TEMPERATURE AND HUMIDITY

Refrigerator WIFI Temperature and Humidity Monitoring Solution

01 Programme Background

Programme Background

The state requires disease prevention institutions to comply with the Code of Practice for the Storage and Transportation of Vaccines, in addition to the Code of Practice for the Quality Management of Pharmaceutical Operations.The specification points out that the CDC should use temperature and humidity monitoring equipment such as refrigerators / freezers / cold storage and other equipment for temperature monitoring and recording; and, the equipment should be placed in the middle of the ordinary refrigerator freezer and freezer, the bottom of the ice lined refrigerator and close to the item cover, the middle of the low temperature refrigerator location, 24h real-time temperature monitoring records.

At present, most domestic CDCs use thermometers to monitor the temperature of refrigerators (including ordinary refrigerators, ice lined refrigerators and low temperature refrigerators), which is time-consuming and laborious, and easy to be negligent, and then cause unnecessary losses; for this reason, Jianda Renke proposes "refrigerator temperature and humidity monitoring solution" to provide reliable protection for the storage safety of vaccines/blood/drugs/test samples.
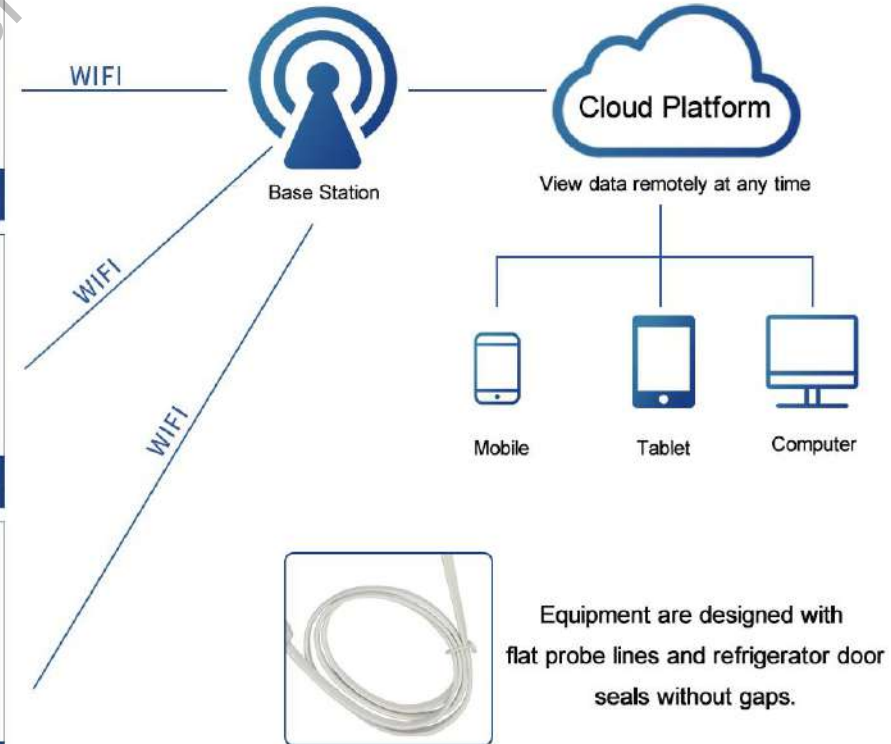
02 Programme Introduction

Programme Introduction

➢ Refrigerator WIFI temperature and humidity monitoring program mainly consists of two parts, WIFI temperature and humidity recorder or WIFI ultra-low temperature recorder and related software platform.It can realize 24-hour uninterrupted online monitoring and support remote view of data, historical data curve view, data abnormality alarm and other functions.

➢ The solution realizes the detection, alarm, recording and data storage and inquiry of the refrigerator temperature through the automatic monitoring technology of temperature and WIFI communication technology,achieves centralized control of refrigerator and real-time online supervision of temperature.

➢ The solution can be used to monitor the temperature of refrigerators and freezers in hospitals, pharmaceutical companies and safeguard CDCs to ensure safe storage of drugs, vaccines, blood, test samples, etc.

WIFI multi-probe temperature and humidity data logger

WIFI single probe temperature and humidity data logger

WIFI ultra-low temperature data logger

WIFI

Base Station

WIFI

WIFI

Cloud Platform
View data remotely at any time

Mobile

Tablet

Computer

Equipment are designed with flat probe lines and refrigerator door seals without gaps.

Other Functions

01 **With data replenishment function to ensure the integrity of the data.**Comes with data storage function，when the server is down, it stores the real-time data it receives.And automatically upload the stored data when the network is restored.

02 **Dual power supply design.**Instrument built-in rechargeable lithium battery, in the case of power failure can still work normally.The metering process is convenient and does not require carrying a power supply.

03 **Alarm frequency conversion function.**Once the temperature exceeds the standard, the monitoring system software synchronizes the alarm and the system automatically switches to recording data every 2 minutes (frequency interval can be set by yourself).

04 **Open cloud platform.**It can realize all kinds of devices connected through multi-protocol adaptation,and provide data sharing services, thus reducing the access threshold of terminals and applications.

05 **Wth manageable functions.**Users can obtain location,terminal WIFI online and offline information through the management platform with a scalable open cloud platform to meet the needs of future project system expansion。

06 **It fully complies with the requirements of the new version of the "Good Manufacturing Practice" (GSP for short).**

07 **Provide excellent after-sales service.**According to the regulatory requirements, we will upgrade of hardware and software timely，meet the requirements of pharmaceutical regulatory authorities at the first time.

03 Programme Composition

Programme Composition

WIFI multi-probe temperature and humidity recorder

The device makes full use of the WIFI communication network that has been set up to realize data collection and transmission, and achieve the purpose of centralized monitoring of temperature and humidity data. Up to 4 channels of temperature and humidity data can be collected and uploaded to the server via WIFI. Adapt to DC10~30V wide voltage power supply.

➢ Data is uploaded to the monitoring platform in WIFI mode

➢ Support remote setting of equipment parameters

➢ Up to four-way temperature and humidity monitoring, probe line up to 30 meters

➢ Temperature and humidity over limit can be local sound and light alarm free cloud platform, multi-terminal real-time view

Perception Layer

WIFI multi-probe temperature and humidity recorder

Programme Composition

WIFI single probe temperature and humidity recorder

With LCD screen for real-time display temperature and humidity data, equipment power and current network connection status. Adopt WIFI wireless transmission, easy to networking and upload data with on-site network, optional built-in battery power supply.Data is uploaded to the monitoring platform via WIFI and it supports remote setting of device parameters.There is no need for field wiring and no distance limit for transmission

- Measurement range: -40~80℃
- Swiss original chip, probe line up to 30m

Perception Layer

WIFI single probe temperature and humidity recorder

Programme Composition

WIFI ultra-low temperature recorder

Industrial grade WIFI temperature record makes full use of the established WIFI communication network to achieve long-distance data collection and transmission, and realize centralized monitoring of temperature data. It can greatly reduce the construction volume,improve the construction efficiency and maintenance cost.
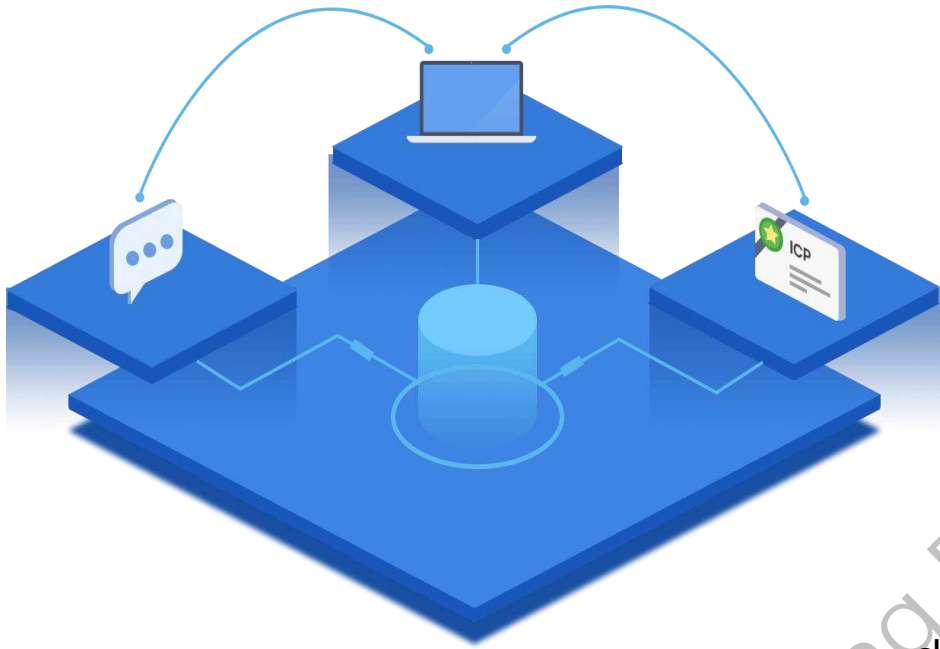
➢Data is uploaded to the monitoring platform via WIFI

➢Support remote setting of device parameters

➢Measurement range: -100~+200 ℃

➢Probe line up to 30 m

➢Probe working temperature: -100℃~+300℃

WIFI ultra-low temperature recorder

Programme Composition

Transport Layer

Real-time WIFI transmission

Wide coverage and connectivity

Fast speed but low cost

Low power consumption and excellent architecture

The transmission layer is the core of data communication and the main channel for data transmission. The network layer of refrigerator WIFI temperature and humidity monitoring solution mainly adopts WIFI communication network, which has the characteristics of wide coverage, many connections, fast rate, low cost, low power consumption, excellent architecture and real-time.

Programme Composition

Refrigerator environment monitoring cloud platform

Refrigerator environment monitoring cloud platform can realize real-time monitoring of the location of monitoring points, equipment and real-time data of refrigerator WIFI temperature and humidity monitoring system. And it can also push real-time monitoring information, historical data curve view, alarm information to managers through phones, pads, computers and other information terminals.

It is convenient for the staff to maintain in time,and improves the stability and reliability of the entire refrigerator temperature and humidity environment.
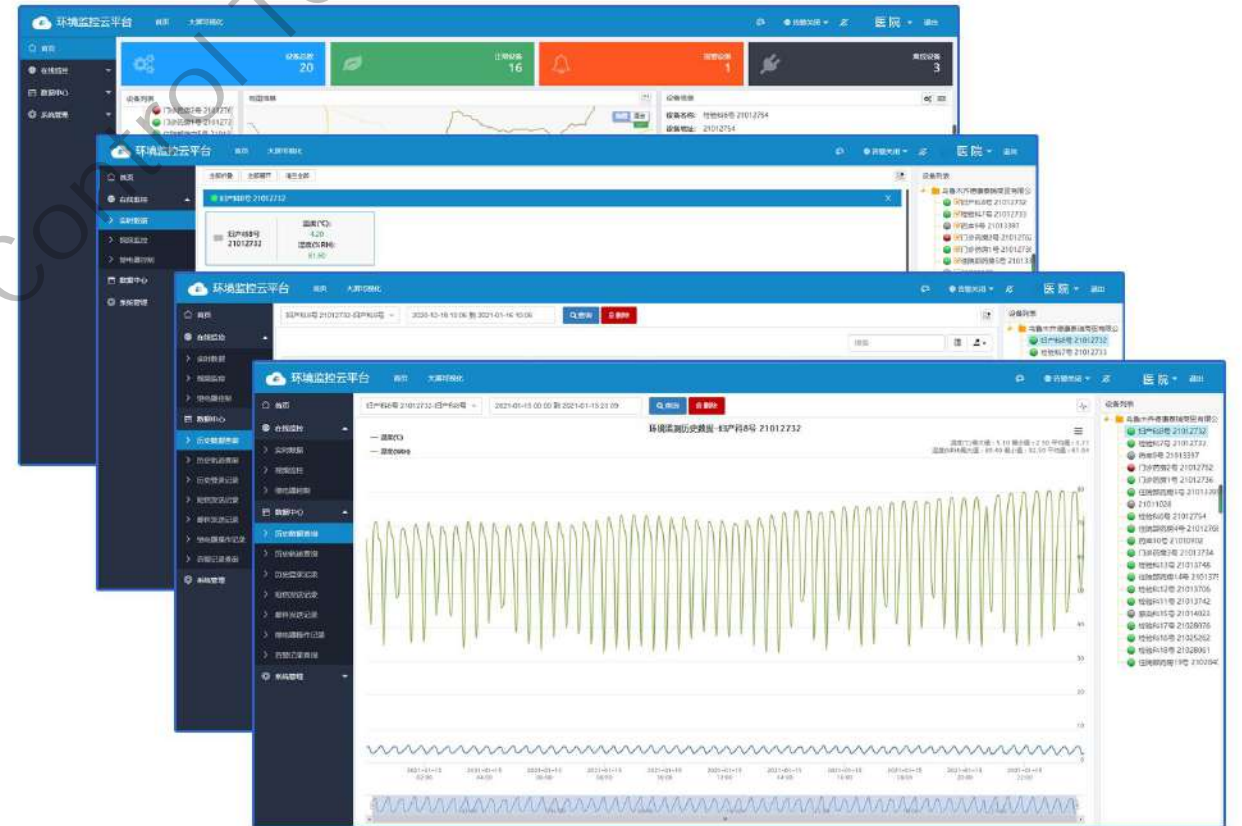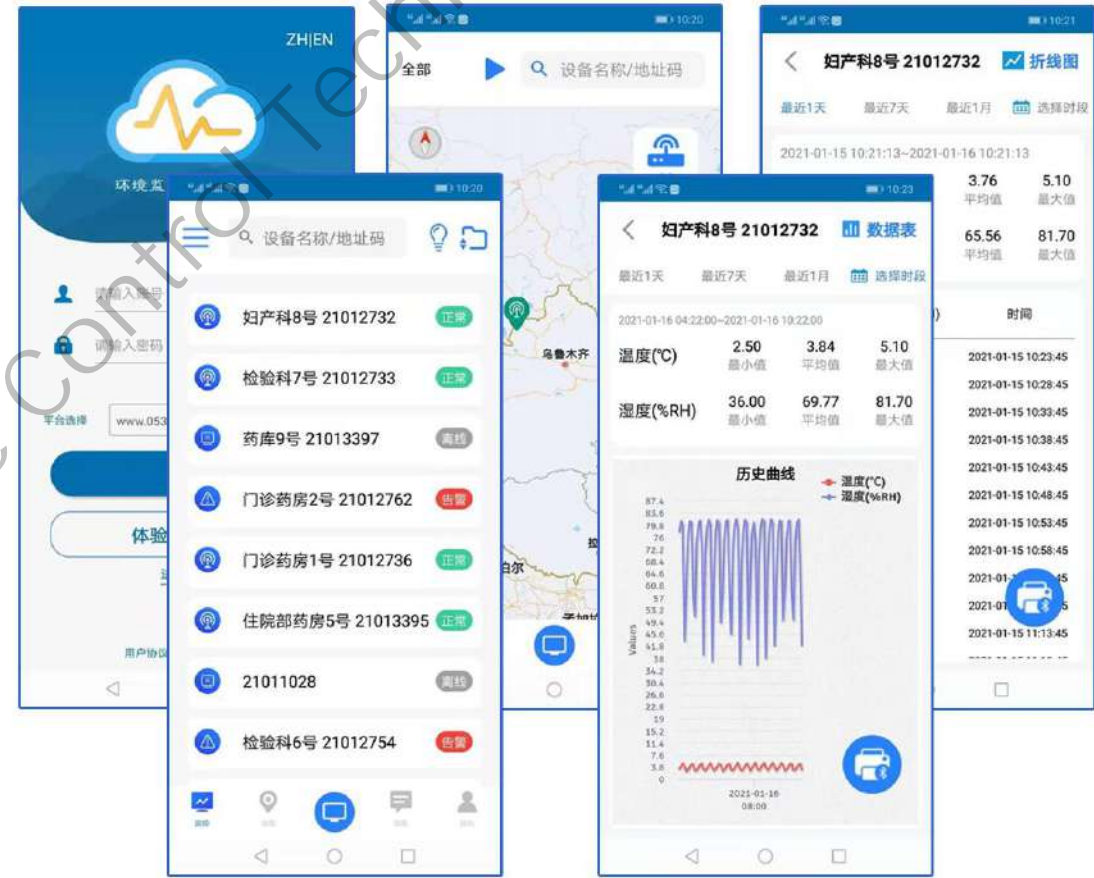

Cloud platform web interface display

Programme Composition

APP Platform

For the convenience of mobile users to monitor data, the company developed and launched the "Cloud Control" mobile phone APP, convenient for users to monitor 24 hours a day in real time. Through the mobile phone APP "Cloud Control", it can control thousands of devices with one click, supports video view, equipment failure / abnormal alarm, support offline alarm function, supports real-time data view, historical data curve view, also can connect Bluetooth printer for data printing.
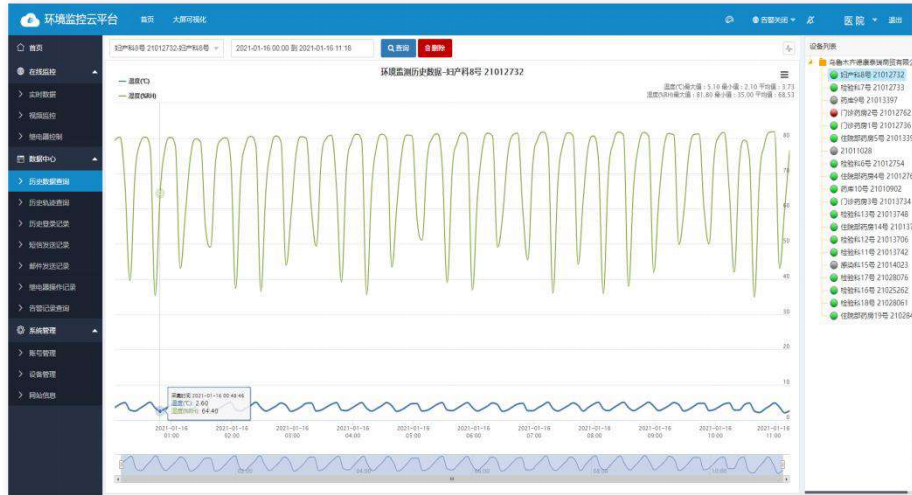
APP Interface Display

04

Programme Functions

Programme Functions

Data Alarm Push

WiFi devices can be alerted by SMS, free WeChat alarm and APP push via the platform in case of data abnormalities and power failure.

Historical Data Curves

Equipment information of each monitoring point can be queried through the system, and equipment monitoring data and historical data can be queried.
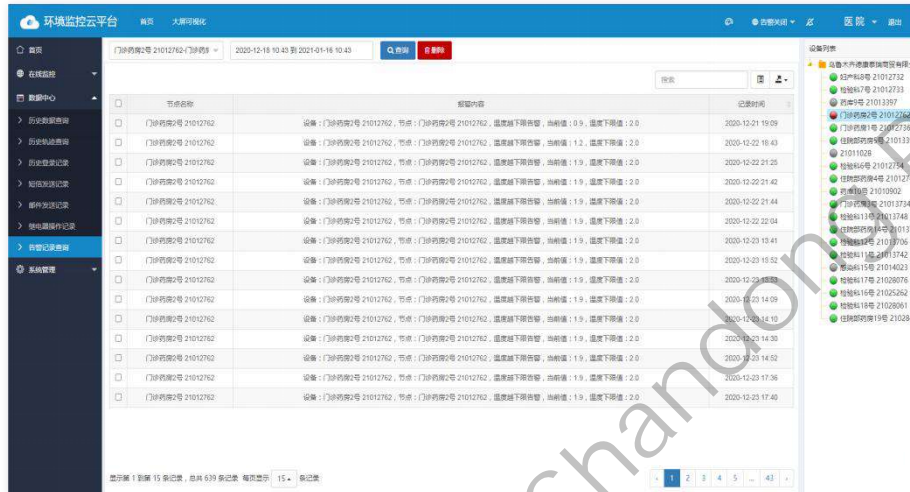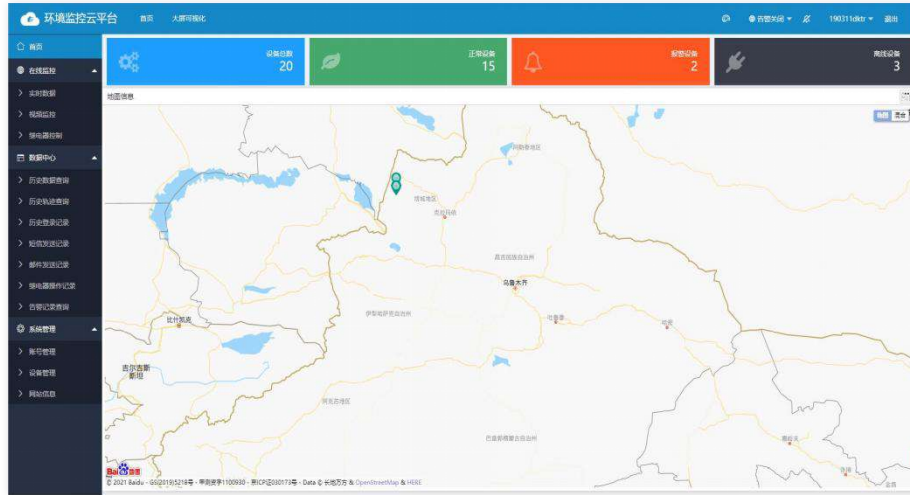
Mobile APP Monitoring

APP can be mobile online monitoring temperature and humidity data, real-time query, locate the alarm location, and query the alarm equipment information, etc.

Remote Configuration

If you are far away from the device, you can use SMS to configure the device remotely.

Programme Functions

Secondary Development

our cloud platform is free, with a completely neutral interface, and supports secondary development of user software.

Real-time Monitoring

The temperature data measured environment can be viewed in real time through the monitoring system software on PC.

Real-time Map

The map shows the device location, online status and some data information in real time.

Account Classification

Support account hierarchy management, multiple sub-accounts can be assigned under the main account, with different account levels and different permissions.

05

Specific cases

Specific cases

Municipal hospital

Guangdong Provincial People's Hospital, Jingzhou First People's Hospital, Baotou Central Hospital, Jishuitan Hospital, Yangzhou Jiangdu People's Hospital, etc.

CDC

China CDC Infectious Disease Institute, Jinchengjiang District CDC, Jiangmen CDC, Taihe County New Chinese Hospital Medical and Technical Building, etc.

County hospital

Ba Miao Shikuan Hospital in Zhenba County, Gongliu County People's Hospital power environment monitoring in the machine room, Xixian People's Hospital in Henan Province, Kangma County People's Hospital, etc.