Remote Temperature Monitoring Solutions
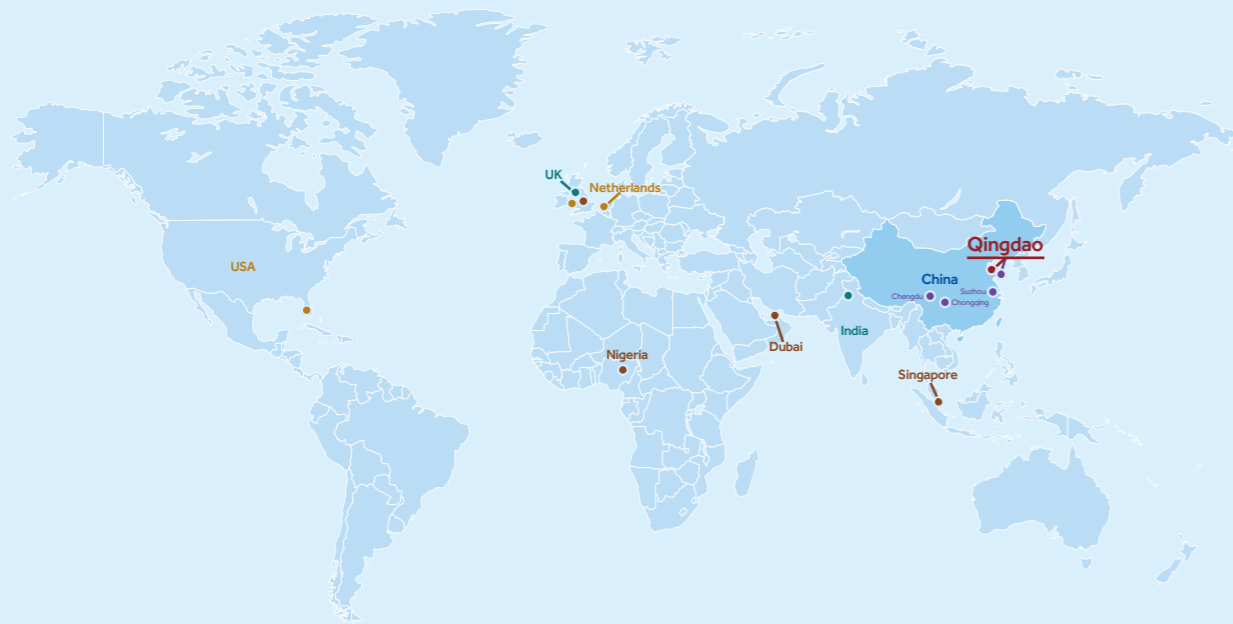
RTMD Device: Haier U-COOL
RTMD Device: Haier U-COOL Pro
RTMD Device: Haier U-COOL LoRa

UK
Netherlands
USA
Qingdao
China
Chengdu
Suzhou
Chongqing
Nigeria
Dubai
India
Singapore

● Headquarter   ● Global warehouse   ● Training center   ● Global subsidiary   ● Manufacturing base

Qingdao Haier Biomedical Co.,Ltd.

Note:If a slight difference occurs between pictures and actual products, please refer to actual products. Our company reserves the right of final interpretation of this brochure, please contact us for any further information if required.

Overview

Based on GPRS, 4G, LoRa and other communication technologies, Haier Biomedical provides three RTMD (Remote Temperature Monitoring Device) devices: U-COOL, U-COOL-LoRa and U-COOL Pro, which can meet customers' demand for real-time monitoring of temperature changes of cold chain equipment and facilitate customers to remotely monitor the running status of cold chain equipment through computers, mobile phones and other electronic devices, timely remind customers to deal with the failures such as abnormal temperature, abnormal door opening, power failure of cold chain equipment in the process of operation, and help customers analyze the current status of stored items through a large number of temperature data reports.

Applicable for the monitoring of the stored items in the fridge, cold rooms, refrigerated vehicles, transport coolers, liquid nitrogen containers in hospitals, in disease control centers, blood stations, laboratories, warehouses, pharmacies and machine rooms.
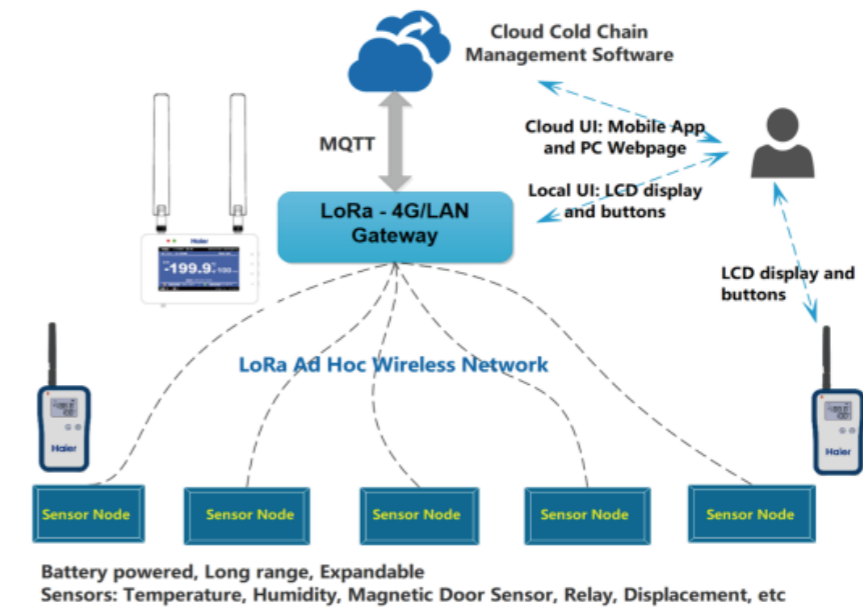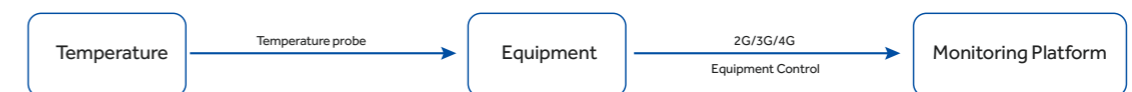

U-COOL   U-COOL-LoRa   U-COOL Pro

LoRa system schematic diagram

Schematic Diagram of U-COOL and U-COOL Pro

Fundamental Functions

Remote monitoring function: Users can remotely monitor data through the Web terminal and APP

Alarms: Supporting two alarm modes: buzzer and LED flashing

Power failure detection function: the information is uploaded to platform with external power failure detection probe (LoRa)

Remote alarms: supporting SMS, voice and email alarms

Door opening and closing detection: the information is uploaded to the platform through 2G/3G/4G network (U-COOL Pro and LoRa)

Data export: local storage of 60,000 pieces of exportable data in PDF

Real-time temperature monitoring: the information is uploaded to the platform in real-time through 2G/3G/4G network with the external temperature sensor

Positioning function: LBS positioning, through 2G/3G/4G network upload monitoring platform

Haier Biomedical Global Equipment Monitoring System

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Remote Temperature Monitoring Solutions

⬡ Product Advantages

One-click installation, automatic networking without manual configuration required

Remote monitoring function: Users can remotely monitor data through the Web terminal or APP

Data export: local storage of 60,000 pieces of exportable data in PDF

Wide temperature monitoring range: -200 ° C to 150 ° C, supporting various temperature monitoring requirements

Multi-point collection node support: U-COOL-LoRa supports a maximum of 60 collection loggers

Applicable for the global market: supporting 180 countries worldwide, supporting SMS, telephone dialing, email alarms

The server of the monitoring system is located in Europe with low data communication latency and supports 5-year data cloud backup

The monitoring platform supports regular data report sending function convenient for scientific research institutes and international organizations to carry out long-term data tracking and research

Remote temperature calibration

Supporting remote SMS, voice and email alarms

Multi-point temperature monitoring for U-COOL Pro

Fully accredited: WHO/PQS, CE(EU), ISO/IEC 27001

Supporting two alarm modes buzzer and LED flashing

Level-to-level administration of user privilege of the platform without limited number of the users

Supporting remote monitoring on multiple platforms including Android, iOS, WEB

Multi-language available for the monitoring platform: Chinese, English, Spanish, French, Russian, Japanese...

Haier U-COOL

USB Interface

Built-in temperature/humidity sensor

Power indicator

Status indicator

Power button

Menu button

External sensor

U-COOL
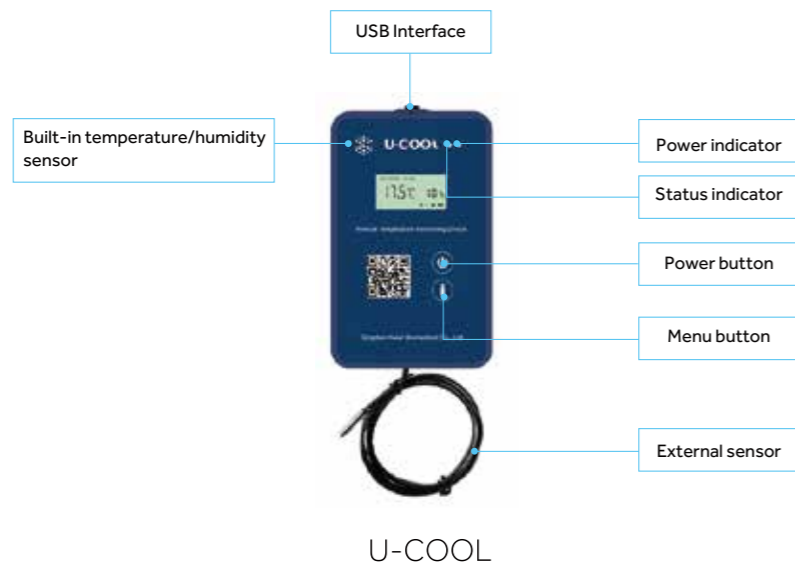
⬡ Features

○ Used for temperature monitoring of cold chain products such as refrigerators, with the characteristics of small size, real-time temperature monitoring, historical data can be queried, historical data can be exported, abnormal data alarm and so on

○ The product has a built-in temperature/ humidity probe and an external temperature probe, which can detect the ambient temperature and humidity and the temperature of the measured device in real time

○ Supporting global SMS, telephone dialing and email alarm; Automatically generate equipment operation report to designated personnel

○ Supporting network operation in 180 countries around the world

○ Support 5-year data backup

Haier U-COOL LoRa

U-COOL-LoRa

Components: smart gateway + temperature data logger+ door on-off logger+ power outage logger+ LoRa alarm

⬡ Features

○ Customers can use computers, mobile phones and other electronic devices to remotely monitor the operation status of cold chain products. Timely reminding customers to deal with high/ low temperature, door ajar, power failure and other faults, and helping customers to analyze the current state of stored goods through a large number of temperature data reports

○ Supporting global SMS, telephone dialing and email alarm; Automatically generate equipment operation report to designated personnel

○ Supporting network operation in 180 countries around the world

○ Supporting 5-year data backup

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Haier U-COOL Pro

Status indicator

Power indicator

Charging port

Enter button

Memu button

Display screen

SIM card slot

External sensor 1

External sensor 2

External door status sensor

U-COOL Pro

Features

o Remote monitoring of cold chain product running status, timely reminding customers to deal with high/ low temperature, door ajar, power failure and other faults, and helping customers to analyze the current state of stored goods through a large number of temperature data reports

o Multi-probe product, customers can choose common probe & PT100 probe according to the scene, with two temperature probes and one door switch detection probe as standard

o Supporting global SMS, telephone dialing and email alarm; Automatically generate equipment operation report to designated personnel

o Supporting network operation in 180 countries around the world

o Supporting 5-year data backup

Specifications
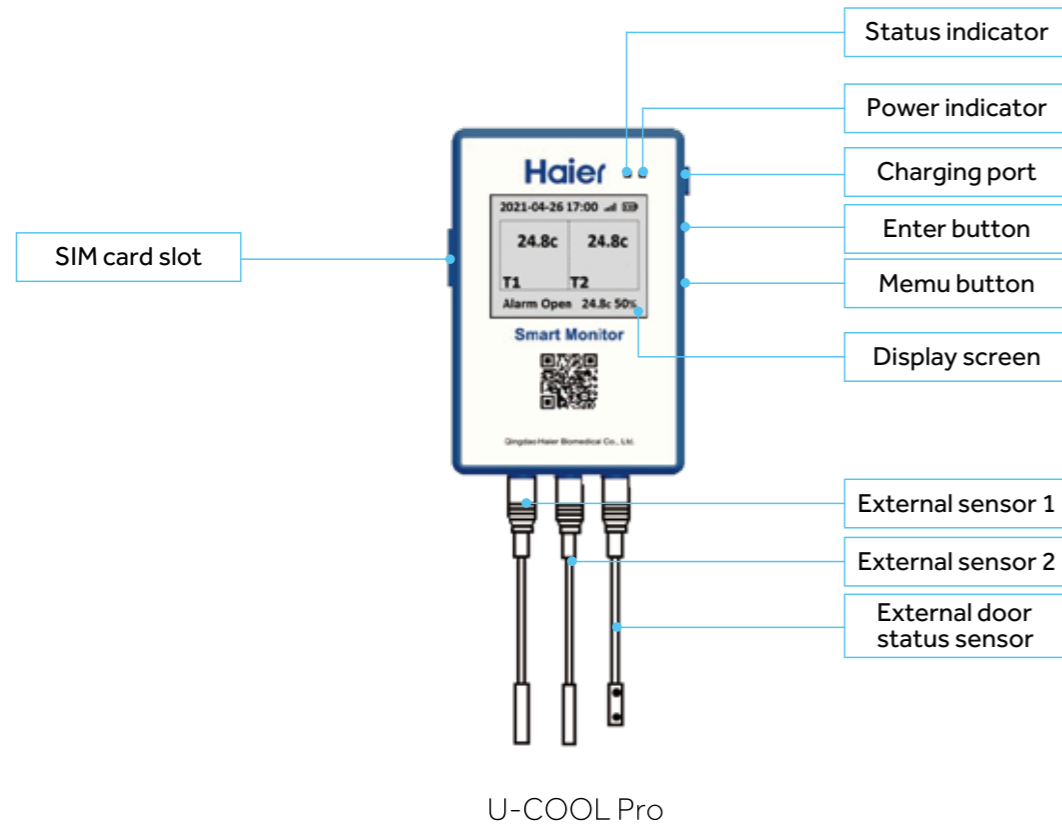
| Model	Haier U-COOL	U-COOL Pro
Temperature sensor	Internal temperature/humidity sensor: 1 External temperature sensor: 1	External temperature sensor: 2 External door status sensor: 1
Measurement items	Ambient temperature/humidity, cold chain equipment temperature	Cold chain equipment temperature, door status
Measurement unit	°C, %RH	°C
External probe	NTC	NTC
	PT100 (optional)	PT100 (optional)
Temperature range	NTC: -40°C~+65°C PT100: -200°C~+150°C	
Accuracy	NTC: ±0.5°C within 0°C to +65°C, ±1°C within -40°C to +0°C PT100: ±0.3°C	
Resolution ratio	0.1°C	0.1°C
Storage capacity	60000 sets	60000 sets
Acquisition frequency	600s (Adjustable)	600s (Adjustable)
Upload frequency	600s (Adjustable)	600s (Adjustable)
Local alarm	sound buzzer alarm and light flashing alarm (Off by default, openable)	
Remote alarm	Support global SMS, telephone dialing and email alarm (user configurable)	
SIM Card	Global roaming card (Standard) / local SIM card (optional)	Global roaming card (Standard) / local SIM card (optional)
Communication net work mode	2G/3G/4G	2G/3G/4G
Ambient temperature	-10°C~+55°C	-10°C~+55°C
Power supply optional solar panel	Built-in rechargeable battery, power adapter DC220V, 50HZ	
Standby time	Support charge and discharge 300 times, single charge standby ≥10 days (Normal signal, acquisition frequency 10min/ time)	Support charge and discharge 300 times, single charge standby ≥10 days (Normal signal, acquisition frequency 10min/ time)
IP	IP66	IP64
Exterior dimension	114.5*71.5*22mm	112mm*75mm*21mm
Shell material	Shell: PA66 plus 30% fiber; Shell sleeve: ABS	shell: PC
Weight	400g	380g
Warranty	3 years	3 years

Remote Temperature Monitoring Solutions

PLM-6 Solar Panel

▷ Scope of application:

This product is suitable for daily charging of Haier Biomedical RTMD equipment such as Ucool and Ucool pro using solar modules. It is recommended to be used in remote and sunny areas and areas with power shortage.

▷ Product Features:

In order to overcome the situation of long-term power loss, battery damage, inability to charge and equipment failure caused by long-term unmanned management after power failure of equipment in remote areas, solar panels are the best choice.
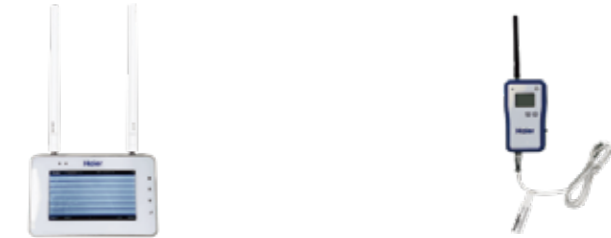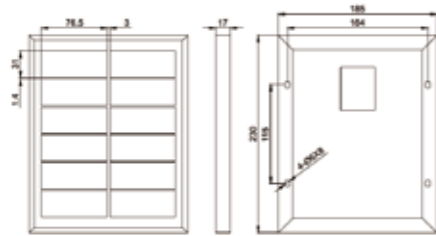
▍▍ Product Advantages

▷ Adopt high-efficiency PERC solar cells

High conversion efficiency、Low decay rate、Low temperature coefficient.

▷ User Friendly Design

With an integrated adjustable bracket, the inclination angle can be adjusted from 0 to 60°, which is suitable for variety of different installation environments.

▍▍ Product Dimensions

▍▍ Product pictures

The front view of the component   Back of component   Component expansion

▍▍ Configuration list

Name	Specification	Unit	Quantity	Remark
Monocrystalline silicon solar photovoltaic panels	6w	piece	1	201 stainless steel, with non-slip gasket at the connection
Adjustable stand		Set	1	
wire	AVVR2*0.3mm2	meter	15	
Nail line card	5mm	One	10	
Bulge	6*30	Set	2	

Model	U-COOL-LoRa: gateway	U-COOL-LoRa: Temperature data logger
Temperature sensor	/	External sensor: 1
Measurement items	/	Temperature
External probe	/	Digital, PT100 (optional)
Temperature range	/	Digital: -40°C~+80°C PT100: -199°C~+199°C
Accuracy	/	0.5°C
Resolution ratio	/	0.1°C
Storage capacity	60000 sets	60000 sets
Acquisition frequency	600s (Adjustable)	600s (Adjustable)
Upload frequency	600s (Adjustable)	600s (Adjustable)
Local alarm	sound buzzer alarm and light flashing alarm	sound buzzer alarm and light flashing alarm (Off by default, openable)
Remote alarm	Support global SMS, telephone dialing and email alarm (user configurable)	/
SIM Card	Global roaming card (Standard) / local SIM card (optional)	/
Communication net work mode	4G/LoRa (Inside the system)	LoRa (Inside the system)
Ambient temperature	-10°C~+55°C	-10°C~+55°C
Power supply	Built-in rechargeable battery, power adapter DC220V, 50HZ	Two non-rechargeable batteries, 3.6V
Standby time	single charge standby ≥48h	3 years (Normal signal, acquisition frequency 10min/ time)
IP	IP50	IP65
Exterior dimension	160*100*33mm	125mm * 73mm * 23mm
Shell material	Aluminum shell +PC panel	ABS
Weight	640g	150g
Warranty	3 years	3 years

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Model	U-COOL-LoRa: Door on-off logger	U-COOL-LoRa: Power outage logger
Temperature sensor	External door status sensor: 1	External power outage sensor: 1
Measurement items	Door on-off status	Power
External probe	Door on-off status	Power
Temperature range	On/off	On/off
Accuracy	/	/
Resolution ratio	/	/
Storage capacity	60000 sets	60000 sets
Acquisition frequency	600s (Adjustable)	600s (Adjustable)
Upload frequency	600s (Adjustable)	600s (Adjustable)
Local alarm	sound buzzer alarm and light flashing alarm (Off by default, openable)	
Remote alarm	/	/
SIM Card	/	/
Communication net work mode	LoRa (Inside the system)	LoRa (Inside the system)
Ambient temperature	-10℃~+55℃	-10℃~+55℃
Power supply	Two non-rechargeable batteries, 3.6V	Two non-rechargeable batteries, 3.6V
Standby time	3 years (Normal signal, acquisition frequency 10min/ time)	3 years (Normal signal, acquisition frequency 10min/ time)
IP	IP65	IP65
Exterior dimension	125mm * 73mm * 23mm	125mm * 73mm *23mm
Shell material	ABS	ABS
Weight	150g	150g
Warranty	3 years	3 years

Product	Alarm light	
Model	YB-HC600-04	
Description	Based on LoRa 433Mhz communication	
Installation	Screw fixation, wall mounting	
Communication	LoRa 433Mhz	
Power supply	12V2A, 5.5x2.1 round port power adapter, European standard	
Working current	200mA	
Volume	>105dB	
Lampshade color	Red	
Alarm mode	sound buzzer alarm and light flashing alarm	
Alarm type	Sensor data, power, failure, etc	
Continuous alarm time	>1 hour	
Structure	Shell material	ABS
	External dimensions	200*110*175mm
	Weight	265g
IP	IP54	
Storage and operating conditions	Storage condition: -40℃ ~ +70℃, <80% RH Operating condition:-30℃ ~ +60℃	

Haier Global Equipment Monitoring System

The physical address of the global equipment monitoring system server is located in Europe. Users can remotely log in the system using only the user name and password to view temperature and humidity data, alarm information, location information, device management, and data export. If the temperature exceeds the threshold, the system sends SMS, emails, and phone calls to the management personnel. The system has the characteristics of strong data processing ability, high reliability and fast operation, and users can monitor the cold chain related data in real time.
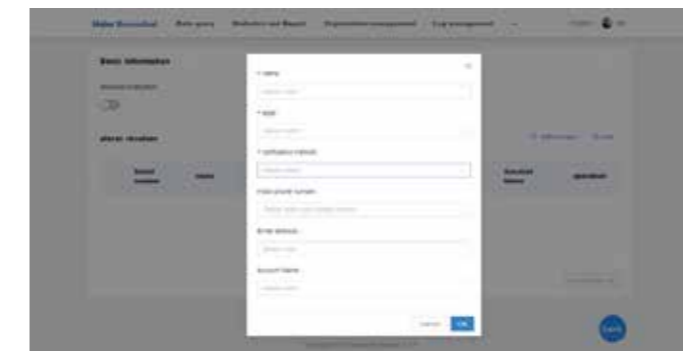
Equipment Management
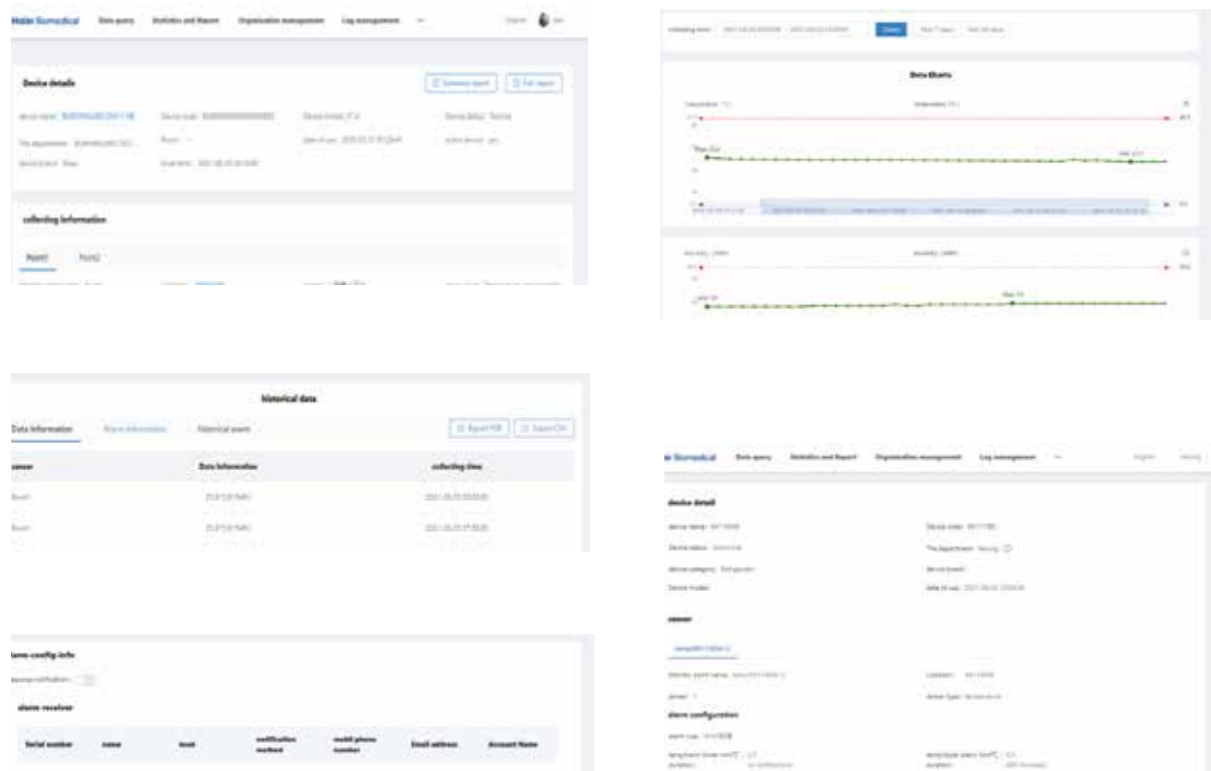
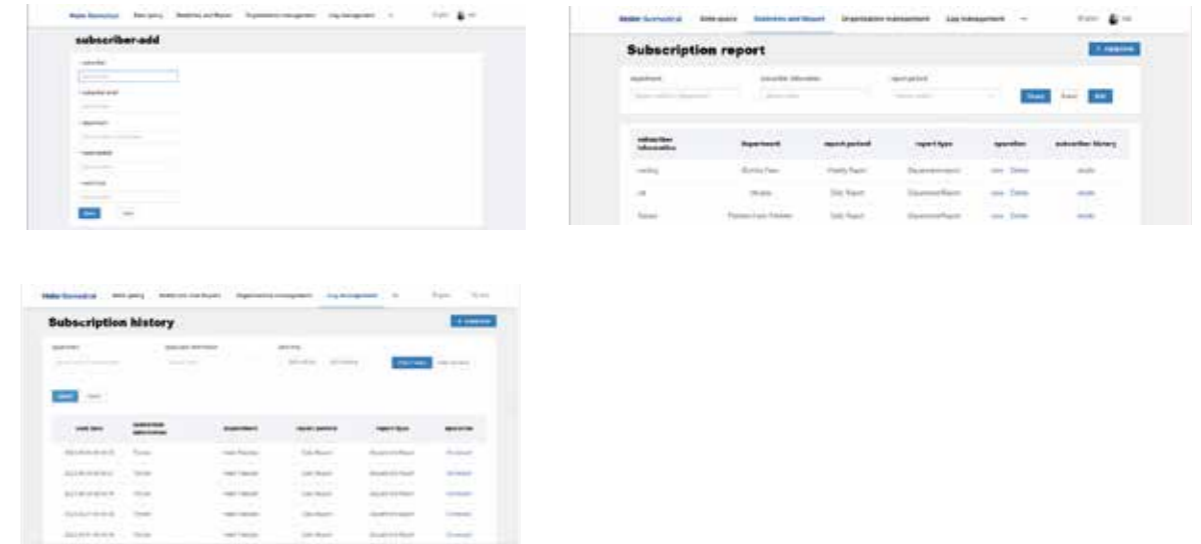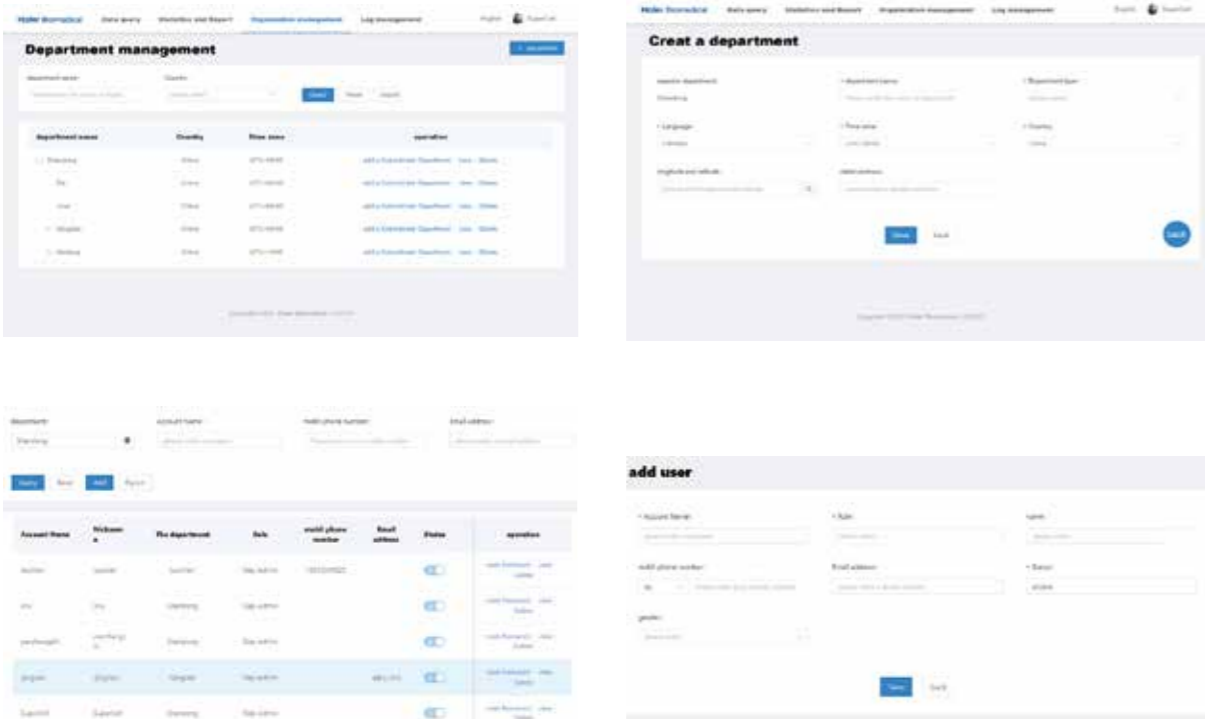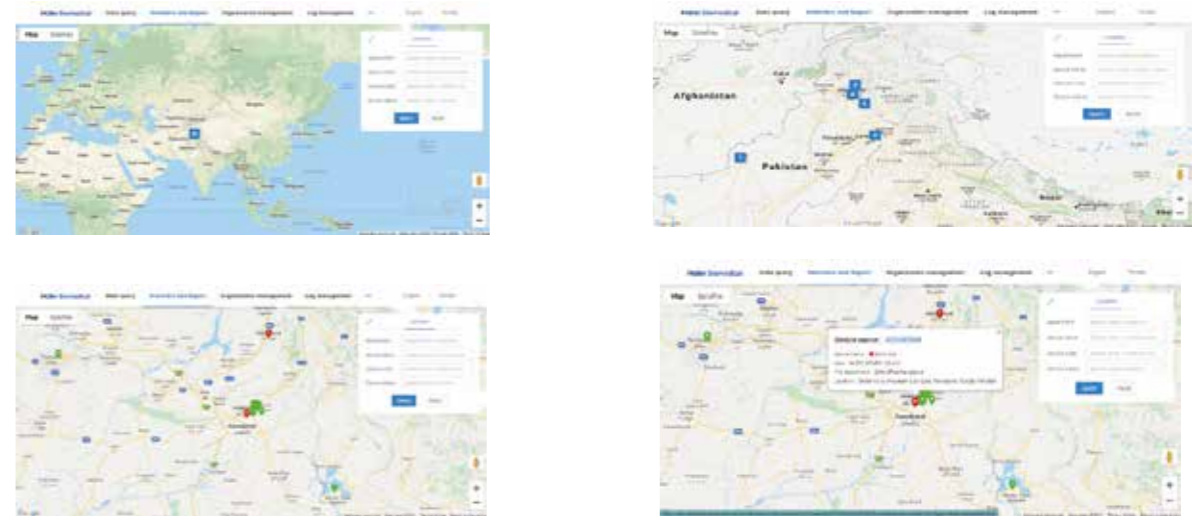## Haier Global Equipment Monitoring System
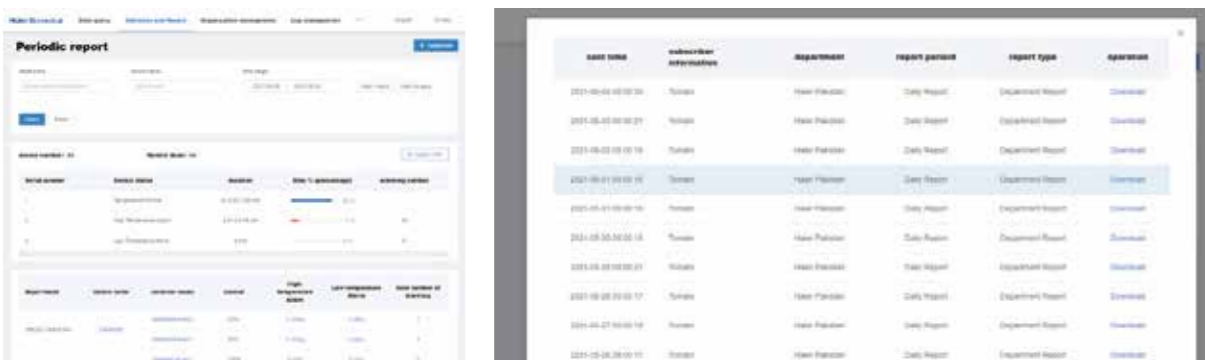
Alarm query

Alarm receiver configuration

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Department and user management

Reporting function

Map display

Service guarantee

Haier Biomedical has a professional localization service team, can provide on-site installation, on-site training, after-sales service and other services;

The project team is composed of professional technical engineers, providing professional pre-sales remote training and 7*24h after-sales service.

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WolfLabs

Pricing on any accessories shown can be found by keying the part number into the search box on our website.

The specifications listed in this brochure are subject to change by the manufacturer and therefore cannot be guaranteed to be correct.
If there are aspects of the specification that must be guaranteed, please provide these to our sales team so that details can be confirmed.

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Please contact us if this literature doesn't answer all your questions.