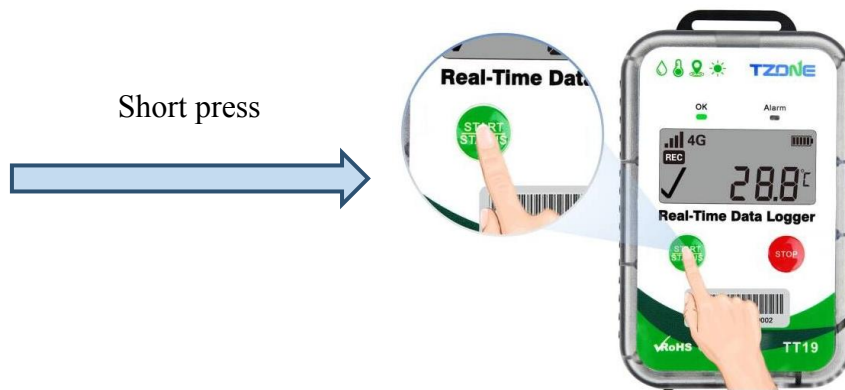
7. Data query

Tzone temperature and humidity cloud platform website: http://cloud.tzonedigital.com/

After turning on, the device data can be queried on TZONE cloud platform. Before entering the cloud platform, you will need to register an account. Once registered, log in and navigate to the "Device Management" section to add the TT19 ID.

Device ID : **190023000000001**

Temperature	Humidity	Electricity	Light
26.2℃	56.5%	100%	45lux

2023/08/08 14:00:48

☐ Chart   ⅲ List

| 2023/08/01 14:31 | 2023/08/08 14:31 | View | Download |

Chart
2023-08-02 10:41 ~ 2023-08-08 14:00
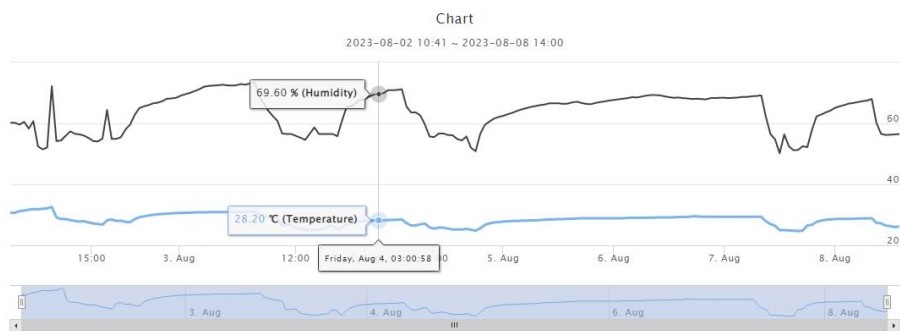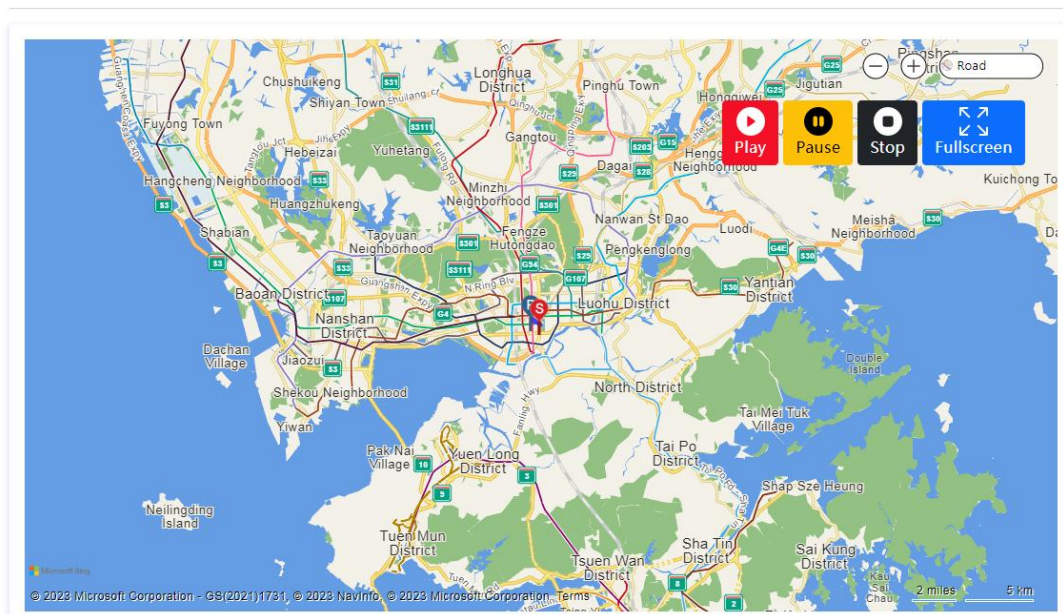
Chart
2023-08-02 10:41 ~ 2023-08-08 14:00

Tips: The query returns a maximum of 10000 data. If it exceeds, please change the time range.

8. PDF report data query

After using the USB cable provided by our company to connect the device to one computer, the computer reads the disk and automatically generates the PDF report. If the real -time data of the device cannot be queried, the historical data of the device can be viewed through the PDF report:

Note: The device must end trip before generating a PDF report.

DATA REPORT

ID: 190124010000224

OK ✓

File Information

File Created Date:	04/18/24 23:01:38

Note: All Times shown are based on UTC-8:00 and 24-Hour clock,[MM/DD/YY HH:MM:SS]

Device Information

Device Type:	TT19EX	Firmware Version:	1.8

Order Information

Company Name:	skywalker	Shipment ID:	DW2403773108048

Logging Summary

First Point:	04/18/24 02:10:23	Max:	33.6°C/83.8%RH/23.3°C
Stop Time:	04/18/24 23:00:59	Min:	30.5°C/63.7%RH/20.5°C
Number of Points:	23	Average:	32.3°C/75.0%RH/22.3°C
Trip Length:	00d 20h 50m 36s	MKT:	32.3°C/22.4°C
Record Interval:	60 Mins	Built-in Threshold:	[-40.0°C,100.0°C]/[0.0%RH,100.0%RH]
Report Interval:	60 Mins	Probe Threshold:	[-200.0°C,1400.0°C]
Start Delay:	0 Mins		

Alarm Condition	First Alarm Time	Time of Alarm	No. of Alarm
Built-in Temp-High	00/00/00 00:00:00	00d 00h 00m 00s	0
Built-in Temp-Low	00/00/00 00:00:00	00d 00h 00m 00s	0
Built-in RH-High	00/00/00 00:00:00	00d 00h 00m 00s	0
Built-in RH-Low	00/00/00 00:00:00	00d 00h 00m 00s	0
Probe Temp-High	00/00/00 00:00:00	00d 00h 00m 00s	0
Probe Temp-Low	00/00/00 00:00:00	00d 00h 00m 00s	0

Chart 1: [°C] / [%RH] — Built-in Temp (black) and Built-in Humidity (blue), Date/Time 02:10 04/18/2024 to 23:00 04/18/2024

Chart 2: [°C] — Probe Temp, Date/Time 02:10 04/18/2024 to 23:00 04/18/2024
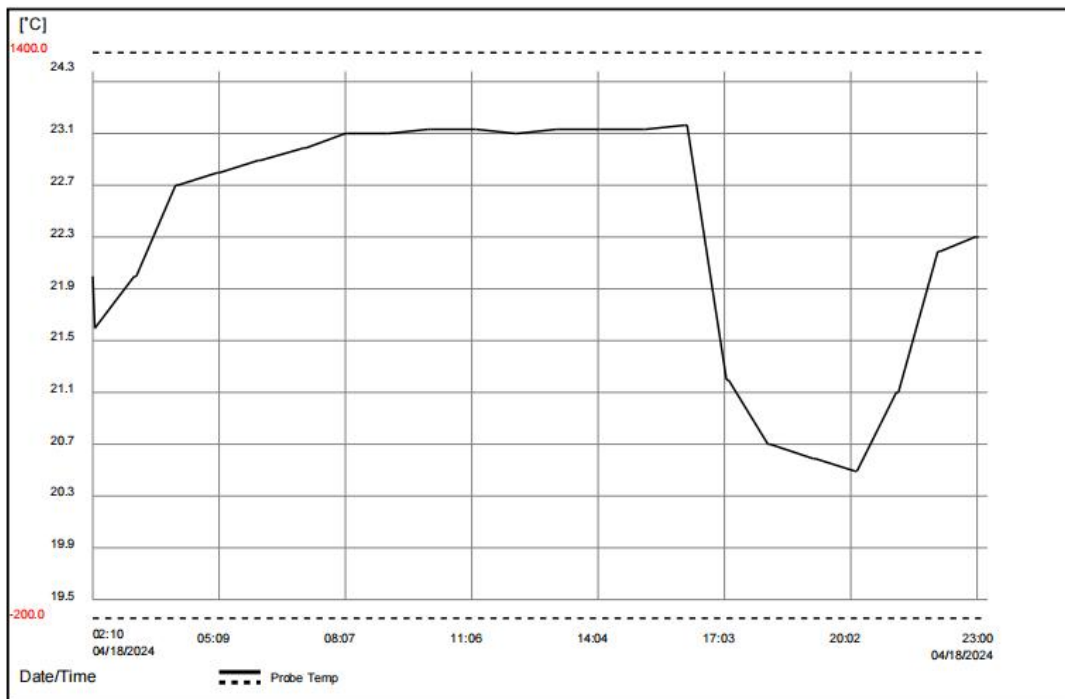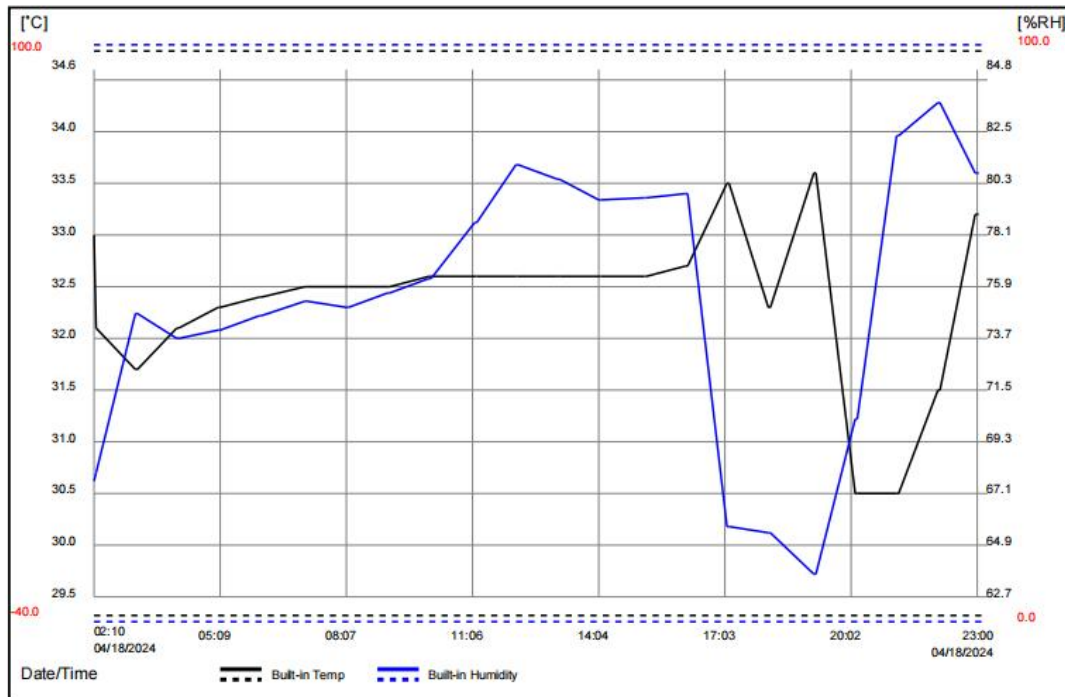
Temperature&Humidity Table

Date	Time	°C (Built-in)	%RH	°C (Probe)	Date	Time	°C (Built-in)	%RH	°C (Probe)	Date	Time	°C (Built-in)	%RH	°C (Probe)	Date	Time	°C (Built-in)	%RH	°C (Probe)
04/18/2024,	02:10:23	33.0	67.7	22.0															
04/18/2024,	02:15:07	32.1	68.0	21.6															
04/18/2024,	03:10:23	31.7	74.8	22.0															
04/18/2024,	04:10:23	32.1	73.7	22.7															
04/18/2024,	05:10:23	32.3	74.1	22.8															
04/18/2024,	06:10:23	32.4	74.7	22.9															
04/18/2024,	07:10:23	32.5	75.3	23.0															
04/18/2024,	08:10:23	32.5	75.1	23.1															
04/18/2024,	09:10:23	32.5	75.7	23.1															
04/18/2024,	10:10:23	32.6	76.3	23.2															
04/18/2024,	11:10:23	32.6	78.7	23.2															
04/18/2024,	12:10:23	32.6	81.1	23.1															
04/18/2024,	13:10:23	32.6	80.5	23.2															
04/18/2024,	14:10:23	32.6	79.6	23.2															
04/18/2024,	15:10:23	32.6	79.7	23.2															
04/18/2024,	16:10:23	32.7	79.9	23.3															
04/18/2024,	17:10:23	33.5	65.7	21.2															
04/18/2024,	18:10:23	32.3	65.5	20.7															
04/18/2024,	19:10:23	33.6	63.7	20.6															
04/18/2024,	20:10:23	30.5	70.3	20.5															
04/18/2024,	21:10:23	30.5	82.4	21.1															
04/18/2024,	22:10:23	31.5	83.8	22.2															
04/18/2024,	23:00:59	33.2	80.8	22.3															