中科时代 SINSEGYE | Computer based Automation comes SINSEGYE

Instaguard

User Guide

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Email	

Update instructions:

This document has recorded the changes to Instaguard.

<November 5, 2025> / <V2.9.7>

Function	Type of change	Description	Related documents
	Refer to the following change types: <Addition> <Modification> <Optimization> <Scrap> <Deletion> <Repair> <Known Issue>	Describe the specific changes.	List related documents and provide hyperlinks.

Preface

1.Document Description

This description is specifically formulated for control and automation technology experts who are familiar with relevant national standards and have undergone professional training.

When installing and debugging components, it is essential to carefully review all relevant documents and the following instructions.

Qualified personnel shall always use the latest valid document for operations.

Responsible personnel must ensure that the application or use of the described product fully complies with all safety requirements, covering all relevant laws, regulations, guidelines, and standards.

1.1Disclaimer

This document has been carefully prepared, but given the continuous development and upgrade process of the described product, Sinsegye (Shenzhen) Computer System Co., Ltd. reserves the right to modify and update the document at any time without prior notice. Please note that any modifications to the delivered products based on the data diagrams or descriptions in this document are strictly prohibited. Sinsegye Computer System Co., Ltd. shall not be liable for any loss or damage caused by the use of or reliance on the information, whether expressed or implied, contained in this manual.

1.2Copyright

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1.3Version 1.3 Statement

The content of this manual is based on the current software version. The software may add new features or optimize operations in the future. We recommend that you visit the online documentation center (https://help.sinsegye.com) to view the latest instructions.

2.Safety Declaration

2.1Safety Regulations

Before using this product, please read the product manual and correctly understand the safety precautions. Failure to comply with the safety precautions may result in personal injury or death or equipment damage.

2.2Disclaimer

All components are provided with both hardware and software configurations. Modifications to hardware or software configurations beyond the described in the document are not permitted. Sinsegye is not responsible for hardware or software not covered in the document.

2.3Personnel Qualifications

This manual is used only for control, automation, and drive technology experts who are familiar with applicable national standards and have undergone training.

2.4Safety Statement

The “Danger”, “Warning”, “Caution” and “Alert” in the manual do not represent all the safety precautions to be observed and are only used as a supplement to all safety precautions.

	“DANGER” indicates an imminent hazardous situation that, if not avoided, will result in serious injury or death.
	“WARNING” indicates a potentially hazardous situation that, if not avoided, could result in serious injury or death.
	"Caution" indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury or damage to the equipment.
	“Notice” indicates a potentially hazardous situation that, if not avoided, may only result in damage to the equipment.

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Ⅰ.Overview

Intelligent Care Diagnostic System of Instaguard Device

Intelligent Care Diagnostic System of Instaguard Device is an industrial digital and intelligent monitoring and management tool integrating care, diagnosis and management. Holographic data access integration is completed through multidimensional data access IotHub, AI intelligent prediction and accurate fault positioning are completed by using Metafacture of pre-training large model and industrial knowledge atlas, and finally, various data protocols are provided for client system and Instaguard front-end display system through Fastkit to achieve fusion and presentation. It provides data overview, real-time Kanban, unit account, device file, diagnosis atlas, abnormal diagnosis history, care report, organization device tree and other functions for customers. The customers can master the device operation state at any time and anywhere, timely find out the device abnormality and fault reasons, reduce the risk and loss of accidental shutdown, and improve the production efficiency and management efficiency.

Instaguard adopts the micro-service architecture mode, which is divided into multiple micro-services according to the system function module and data processing flow, and realizes self-selection service of functions for users. It integrates lightweight container technology to realize unified deployment of micro-services, resource scheduling optimization, automatic CI/CD, and user-transparent upgrades.

Instaguard platform storage adopts the mixed architecture mode of relational database, NoSQL and file system to realize multi-source heterogeneous data storage of structured data, unstructured data and semi-structured data. It provides Web and various data output protocols for users. The system supports multi-dimensional data input through Mqtt, message queue subscription and push, Restful API, etc. At the same time, it supports multiple protocol data output such as standard cloud API and OPC SERVER interface, and can package and integrate the system functions into the user-specified platform.

The following table provides an overview of each product components of Instaguard.

Product Components	Description
Large screen for intelligent care	It supports multi-dimensional unit data visualization, early warning notification integration and organization-level health statistics, and realizes rapid insight and decision support for device operation and maintenance.
Process overview	It supports real-time data integration and interactive status presentation of upstream and downstream processes of device, and enables visualization and data drive of process optimization and operation and maintenance decision.
Intelligent unit care	It supports the realization of panoramic visualization of unit health status through intelligent Kanban, and forms a full-chain operation and maintenance view covering "Unit-device-measuring point" in combination with hierarchical management of unit and device account, enabling device health assessment, fault diagnosis and operation optimization decision.
Intelligent unit diagnosis	It supports the in-depth diagnosis of device status through multi-view atlas analysis, and forms a closed-loop operation and maintenance system covering "data insight-abnormal early warning-report generation-hardware linkage" in combination with abnormal history tracking, AI/manual diagnosis report management and IOT hardware status monitoring, improving the efficiency of device health assessment and the accuracy of decision-making.
Intelligent statement management	It supports operation duration statistics of device, fault early warning monitoring, energy consumption efficiency analysis and organization-level data aggregation, supports user-defined query conditions and data export, and helps to optimize operation and maintenance decision and improve business efficiency.
System management	It supports organization tree structure adjustment, user life cycle management, dynamic role authority allocation and message push strategy customization, and realizes safe and compliant access to platform resources and efficient access to

	business information.

The following table provides an overview of each product component of the IOTHub

Product Components	Description
IOTHub	It supports rapid device access through standardized coding rules, has core capabilities such as device binding/unbinding, parameter configuration, collection strategy issuing, etc., supports device status monitoring, data link maintenance and multi-protocol adaptation, and establishes a strict device deletion protection mechanism to ensure data integrity.
Configuration management	It supports the full life cycle operation and multi-dimensional measuring point configuration of the unit, realizes multi-condition measuring point retrieval based on IOT number, hardware type and organizational structure, and ensures accurate association and dynamic maintenance of device parameters and business data.
Algorithm management	It supports the creation, version control, unit binding and engineering deployment of multi-type algorithms, realizes the dynamic association between algorithm flow and unit-level business scenarios, and has the functions of task execution monitoring, log tracing, closed-loop management of input and output data, and ensures the efficient implementation and accurate operation of algorithm models from R&D to industrial site.
Development access management	It supports the full life cycle management of the liaison party, interface resource allocation and device data routing configuration, realizes API-based customized data interaction, call frequency control and operation audit, and ensures the efficient and safe integration of the external system and the intelligent diagnosis platform.
Dictionary management	It supports the standardized definition and dynamic maintenance of core data such as bearing parameters, acquisition strategies and product attributes, realizes flexible configuration of extensible attribute library through dictionary

	management, realizes unified modeling and reuse of device types, measuring point configuration and early warning rules in combination with the template design of unit and device model library, and ensures the consistency and efficient management of the full life cycle data of device.
Account management	It supports user life cycle operation, refined role permission allocation and dynamic maintenance at department level, realizes compliance access and control of system resources and flexible expansion of organizational structure, and ensures operation security and collaboration efficiency of the platform.

Ⅱ.Instaguard & IOTHub

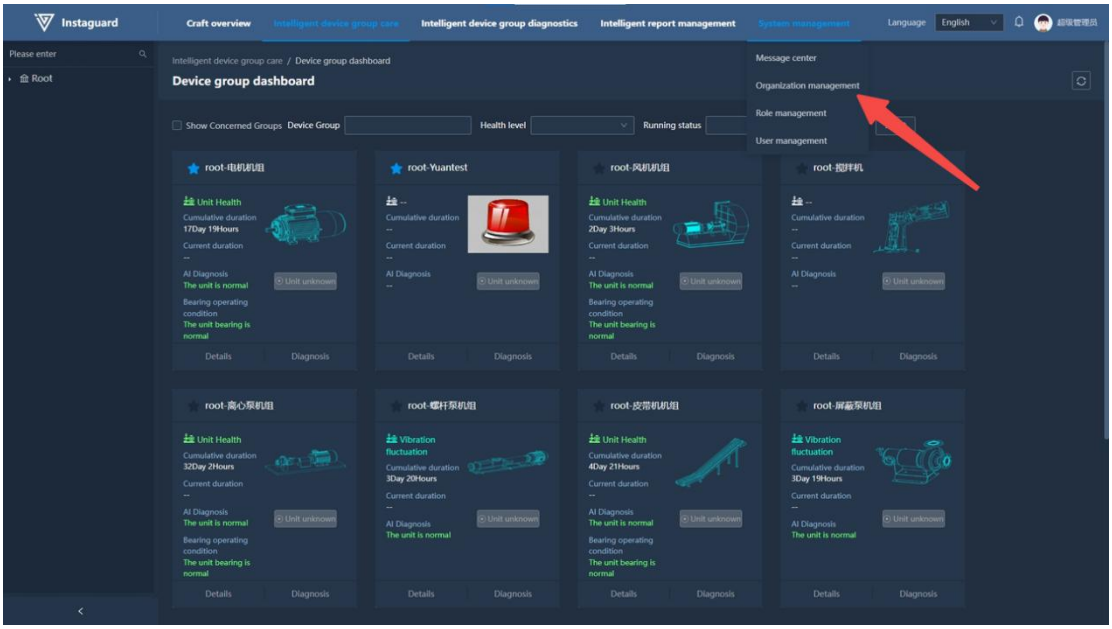
1.Quick Operation Guide

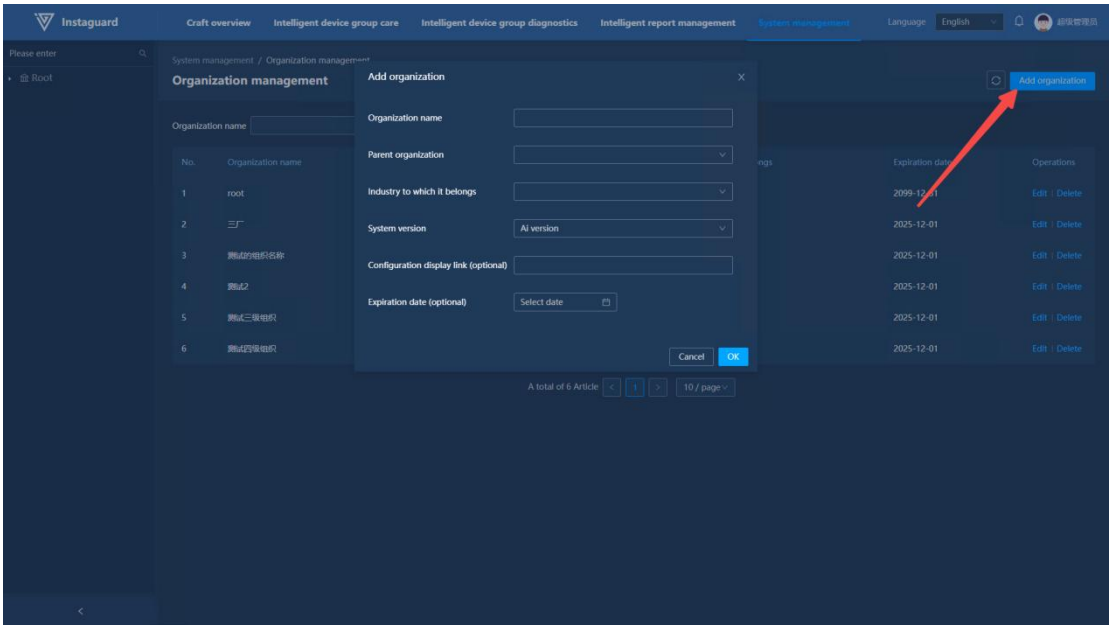
1.1Instaguard Quick Operation Guide

System Login

- Public Cloud: https://www.instaguard.com.cn/
- Private Cloud: Project-specific address (similar to 192.168.111.174:20031)

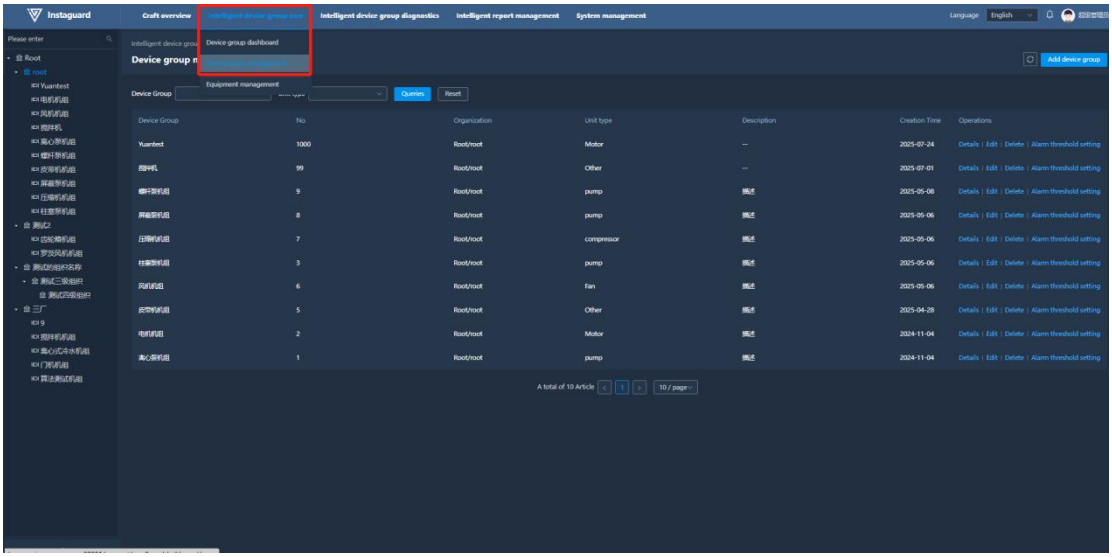
Add Organization



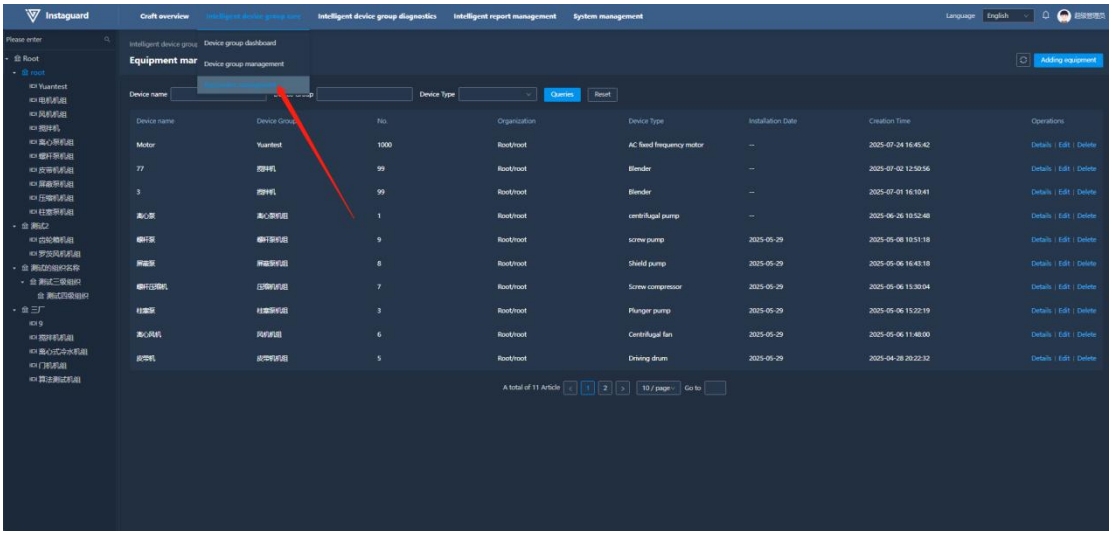


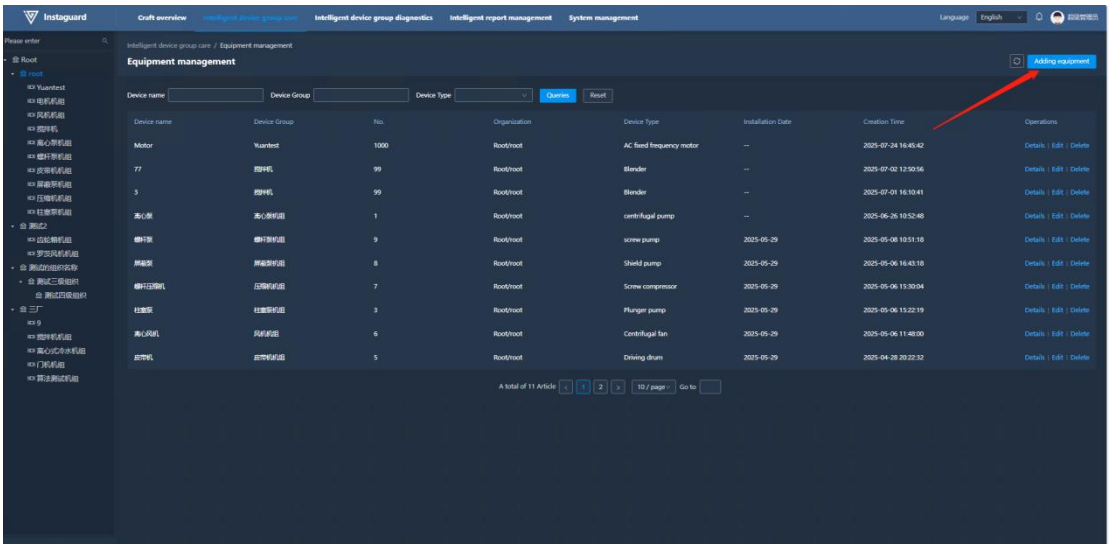
Generally, the expiration date is not selected. If there are contract restrictions, fill it in according to the time specified in the contract.

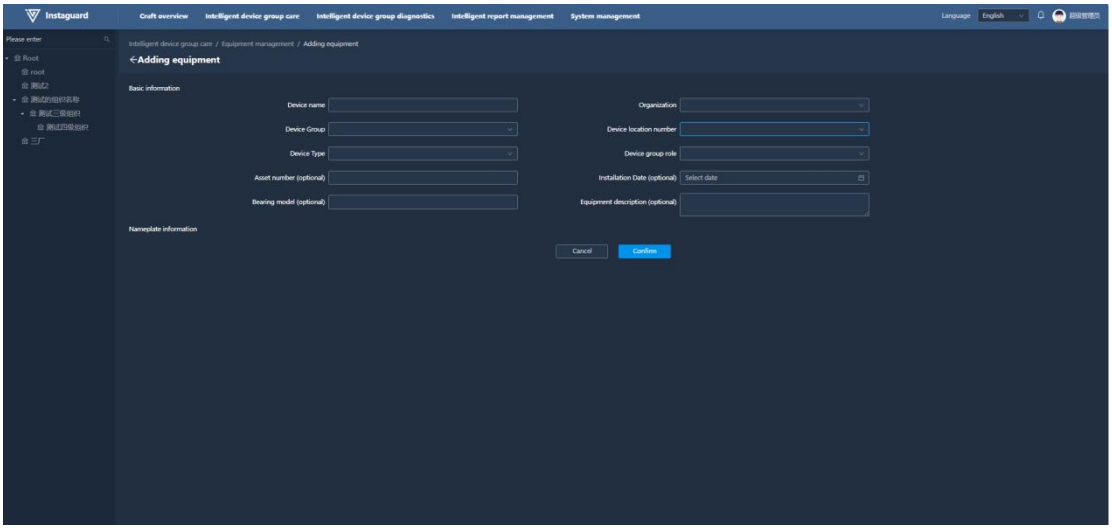
Add Unit



Add Device







For the unit role, fill in the drive device. Transmission devices, driven devices, and motors belong to drive devices; water pumps and fans belong to driven devices;

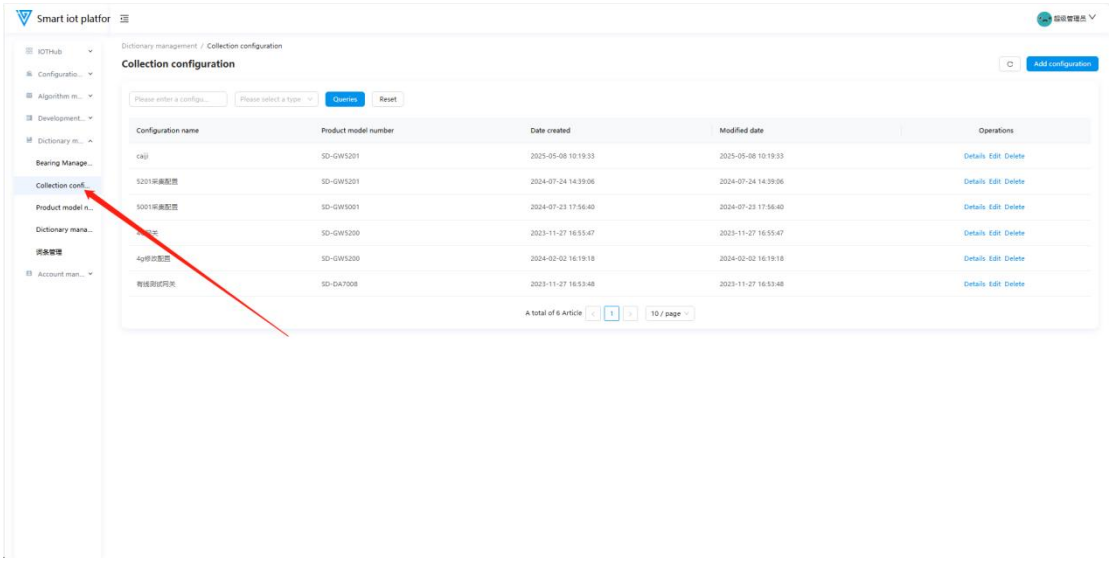
gearboxes belong to transmission devices.

1.2Iothub Quick Operation Guide

System Login

- Public Cloud: https://iothub.instaguard.com.cn/
- Private Cloud: Project-specific address (similar to 192.168.111.174:20021)

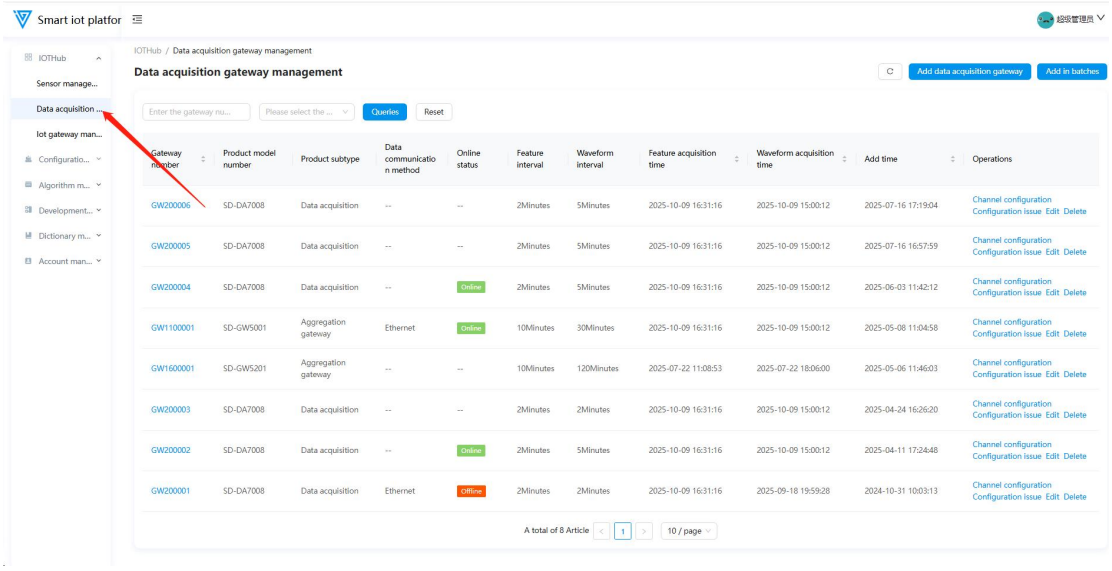
Acquisition Configuration

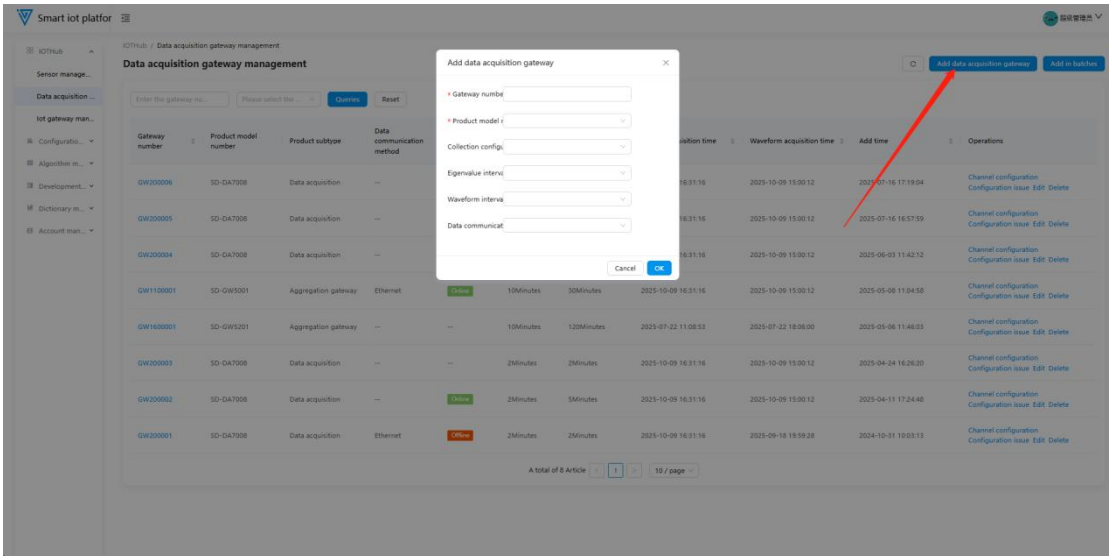


Adding Data Acquisition Gateways

The product number of the data acquisition gateway starts with "GW" and is 8 digits long. The first two digits are fixed as "GW", the middle one digit indicates the gateway type, and the last five digits are the unique serial number. The correspondence between gateway products and serial numbers is as follows:

Product Model	Gateway Number	Product Type
SD-DA7008	GW2XXXXX	8-Channel Vibration Collector
SD-DA7016	GW2XXXXX	16-Channel Vibration Collector
SD-DA7024	GW2XXXXX	24-Channel Vibration Collector
SD-GW5001/5101	GW11XXXXX GW12XXXXX GW13XXXXX GW14XXXXX GW15XXXXX	Vibration Gateway
SD-GW5200/5201	GW16XXXXX GW17XXXXX GW18XXXXX GW19XXXXX	4G Virtual Gateway



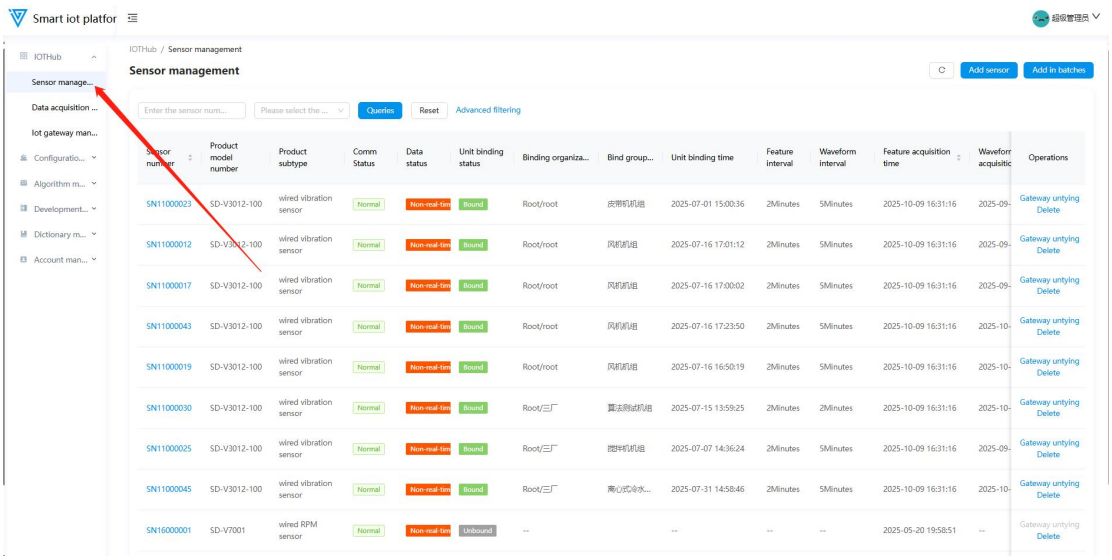


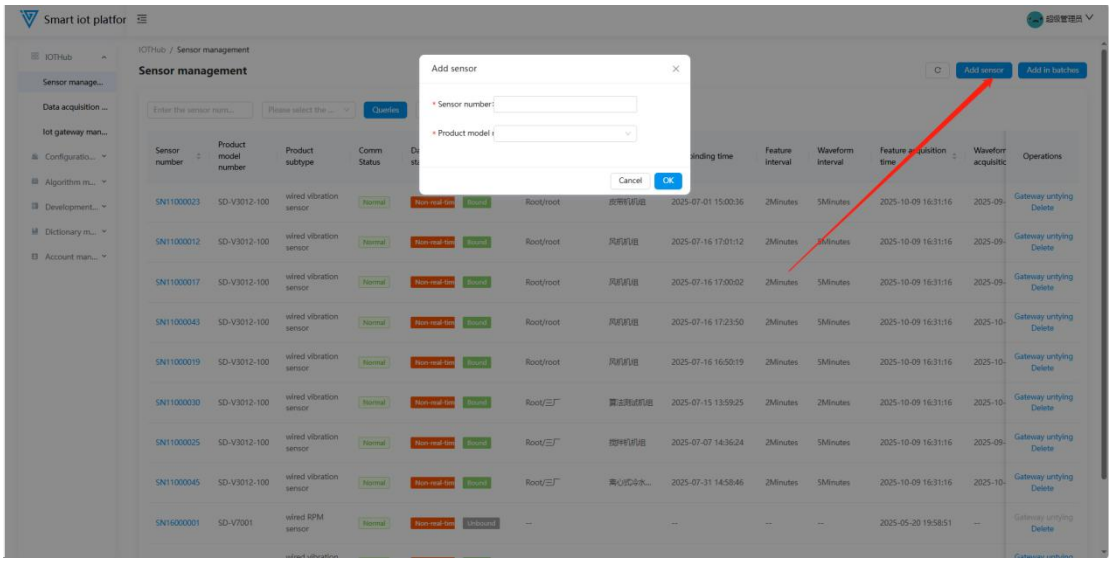
Adding Sensors

When adding sensors, note that the sensor serial number starts with "SN" and is 10 digits long. The middle two digits represent the monitoring type, and the last six digits are the unique serial number. The correspondence between sensor product models and serial numbers is as follows:

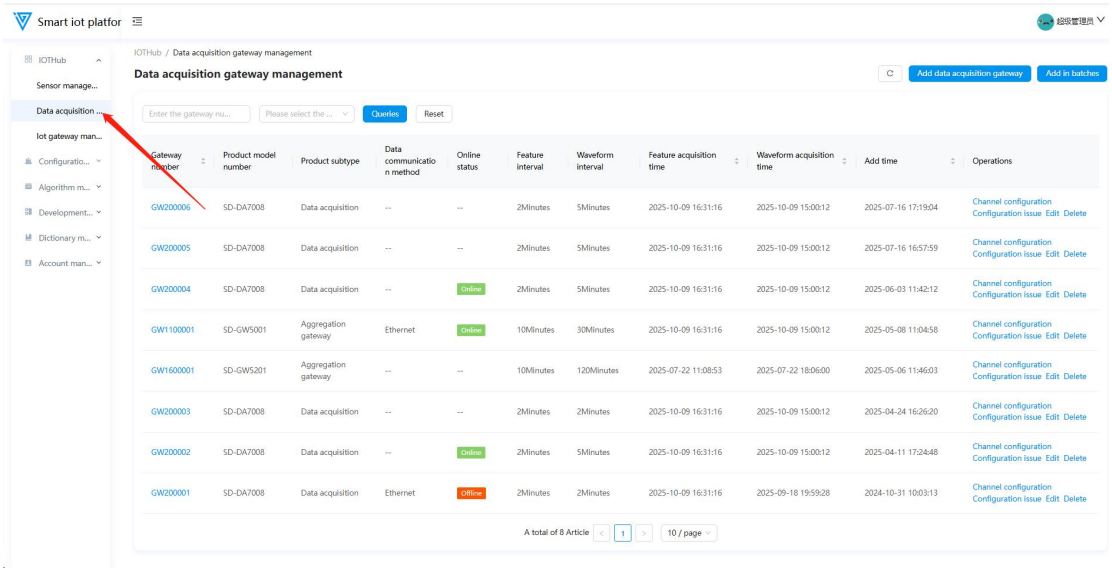
Product Model	Serial Number	Product Type	Product Characteristics
SD-V3012-100	SN11XXXXXX	Single-Axis Wired Acceleration Sensor	100mg

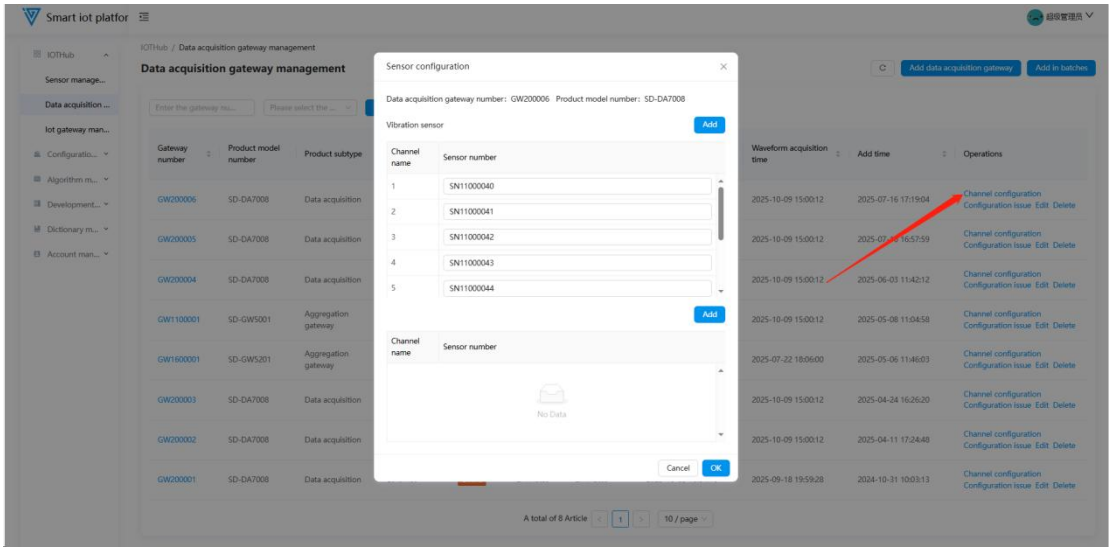
SD-V3012-500	SN11XXXXXX	Single-Axis Wired Acceleration Sensor	500mg
SD-V3207-ZG	SN12XXXXXX	Tri-Axis Wireless Zigbee Acceleration Sensor	10k
SD-V3207-4G	SN13XXXXXX	Tri-Axis Wireless 4G-Cat1 Acceleration Sensor	10k, 4G-Cat1

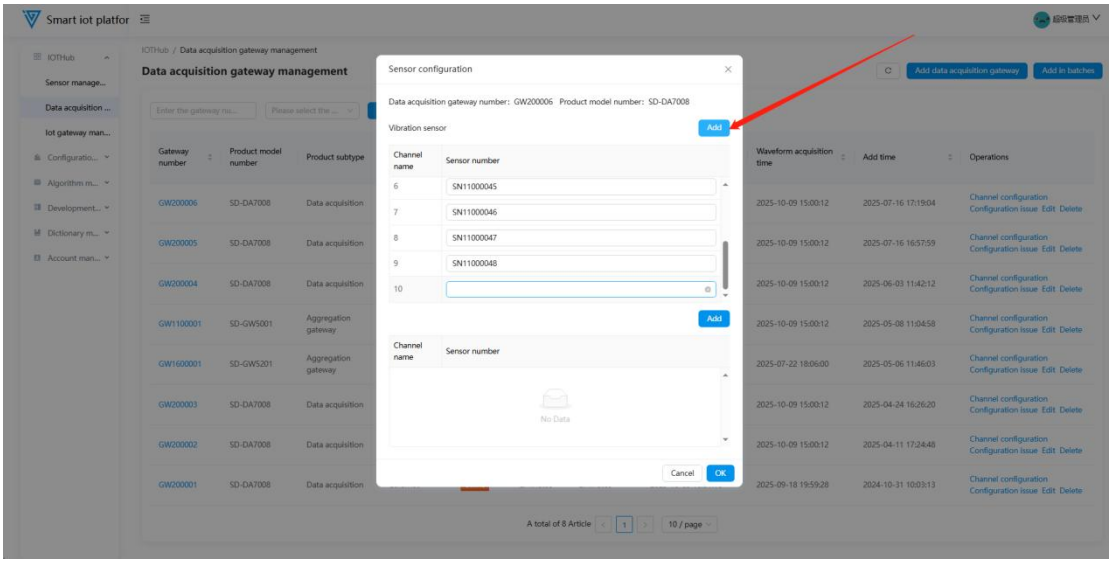




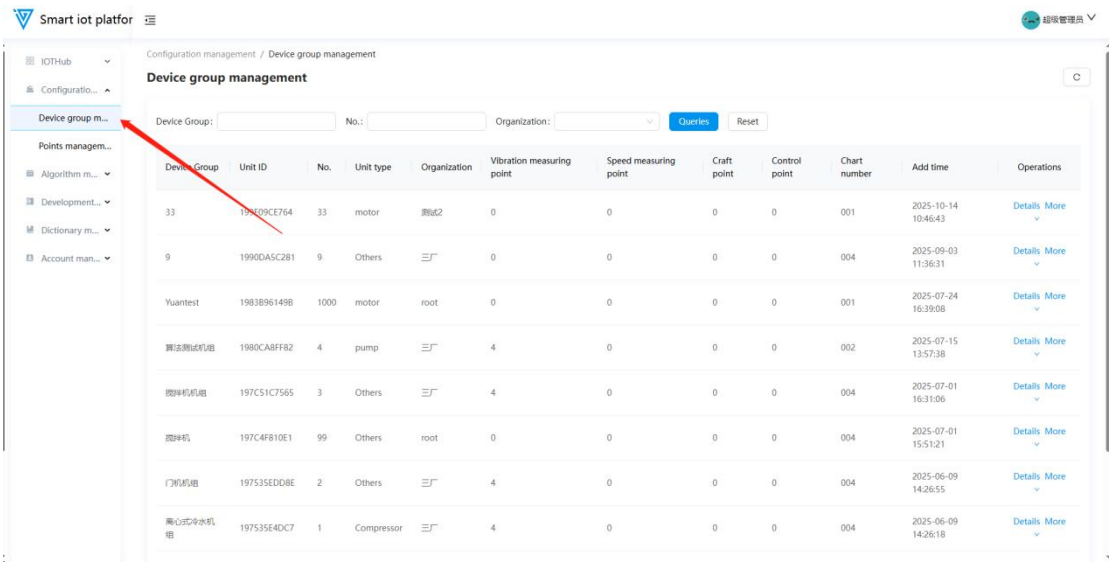
Channel Configuration

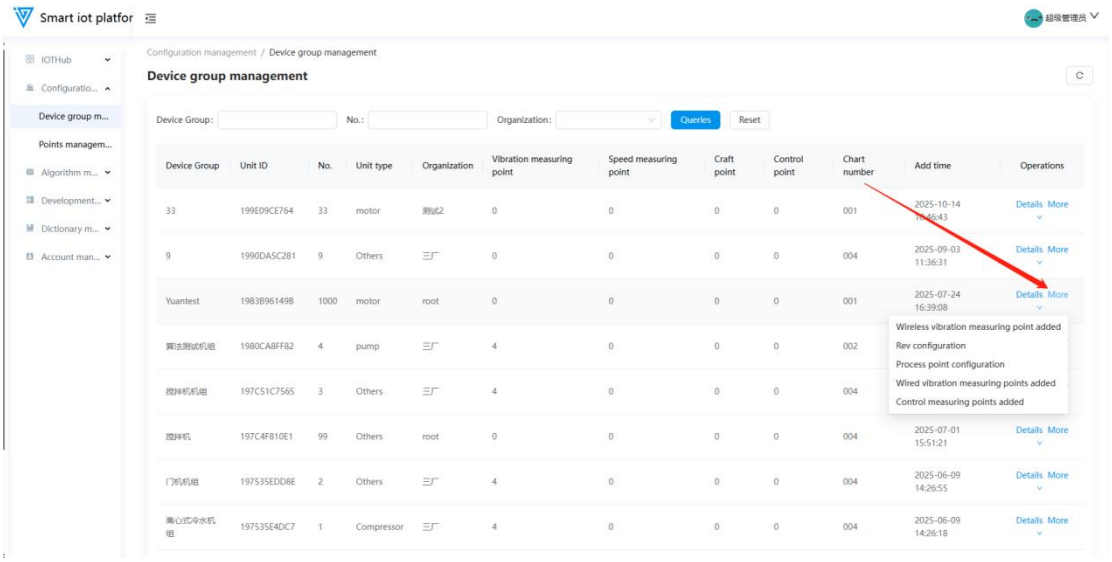


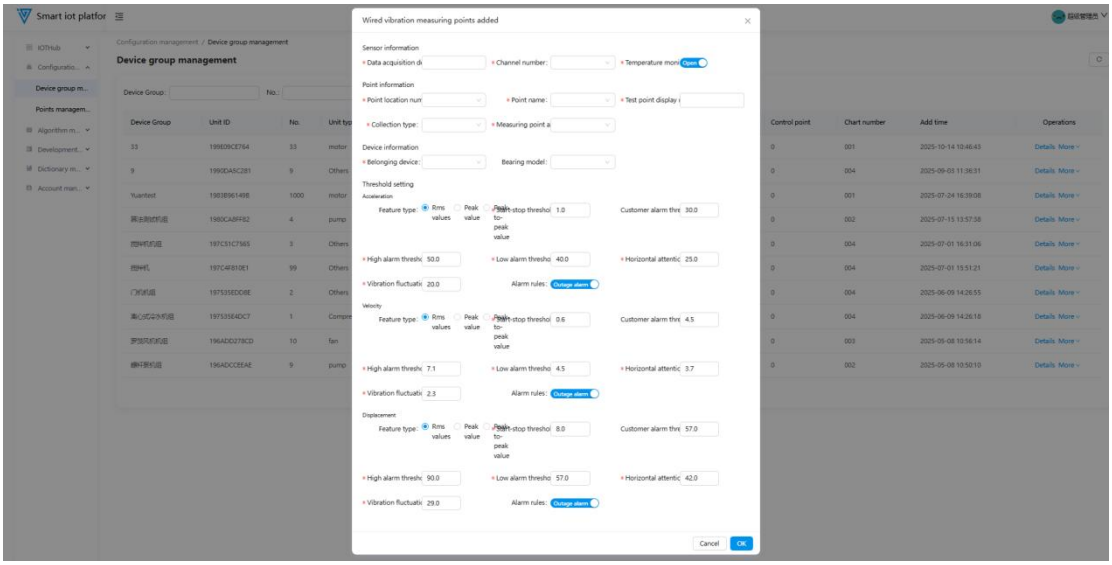




Add Measuring Point





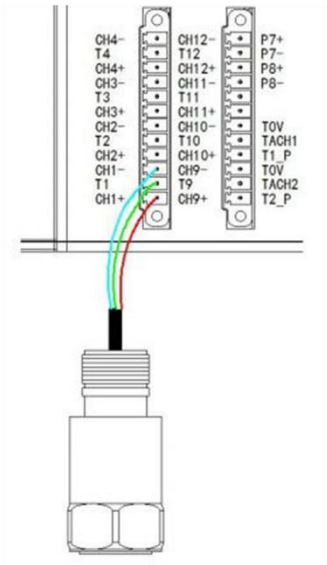


1.3Using APP to Configure SD-DA7000 Series Parameters and Acquisition

Wiring of the Data Collector

Wiring of the Acceleration Measuring Point of the Monitoring Unit

The monitoring unit supports the acquisition of 8/16-channel acceleration-temperature integrated sensors. The acceleration-temperature integrated sensor is a three-wire type, not a PT100 type. Please communicate with us in advance for relevant sensor selection.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T4
CH4+
CH3−
T3
CH3+
CH2−
T2
CH2+
CH1−
T1
CH1+
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CH12+
CH11−
T11
CH11+
CH10−
T10
CH10+
CH9−
T9
CH9+
P7+
P7−
P8+
P8−
TOV
TACH1
T1_P
TOV
TACH2
T2_P

13:47
计算器
日历
运动健康
相机
一键加速
浏览器
微信
信息
AI设备...
ESMS配...
设备看...
hello
13:48
状态区
设备已断开！
断开连接
功能区
数采器配置
传感器配置
趋势采集
实时采集
历史数据
系统设置
14:17
系统设置
通讯方式
接口
WIFI
蓝牙
APP版本
权限管理
用户权限
Language
Auto
服务器参数
域名
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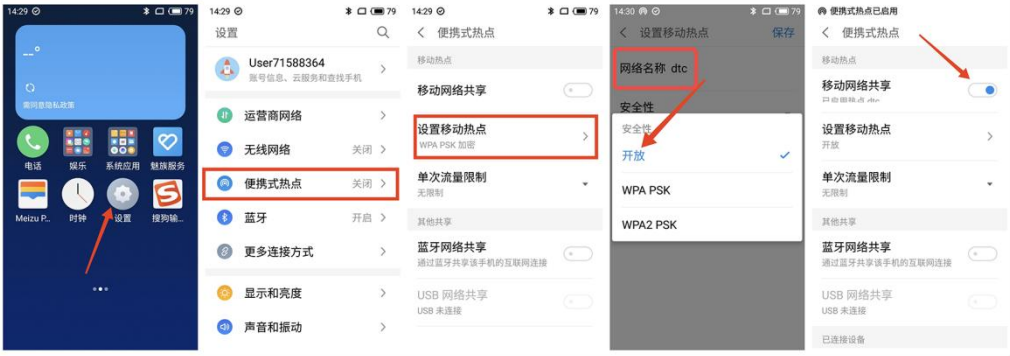
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运营商网络
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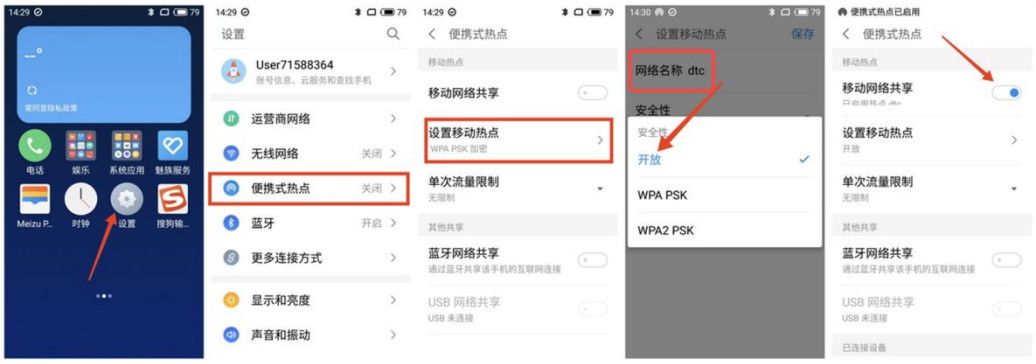
关闭
便携式热点
关闭
蓝牙
开启
更多连接方式
显示和亮度
声音和振动
便携式热点
移动热点
移动网络共享
设置移动热点
WPA PSK 加密
单次流量限制
无限制
其他共享
蓝牙网络共享
通过蓝牙共享该手机的互联网连接
USB 网络共享
USB 未连接
设置移动热点
保存
网络名称 dtc
安全性
开放
WPA PSK
WPA2 PSK
便携式热点已启用

状态区
设备已连接！
断开连接
功能区
数采器配置
传感器配置
趋势采集
临时采集
历史数据
系统设置
数采器配置
网络参数
ModBus
硬件参数
工艺量
扩展工艺量
获取配置成功!
确定

1.4Using APP to Configure SD-GW5000 Series Parameters and Acquisition


设置
User71588364
运营商网络
无线网络
关闭
便携式热点
关闭
蓝牙
开启
更多连接方式
显示和亮度
声音和振动
便携式热点
移动网络共享
设置移动热点
WPA PSK 加密
单次流量限制
无限制
蓝牙网络共享
USB 网络共享
USB 未连接
设置移动热点
保存
网络名称 dtc
安全性
开放
WPA PSK
WPA2 PSK

状态区
设备已连接！
断开连接
功能区
数采器配置
传感器配置
趋势采集
临时采集
历史数据
系统设置
数采器配置
系统参数
数采器编码 50100099
数采器SN 23020011
硬件版本 V2.4
MPU版本 V3.011
MCU版本 V1.054
协议版本 V1.0
上传方式 以太网
RS485 ID(1) 1
RS485波特率(1) 4800
RS485 ID(2) 0
RS485波特率(2) 4800
MQTT参数:
前缀 sinseqve/doton
用户名 wjb
密码 sin123456
心跳(S) 0
MQTT TLS 否
时间服务器
时间服务器端口 0
DNS服务器 0. 0. 0. 0
日志回收 0%
Zigbee参数
频段14
MQTT参数:
前缀 sinseqve/doton
用户名 wjb
密码 sin123456
心跳(S) 0
MQTT TLS 否
时间服务器
时间服务器端口 0
DNS服务器 0. 0. 0. 0
日志回收 0%
Zigbee参数
频段14
以太网参数
本机IP 192.168.111.107
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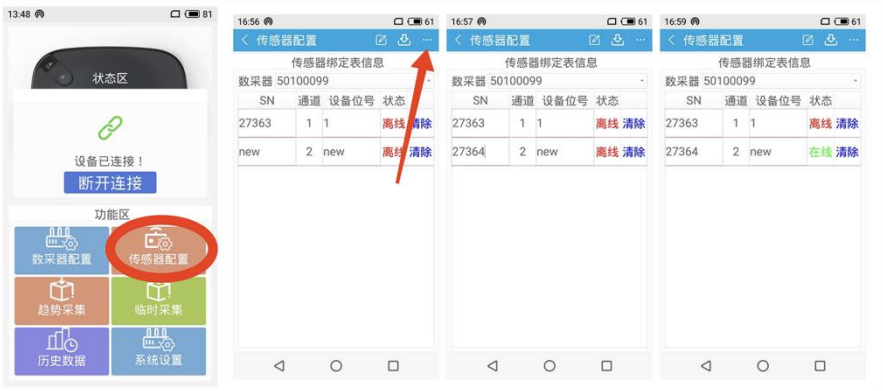
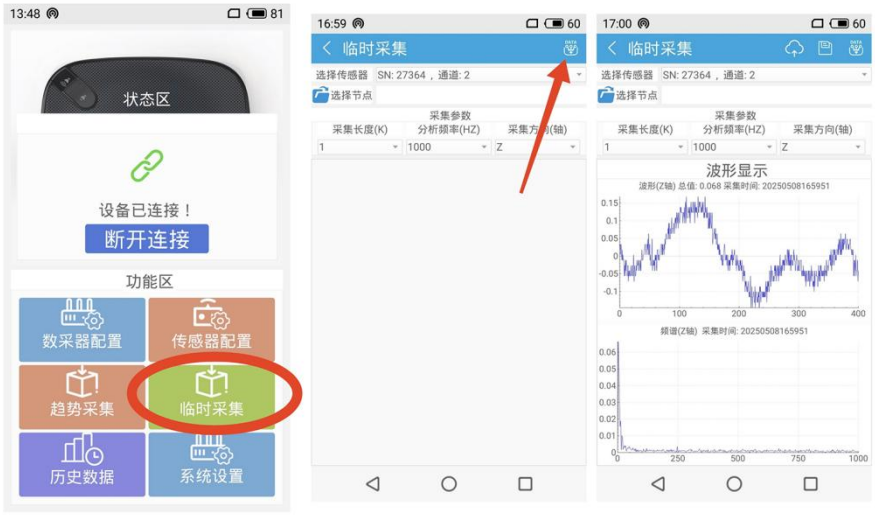
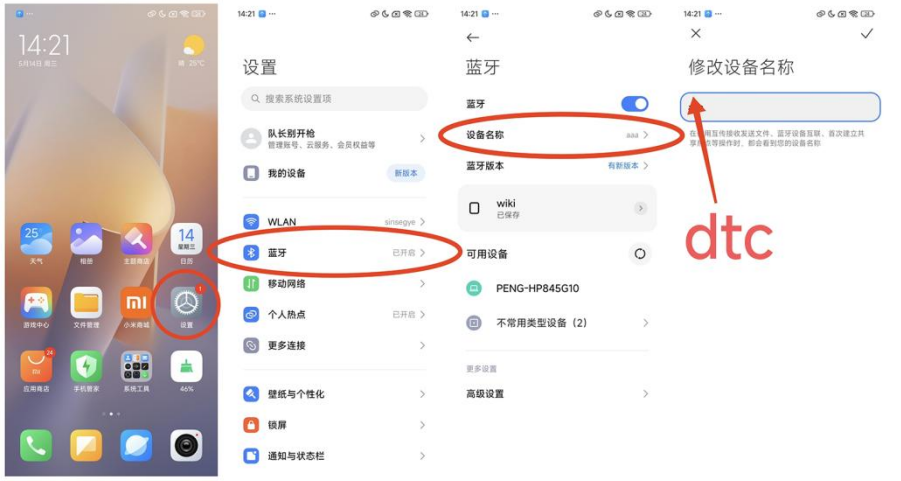
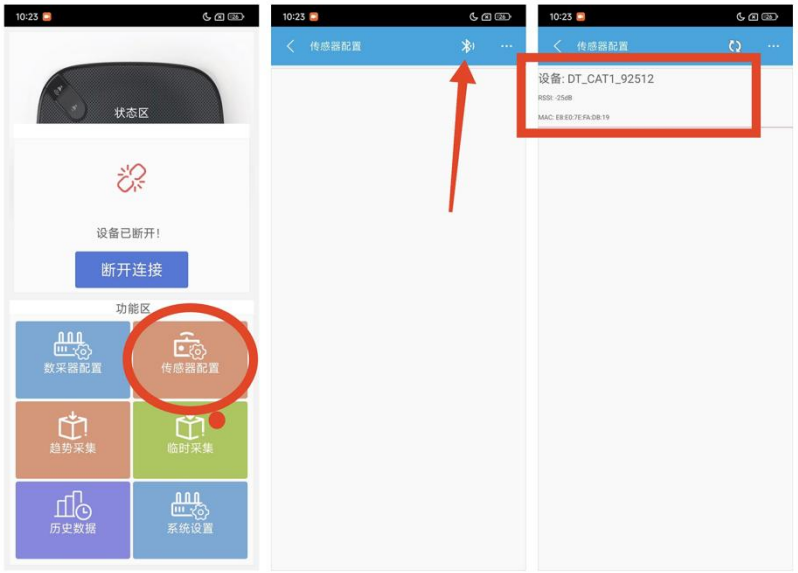
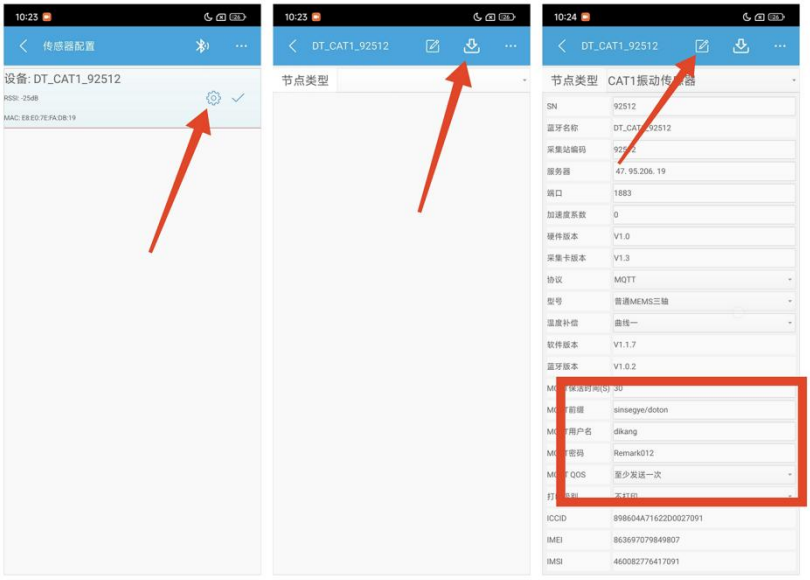




1.5Using APP to Configure Wireless Sensor SD-V3207-4G Series Parameters and Acquisition


14:21
设置
搜索系统设置项
队长别开枪
管理账号、云服务、会员权益等
我的设备
新版本
WLAN
sinsegye
蓝牙
已开启
移动网络
个人热点
已开启
更多连接
壁纸与个性化
锁屏
通知与状态栏
蓝牙
蓝牙
设备名称
aaa
蓝牙版本
有新版本
wiki
已保存
可用设备
PENG-HP845G10
不常用类型设备（2）
更多设置
高级设置
修改设备名称
dtc


10:23
状态区
设备已断开!
断开连接
功能区
数采器配置
传感器配置
趋势采集
临时采集
历史数据
系统设置
传感器配置
设备: DT_CAT1_92512

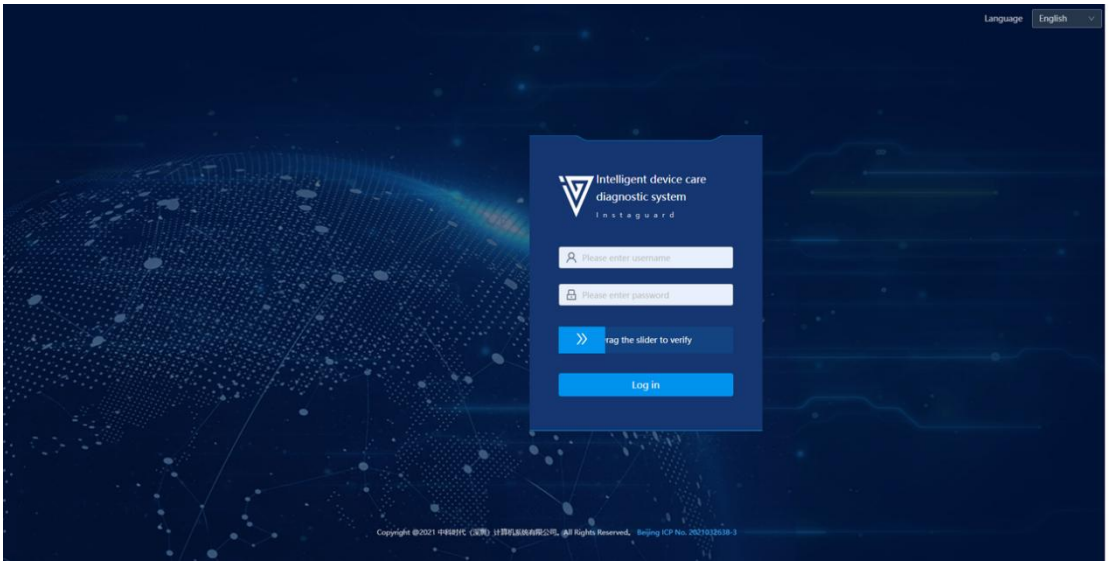


2.Instaguard Functions

2.1Login Page

2.1.1Function Overview

This interface serves as the login entry for the Intelligent Device Care Diagnostic System. It realizes user identity verification through a simple interface design to ensure the security of device operations and data management.



2.1.2Operation Process

Accessing the System

Access via a display with a resolution ≥ 1920×1080 and a Google kernel browser (version ≥ 92):

Industrial intelligent computer IP address: 20031 (e.g., 192.168.111.174:20031)

Identity Verification

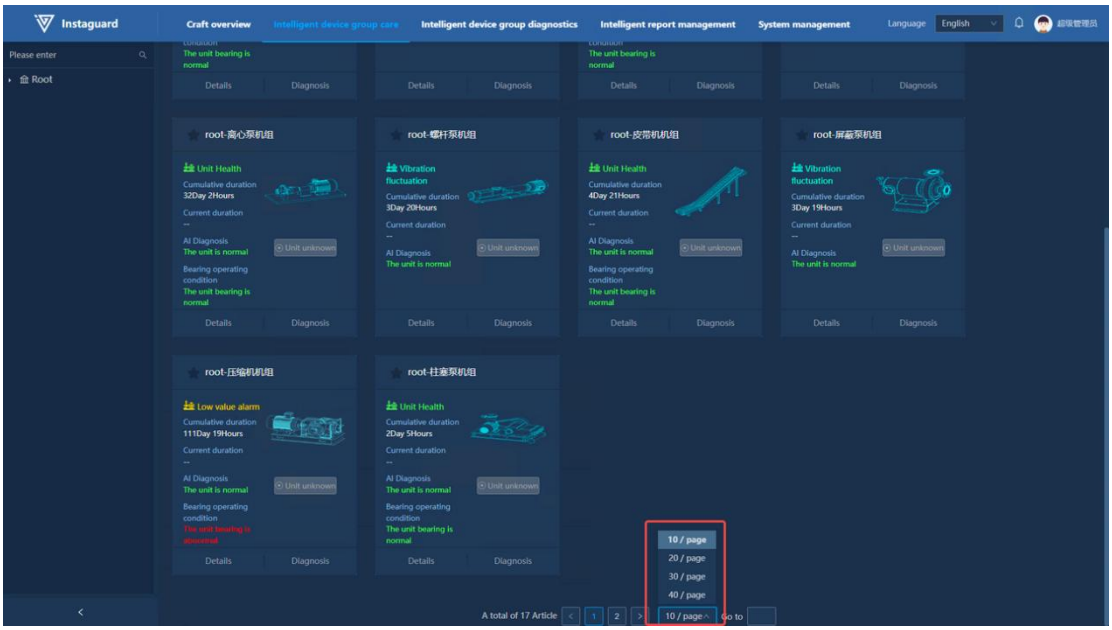
Step 1: Enter the employee number/registered account in the "Username" input field.
Step 2: Enter the corresponding password in the "Password" input field (password is hidden by default).
Step 3: Drag the blue slider for verification.
Step 4: Click the blue "Login" button.

2.2Auxiliary Functions (General)

2.2.1Pagination Control

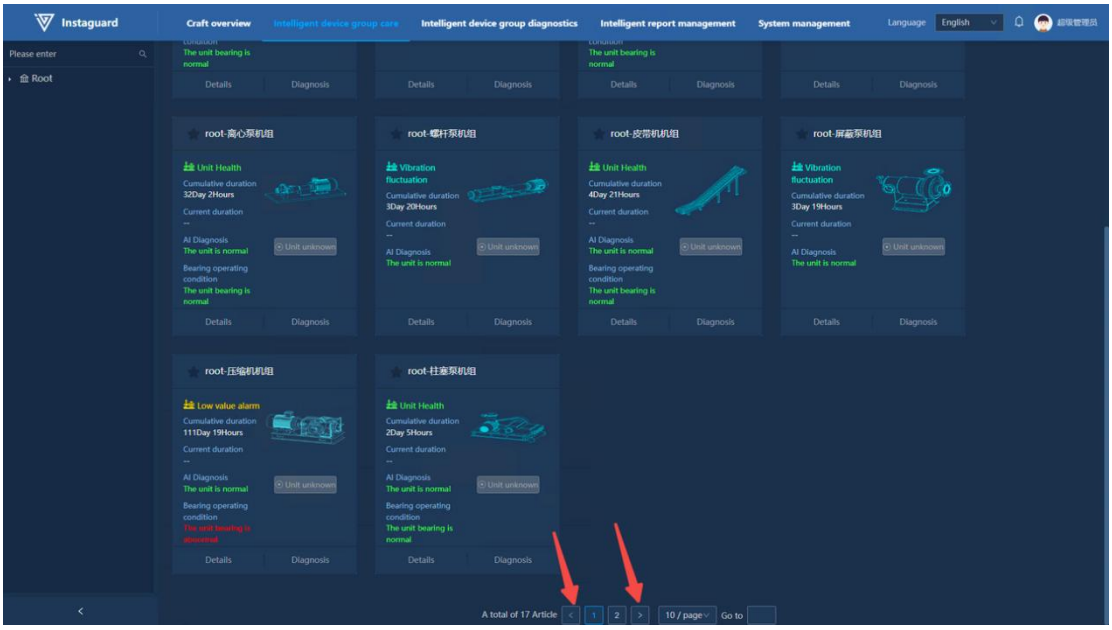
Pagination Capacity

Switchable to display 10/20/30/40 pieces of information per page.

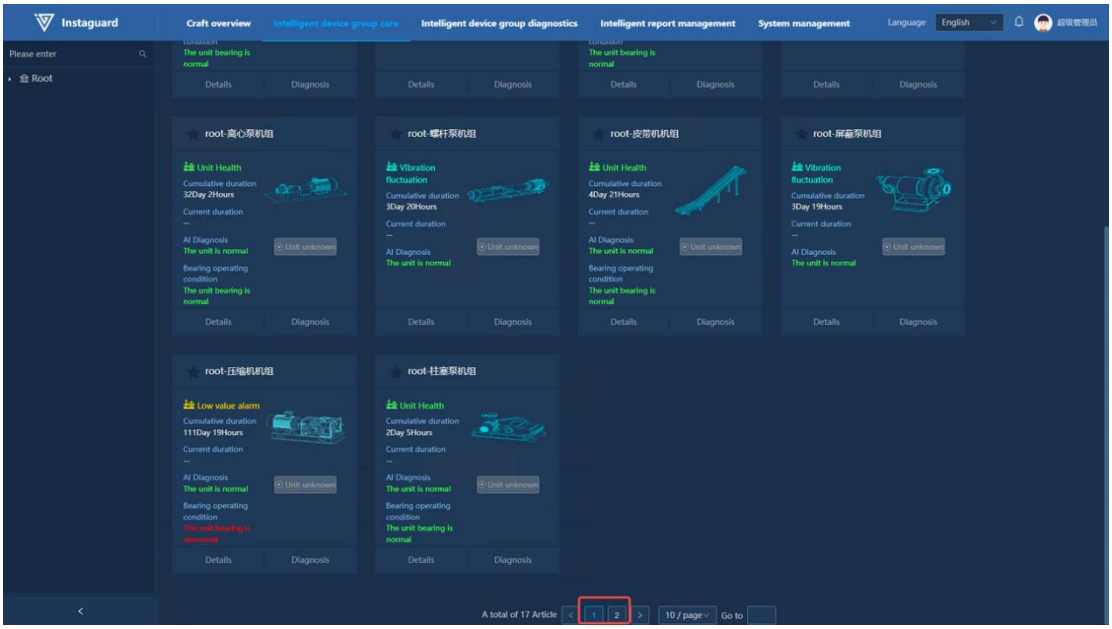


Page Navigation

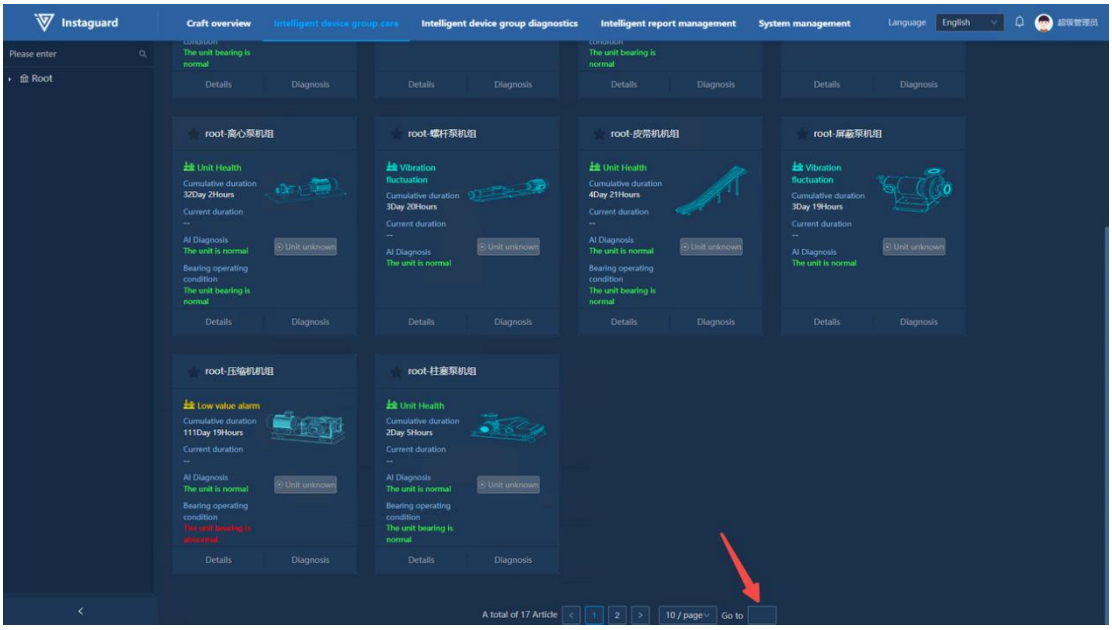
- Click the " < " " > " buttons to navigate between pages.



- Click the page number you want to go to for direct jumping.

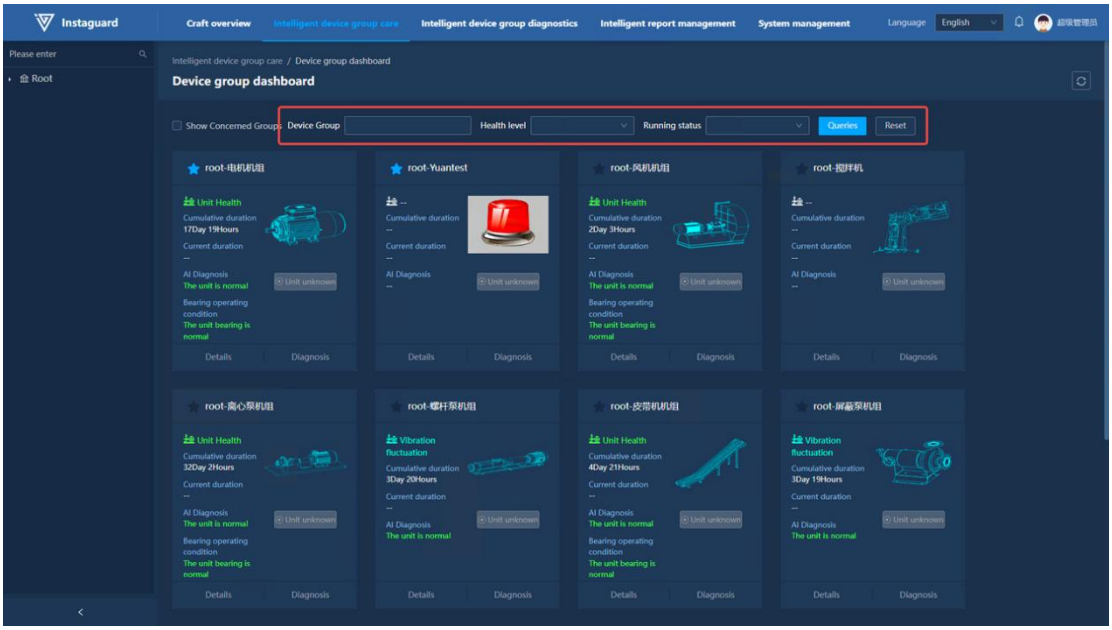


- Enter the target page number in the input field for jumping.

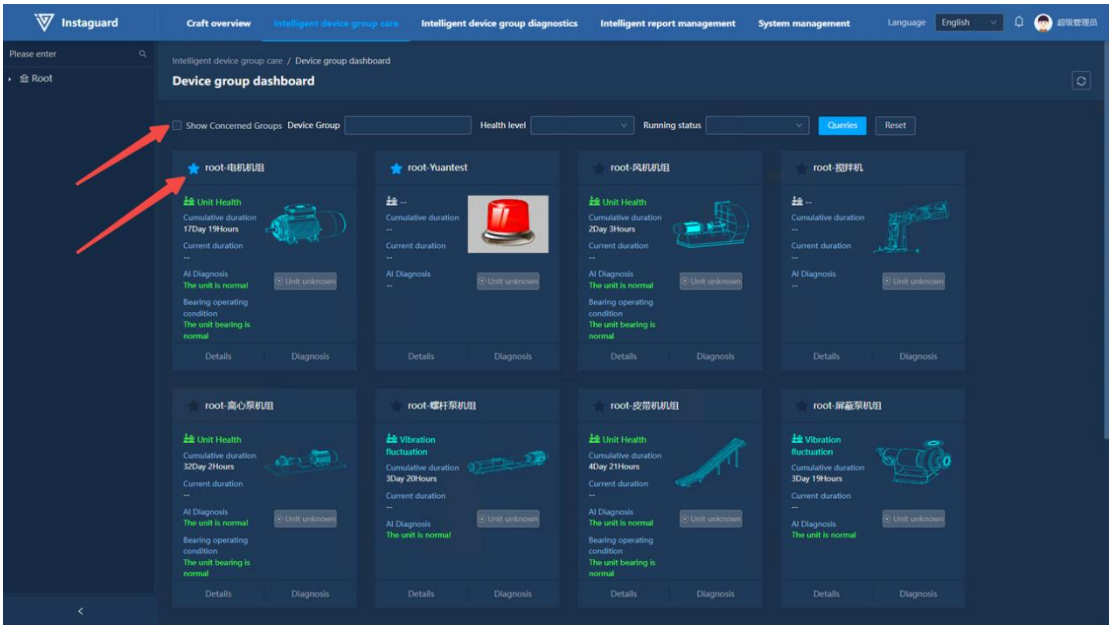


2.2.2Filter Query

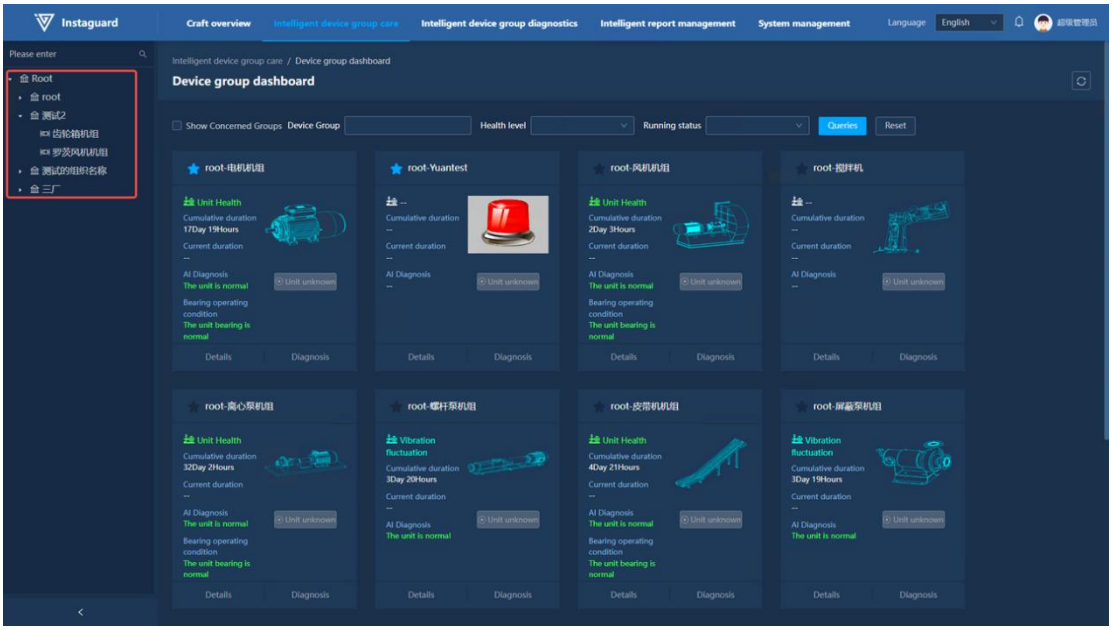
Select or enter filter criteria as prompted, then click the "Query" button. Click "Reset" to clear all criteria.



- The Unit Kanban page features an exclusive "Show Followed Units Only" option. When checked, only followed units are displayed (click the asterisk before the unit name to mark it in blue for following).

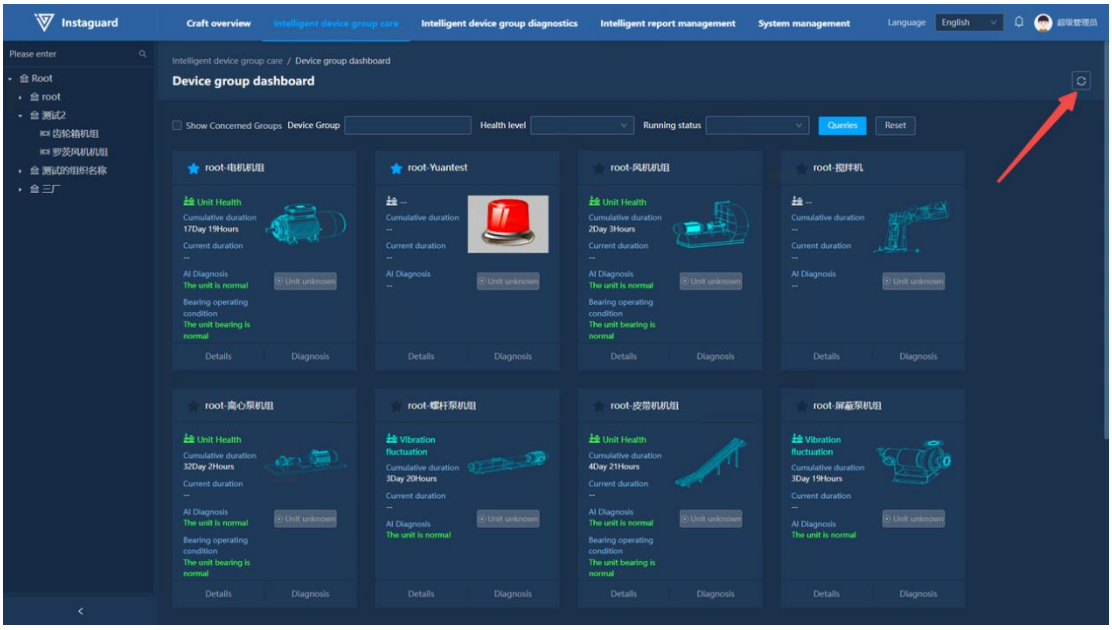


- Select or perform a fuzzy search in the left organization tree to display units under the corresponding organization and its subordinates.



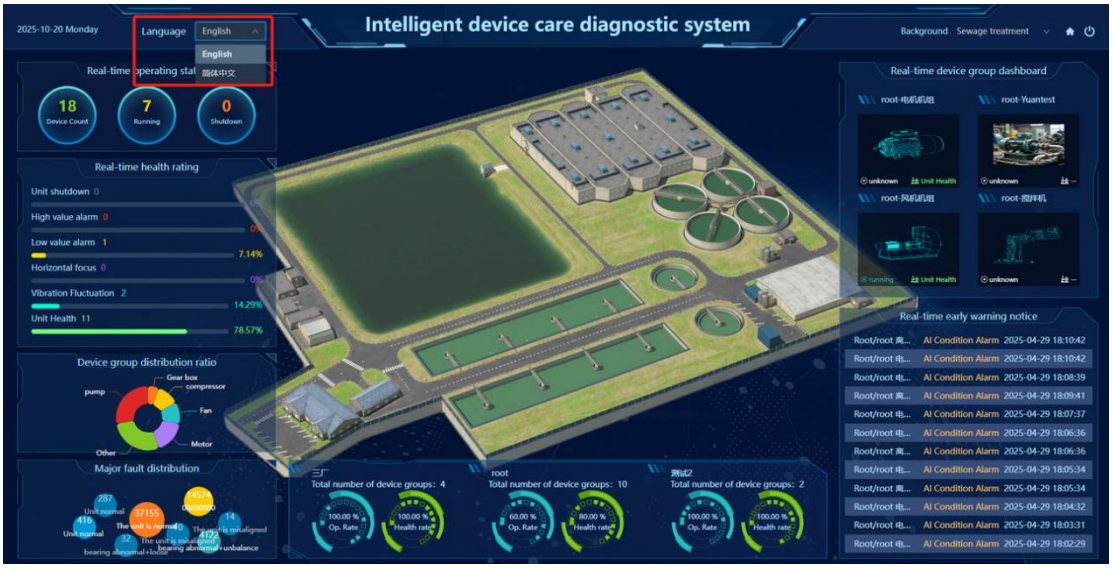
2.2.3Data Refresh

Click the "Refresh" button to force an update of the page content.



2.2.4Language Switching

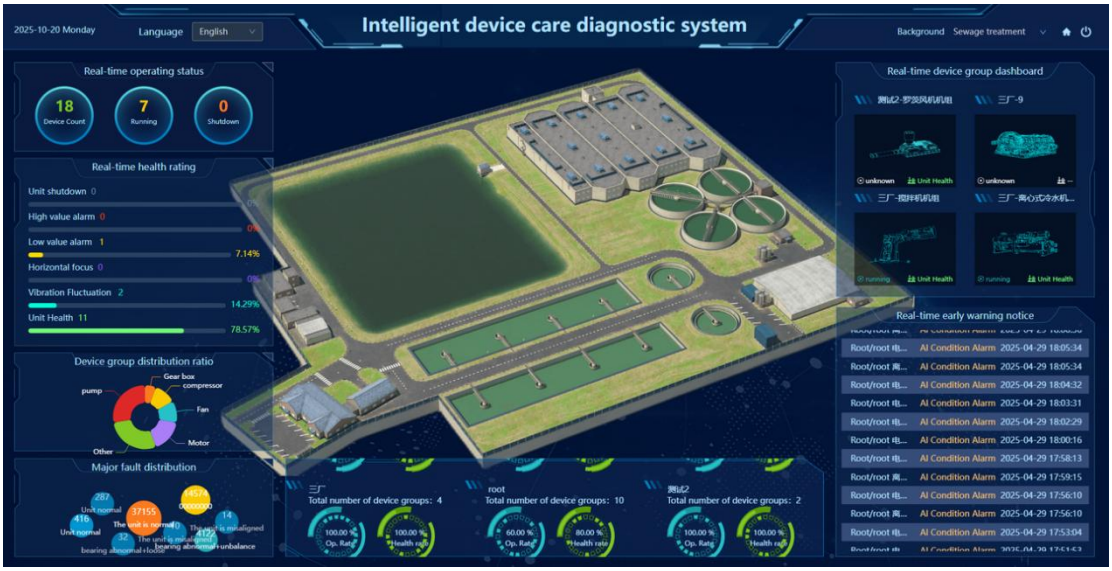
Click the "Language" drop-down menu at the top to switch between Chinese and English.



2.3Intelligent Care Dashboard (Home Page)

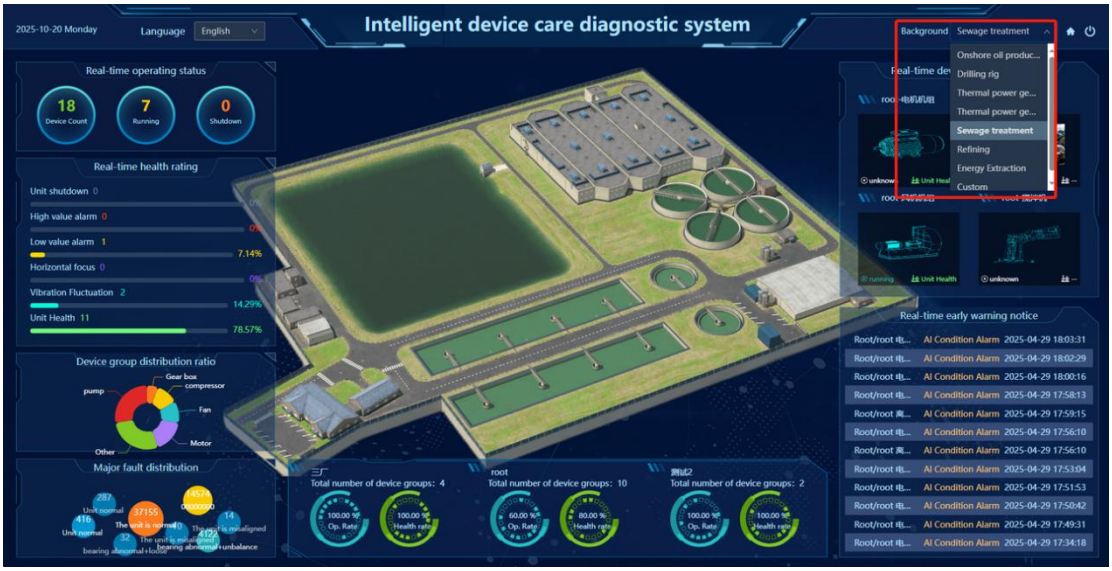
2.3.1Function Overview

Use the intelligent care dashboard to quickly access real-time operation status, real-time health grade, unit proportion distribution, main fault distribution, unit real-time kanban, real-time warning notifications, and real-time health statistics of organizational units:



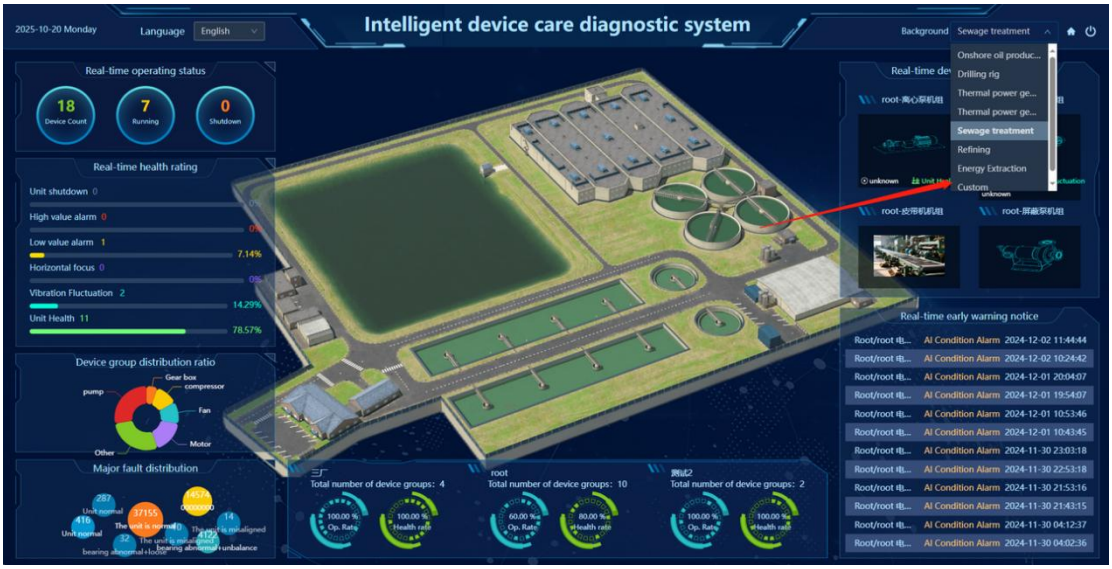
2.3.2Background Selection

The intelligent care dashboard allows users to change the background image. Click the "∨" in the upper-right corner and select from the drop-down menu. The system defaults to background images for onshore oil extraction, drilling platforms, metallurgy, thermal power generation, sewage treatment, refining, and energy extraction, which can be selected according to display requirements. Once selected, the background will be applied to all users in the organization.



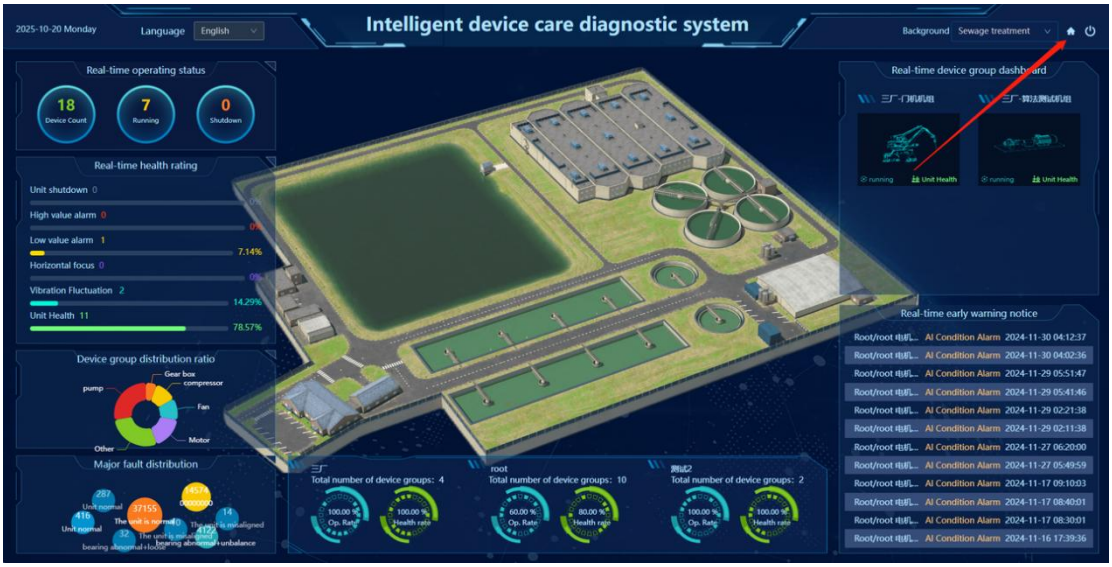
2.3.3Background Upload

Users can also upload custom background images. Click the "∨" in the upper-right corner, select "Custom" below, and a pop-up window will appear for image upload. The image supports JPG/PNG format and must be under 10MB. After upload, all users in the organization will use this image as the dashboard background (file names cannot contain special characters).



2.3.4Unit Kanban

Click the " " in the upper-right corner to enter the Unit Kanban interface, from which you can access other detail interfaces.

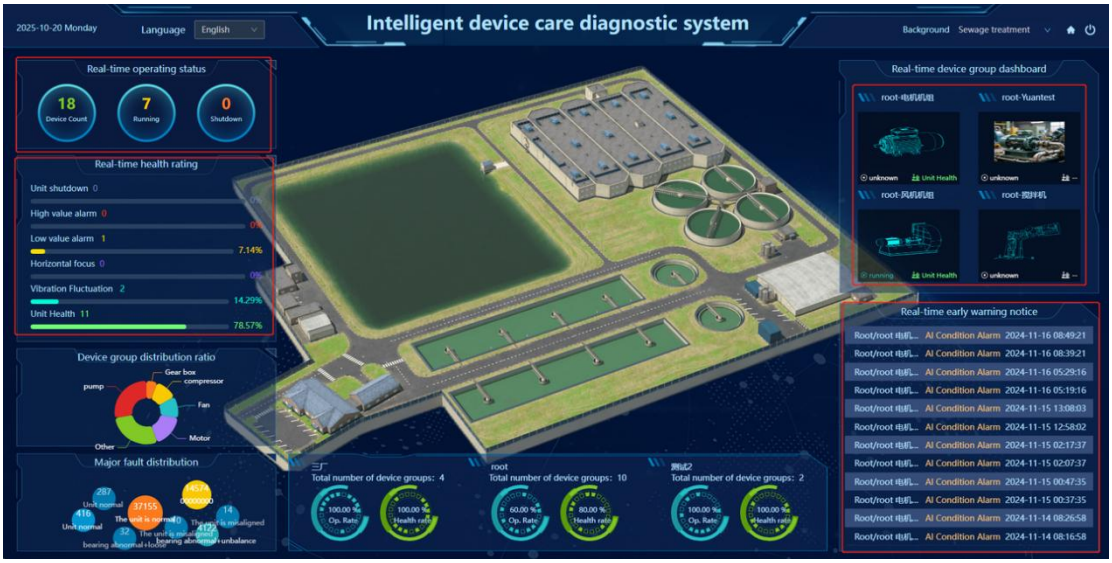


2.3.5Logout

Click the " " in the upper-right corner to log out.

2.3.6Detail Jump

Click the following four sections to jump to the corresponding detail interfaces:

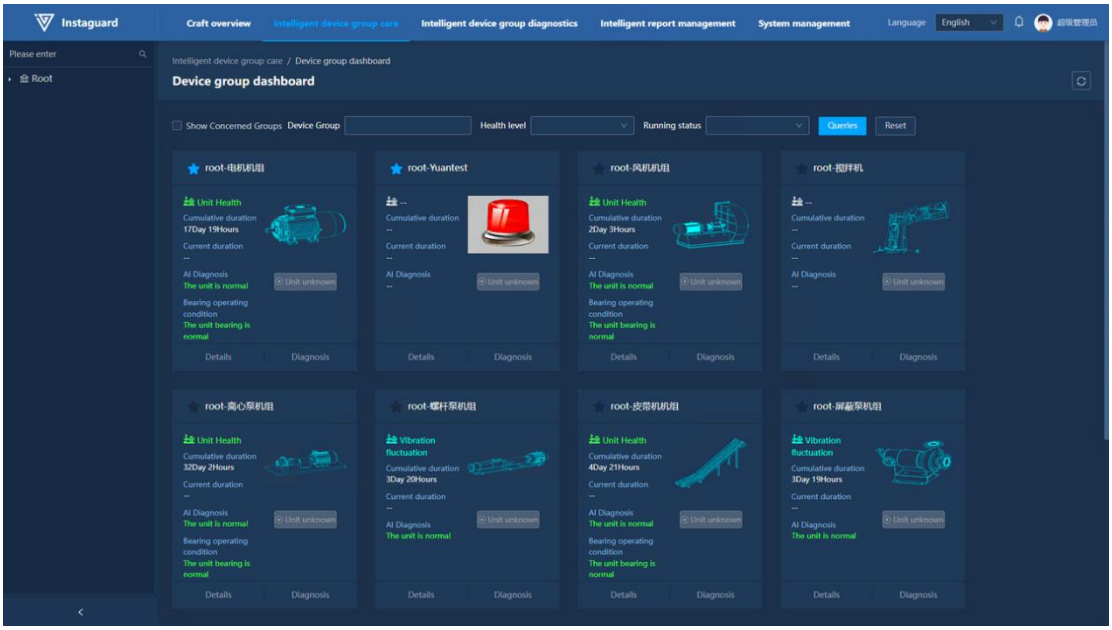


2.4Intelligent Unit Care

2.4.1Unit Kanban

Function Overview

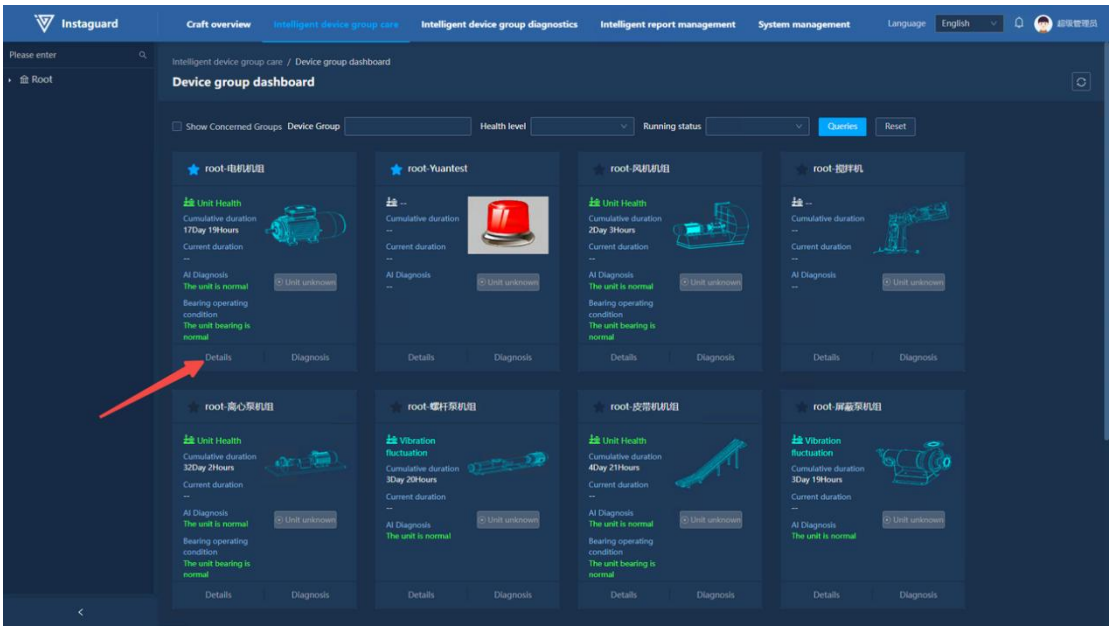
Use this function to centrally care for supervised units. The kanban displays the unit's organization, name, structure, current health grade, accumulated operation time, current operation time, and real-time status. The AI version supports viewing the latest AI care diagnosis results. Kanban supports the functions of changing unit overview diagrams according to unit subtypes, refreshing the database, refreshing the existing unit overview diagrams according to unit subtypes, defaulting to the most recently created image from the subtype library, and quickly screening by unit name, health level, and running status.



2.4.2Unit Details

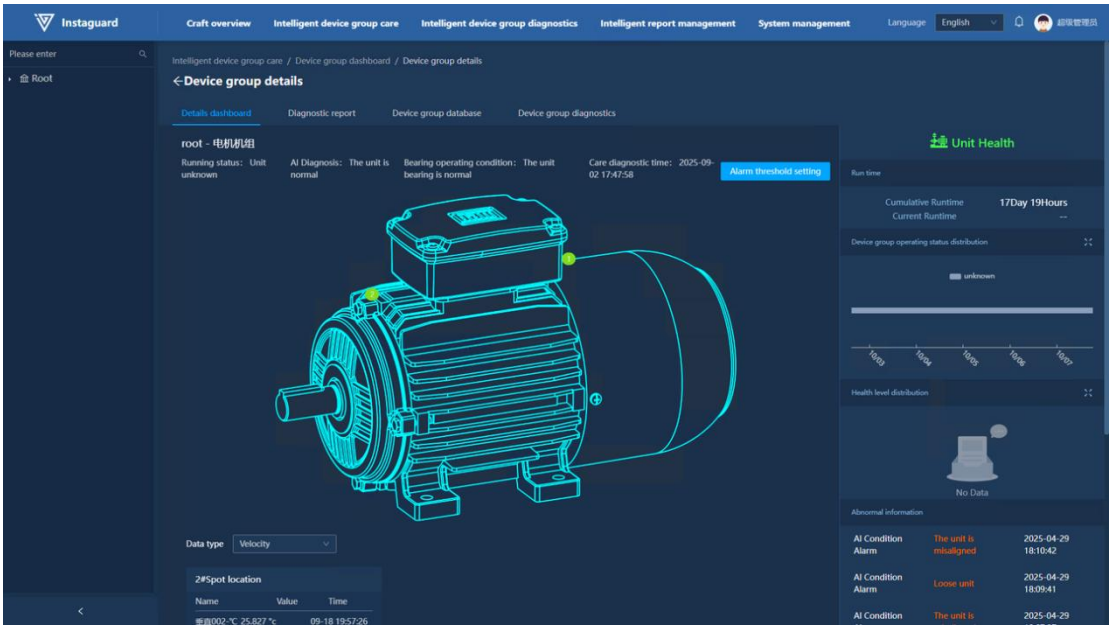
Navigation Path

「Intelligent Unit Care」 → 「Unit Kanban」 → 「Details」



Function Overview

Unit details enable comprehensive care and diagnosis of specified units. The detail kanban shows the unit structure, installation positions of measuring points, real-time operation status, and (for AI version) the latest AI diagnosis results. It also displays real-time data from installed IOT hardware, highlights data exceeding set thresholds, and shows recent/specified-period operation status distribution, health grade distribution, and the latest abnormal alarms.

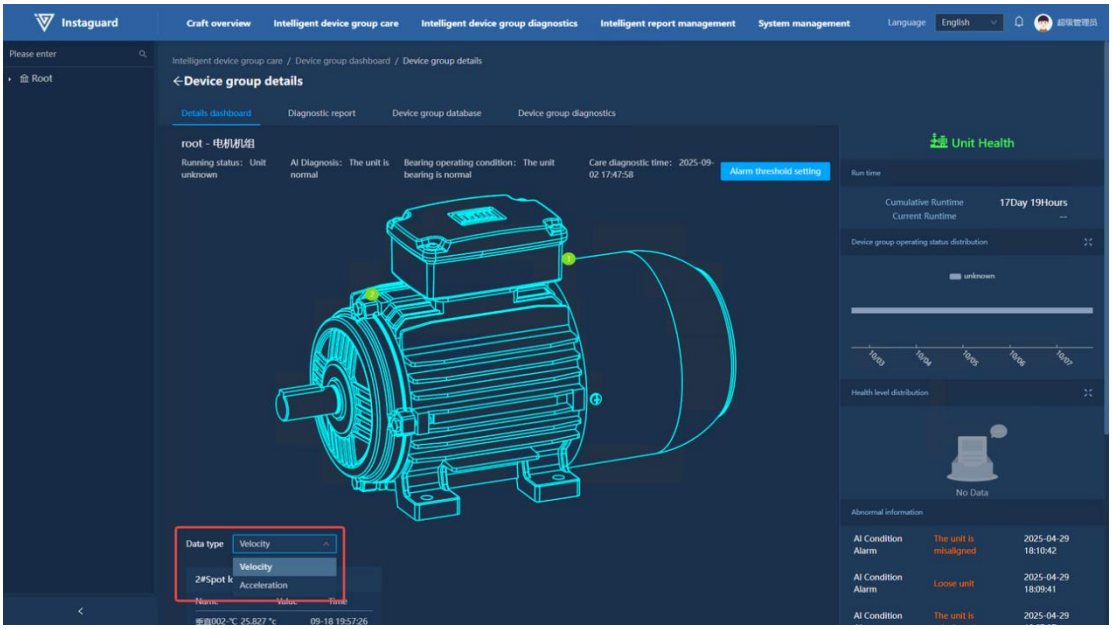


Detail Kanban

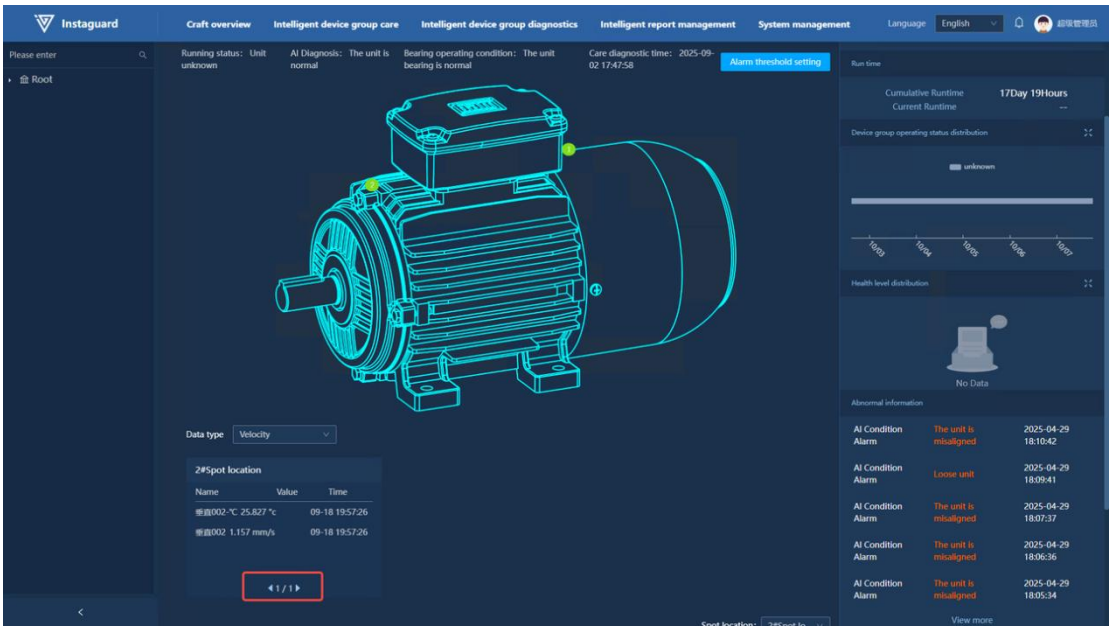
Viewing Unit Real-time Data

After entering unit details, the latest characteristic data of the cared unit are displayed below the kanban, arranged by measuring point positions. Vibration data in each

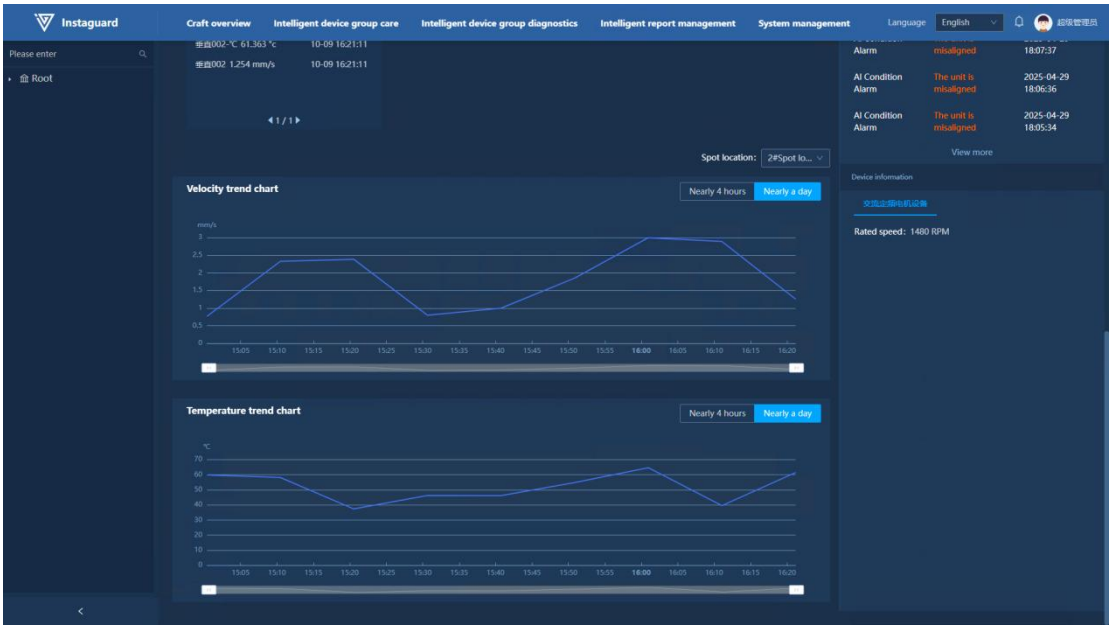
measuring point kanban are ordered by temperature, Z-axis, X-axis, and Y-axis data. Data can be switched by type (acceleration/velocity).



- Each kanban page displays 4 pieces of data; use " < " " > " to page through.

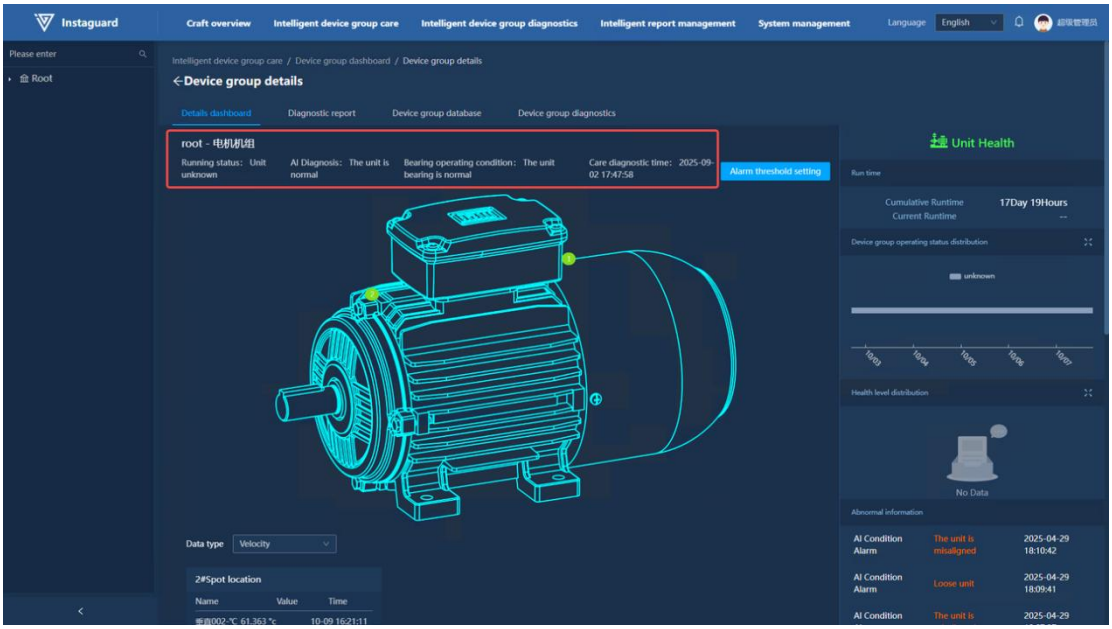


- A corresponding trend chart is displayed below, supporting zooming and hover-to-view details. Select measuring points to switch.



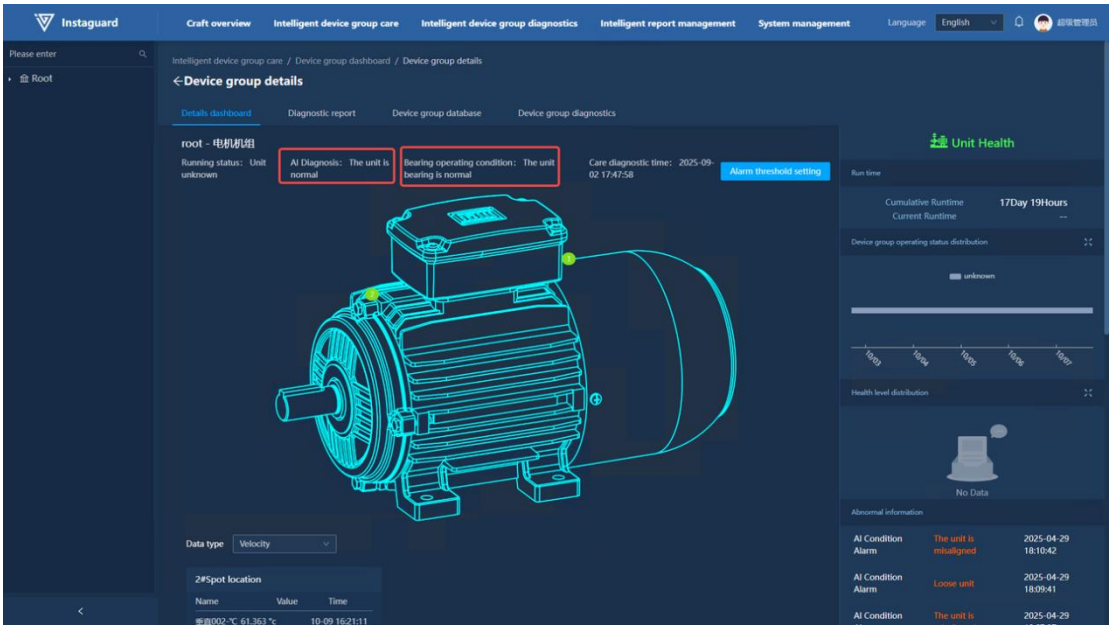
Viewing Real-time Operation Status

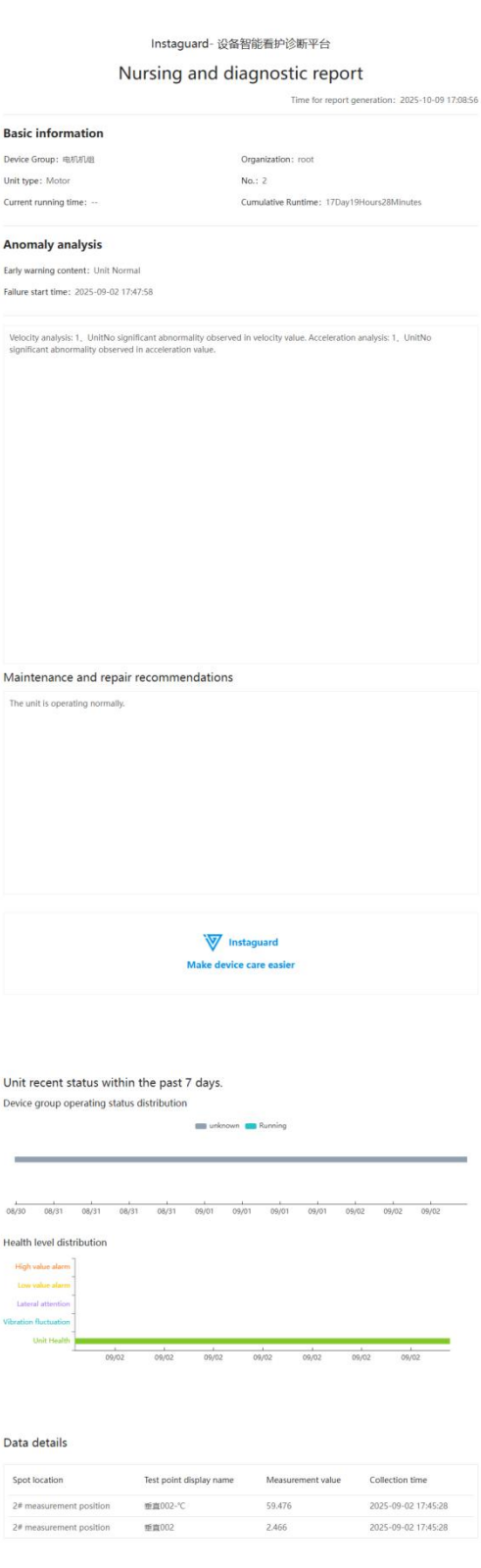
In the middle area of the details, the unit structure and real-time operation status, along with the latest AI diagnosis conclusion, are displayed.



Viewing Care Diagnosis Reports

Click "Unit AI Condition" or "Bearing Condition" to automatically generate and download the diagnosis report as a PDF.


Instaguard
Craft overview
Intelligent device group care
Intelligent device group diagnostics
Intelligent report management
System management
Language
English
Please enter
Root
Intelligent device group care / Device group dashboard / Device group details
Device group details
Details dashboard
Diagnostic report
Device group database
Device group diagnostics
root - 电机机组
Running status: Unit unknown
AI Diagnosis: The unit is normal
Bearing operating condition: The unit bearing is normal
Care diagnostic time: 2025-09-02 17:47:58
Alarm threshold setting
Data type
Velocity
2#Spot location
Name
Value
Time
10-09 16:21:11
Unit Health
Run time
Cumulative Runtime
17Day 19Hours
Current Runtime
--
Device group operating status distribution
unknown
Health level distribution
No Data
Abnormal information
AI Condition Alarm
The unit is misaligned
2025-04-29 18:10:42
AI Condition Alarm
Loose unit
2025-04-29 18:09:41
AI Condition
The unit is
2025-04-29



Instaguard- 设备智能看护诊断平台

Nursing and diagnostic report

Time for report generation: 2025-10-09 17:08:56

Basic information

Device Group: 电机机组 | Organization: root

Unit type: Motor | No.: 2

Current running time: -- | Cumulative Runtime: 17Day19Hours28Minutes

Anomaly analysis

Early warning content: Unit Normal

Failure start time: 2025-09-02 17:47:58

Velocity analysis: 1、UnitNo significant abnormality observed in velocity value. Acceleration analysis: 1、UnitNo significant abnormality observed in acceleration value.

Maintenance and repair recommendations

The unit is operating normally.

Instaguard

Make device care easier

Unit recent status within the past 7 days.

Device group operating status distribution

unknown Running

08/30 08/31 08/31 08/31 08/31 09/01 09/01 09/01 09/01 09/02 09/02 09/02

Health level distribution

High value alarm

Low value alarm

Lateral attention

Vibration fluctuation

Unit Health

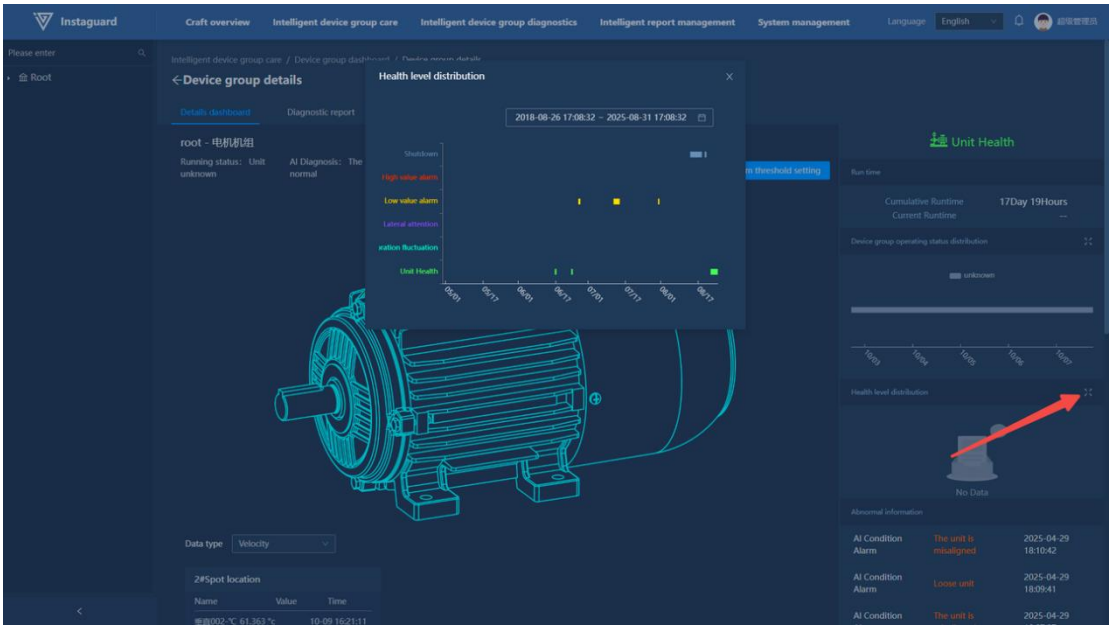
09/02 09/02 09/02 09/02 09/02 09/02 09/02

Data details

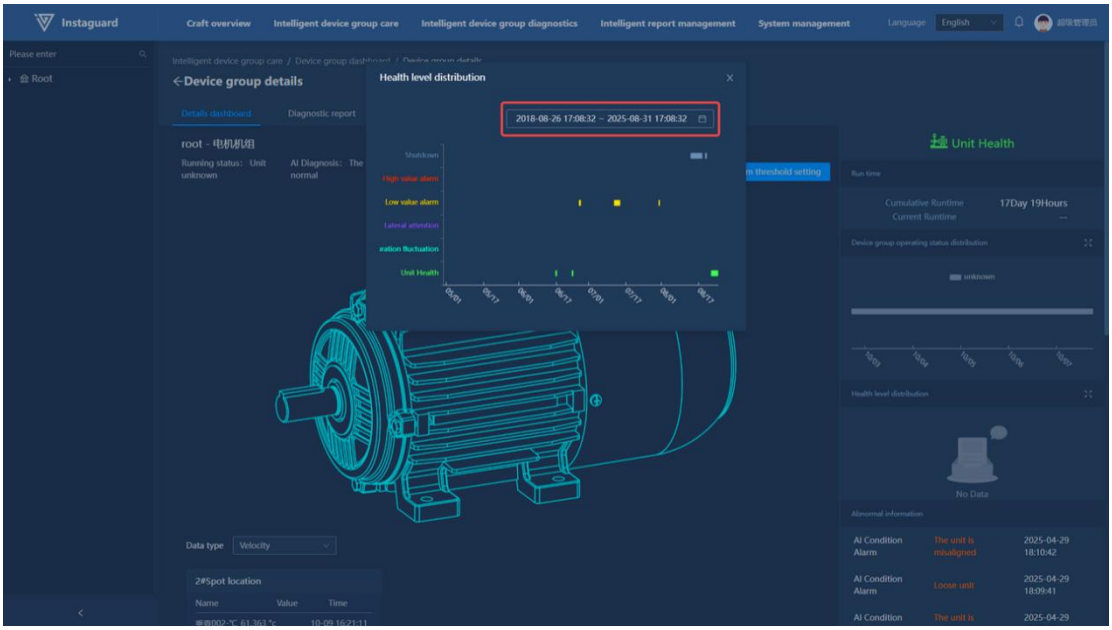
Spot location	Test point display name	Measurement value	Collection time
2# measurement position	垂直002-°C	59.476	2025-09-02 17:45:28
2# measurement position	垂直002	2.466	2025-09-02 17:45:28

Viewing Health Grade History

After entering the unit kanban, click "Health Grade Distribution" to access the history page.

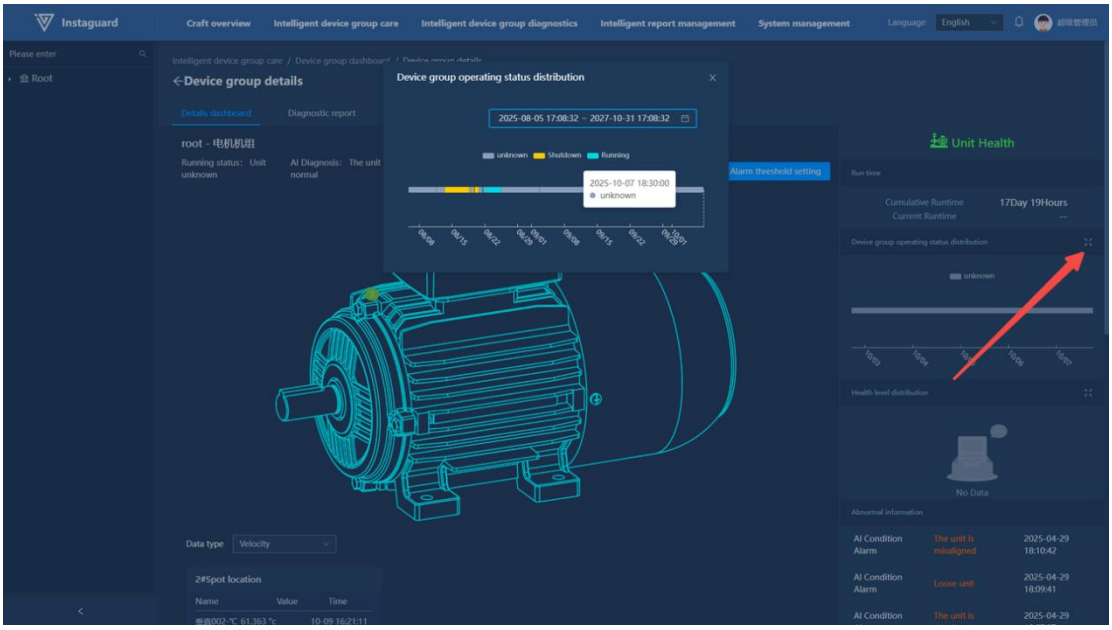


- The start time and end time on the horizontal axis are displayed according to the selected date range, to display the health grade distribution for that period.

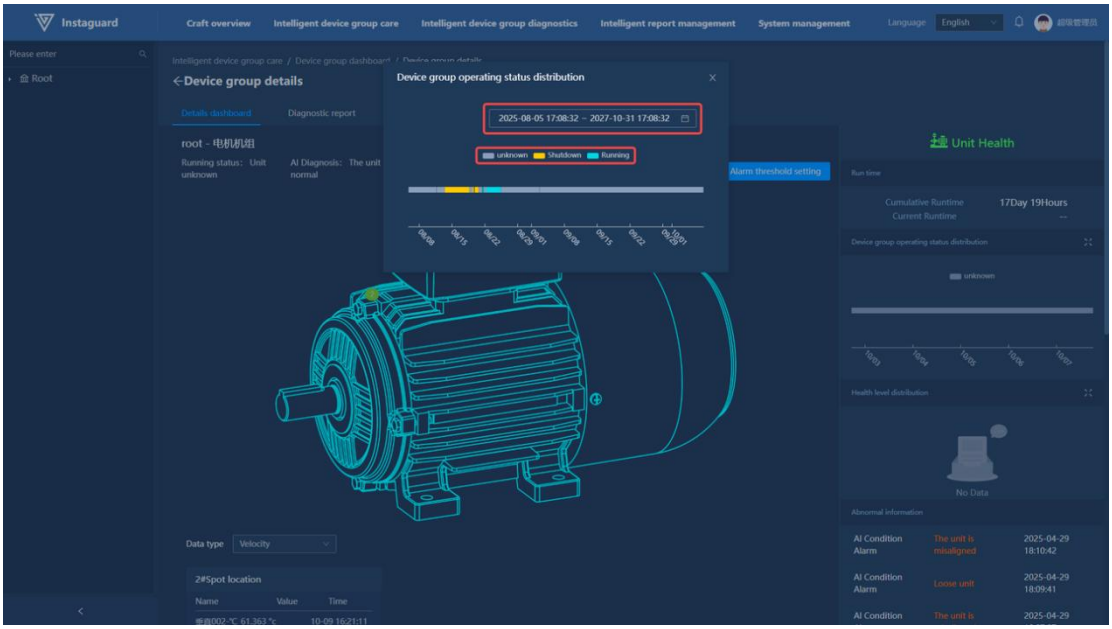


Viewing Operation History Status

After entering the unit kanban, click "Unit Operation Status Distribution" to access the history page.

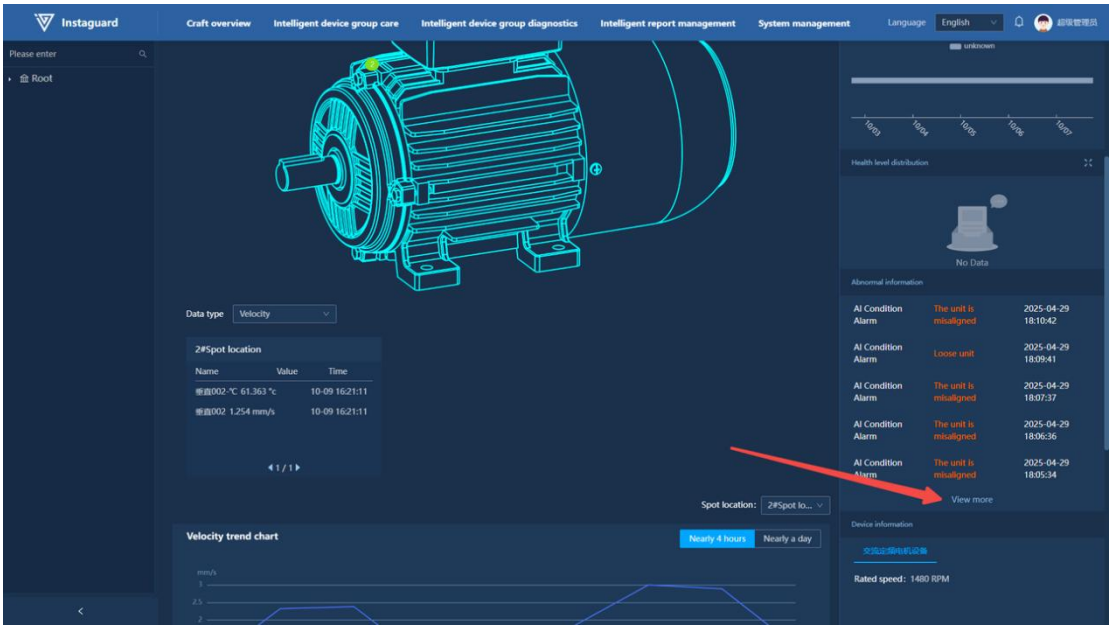


- The start time and end time on the horizontal axis are displayed according to the selected date range,to display the operation status distribution for that period, or click the legend to filter displayed information.



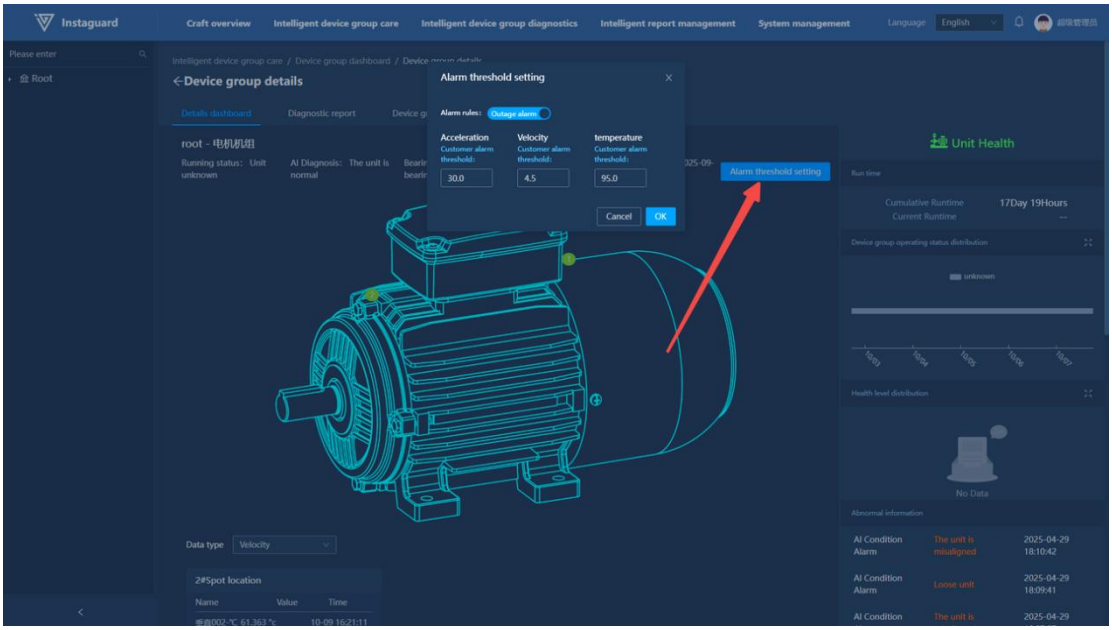
Recent Abnormality Information

In the lower-right "Abnormality Information" section, view the latest 5 abnormalities (type, status, time). Click "View More" to jump to the Abnormality Management function page.



Alarm Threshold Setting

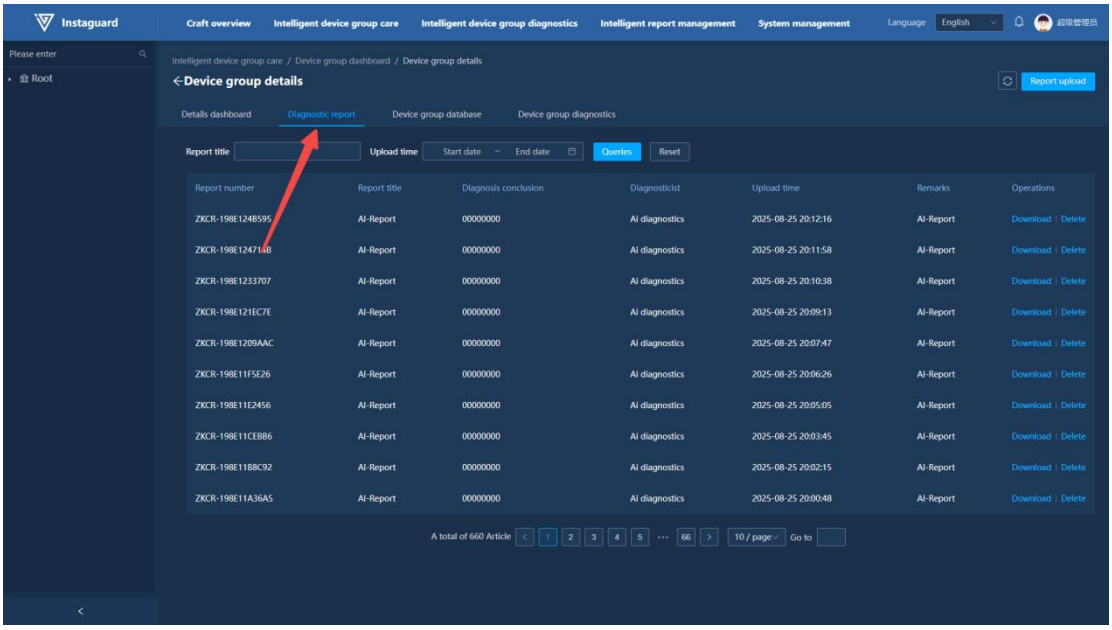
Click "Alarm Threshold Setting" to set thresholds in the pop-up window. The system will alarm when parameters exceed these thresholds. Click "OK" to save or "Cancel" to discard changes.



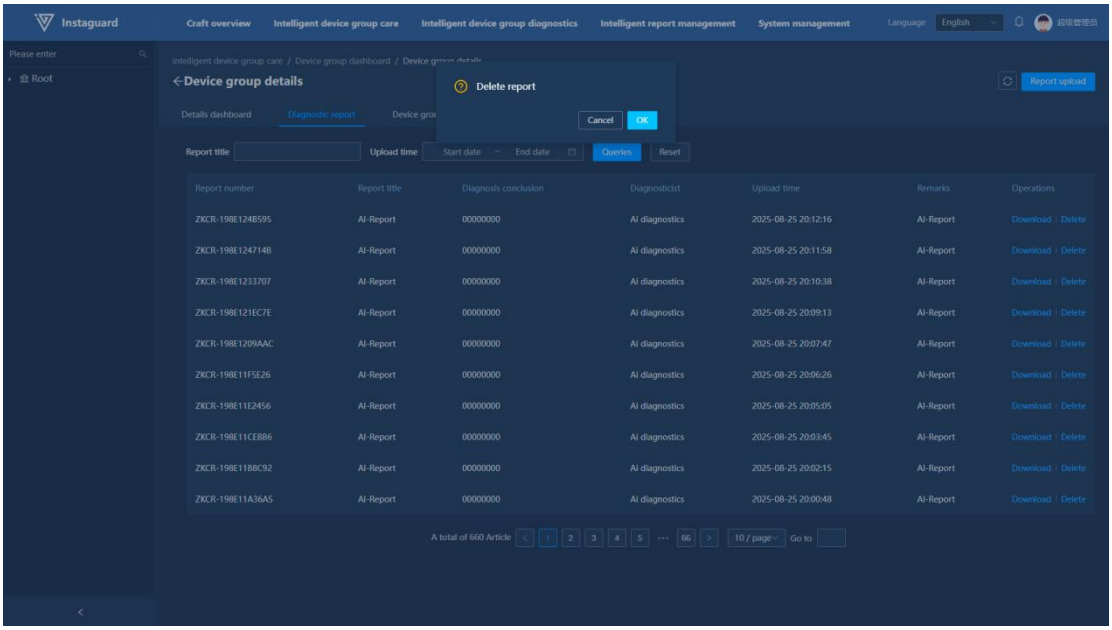
Diagnosis Reports

Viewing Diagnosis Reports

After entering unit details, click "Diagnosis Report" to jump to the report page, where manually uploaded reports and quick diagnosis conclusions are displayed.

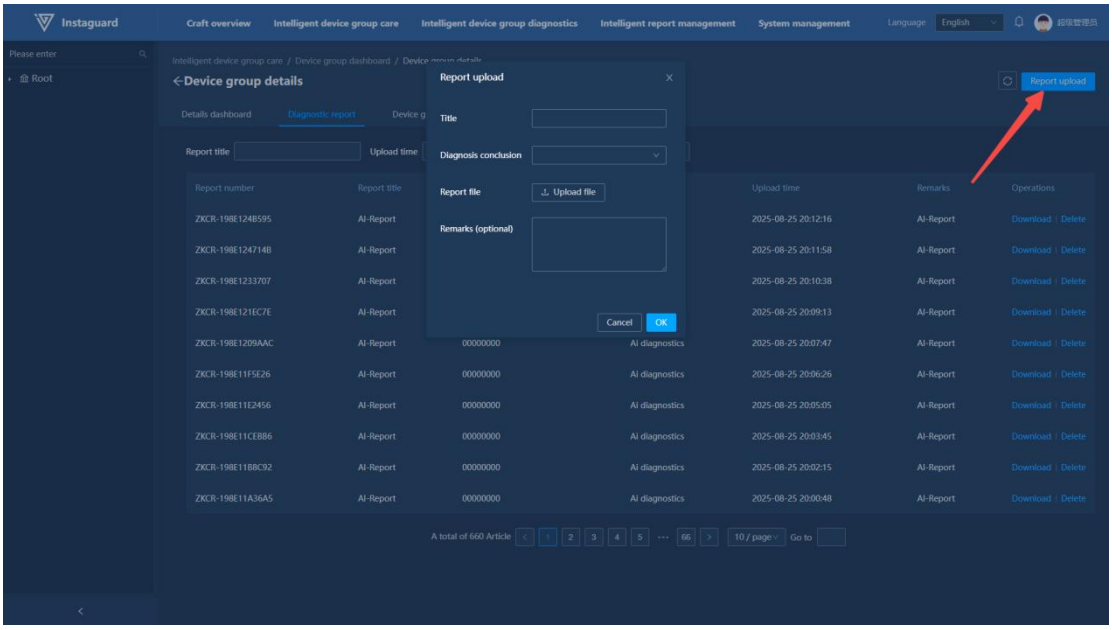


- Click "Download" for a specified entry to save the report locally; click "Delete" to remove it.



Uploading Diagnosis Reports

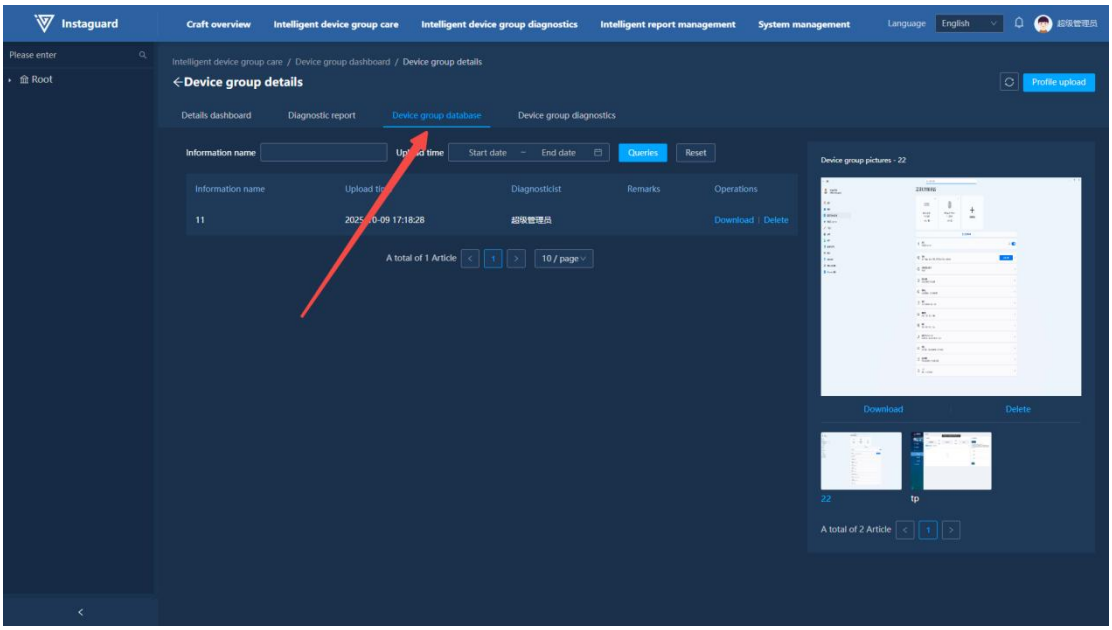
On the diagnosis report page, click "Report Upload" to open the upload interface.



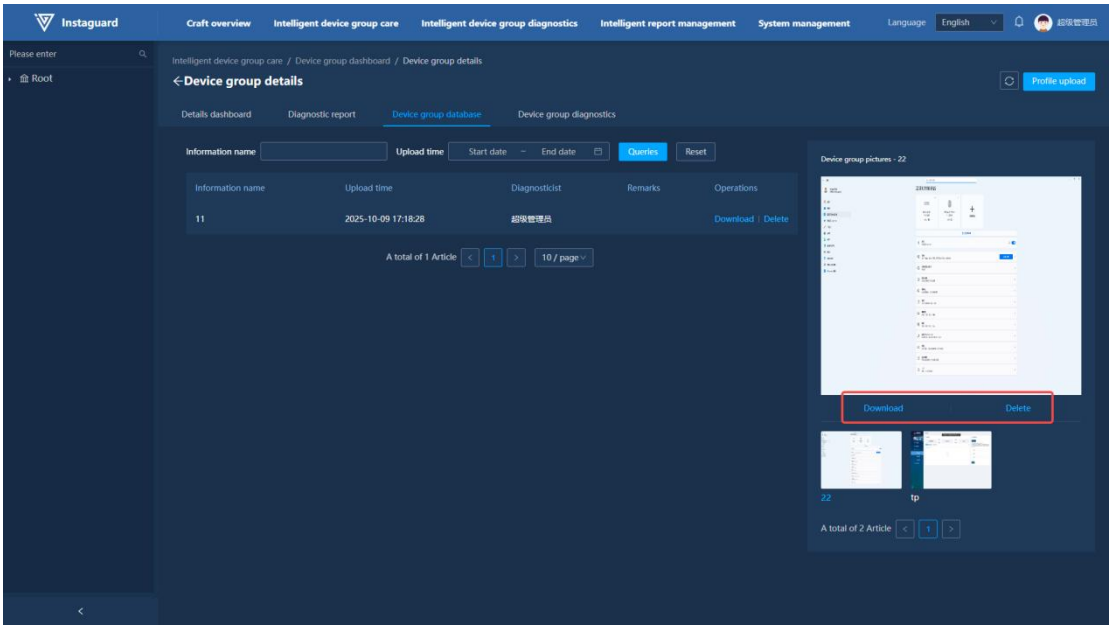
- Click "OK" to complete upload. Reports can be in any format, ≤10MB, and only one file can be uploaded at a time.

Unit Database

After entering unit details, click "Unit Database" to access files and images related to the unit uploaded by users.

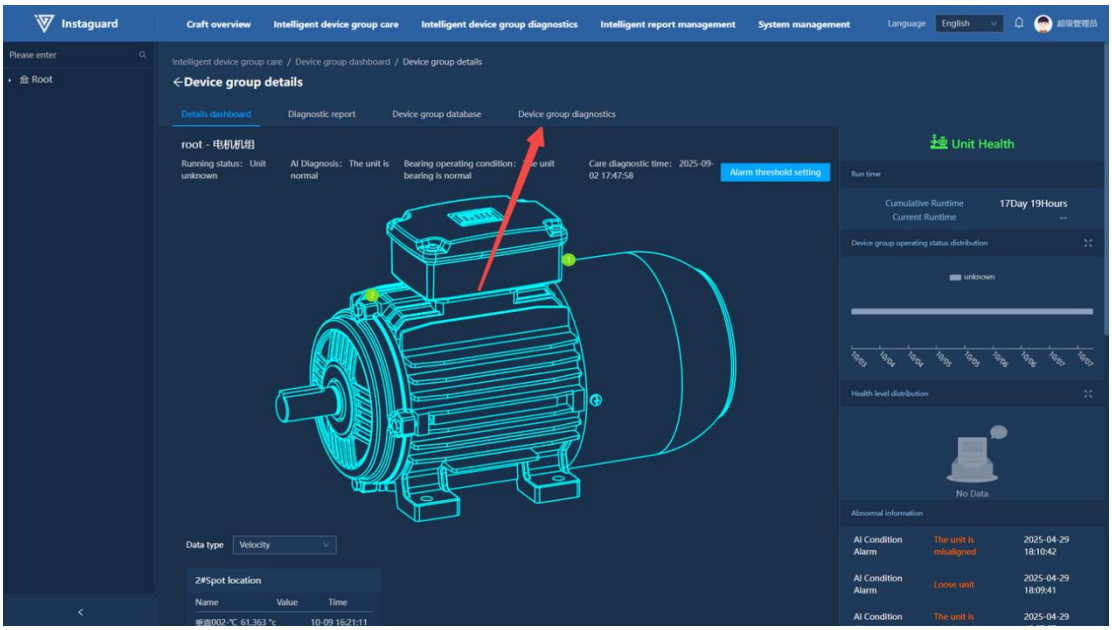


- For images, quick preview is available on the right side of the database. Click an image to view it in full and "Download" to save locally.



Unit Diagnosis

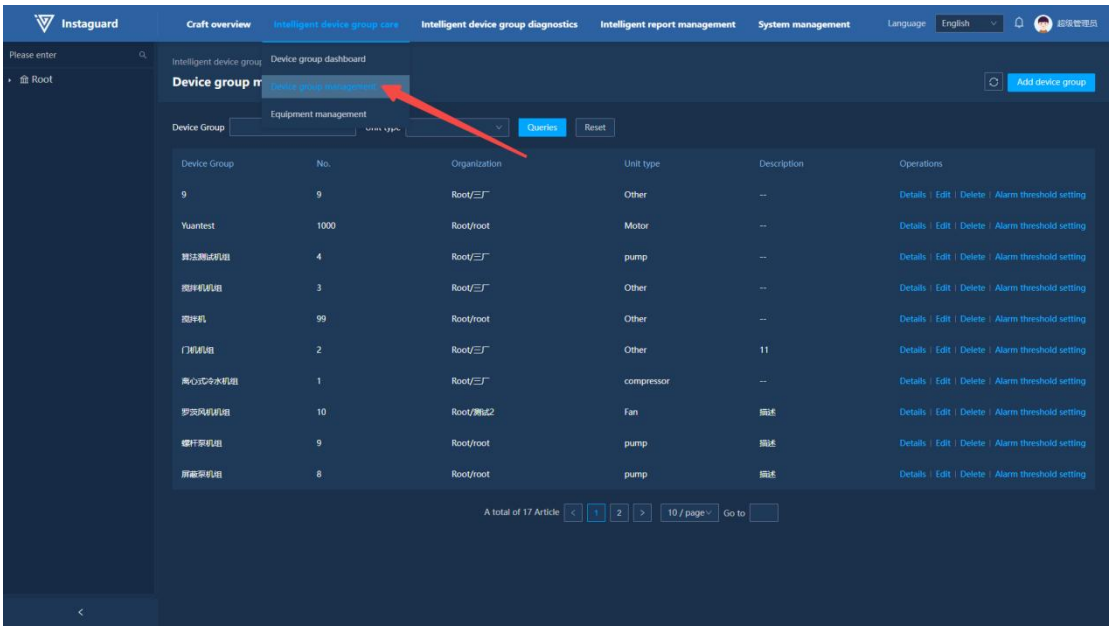
Click "Unit Diagnosis" to jump to 「Intelligent Unit Diagnosis」 → 「Diagnosis View」.



2.4.3Unit Management

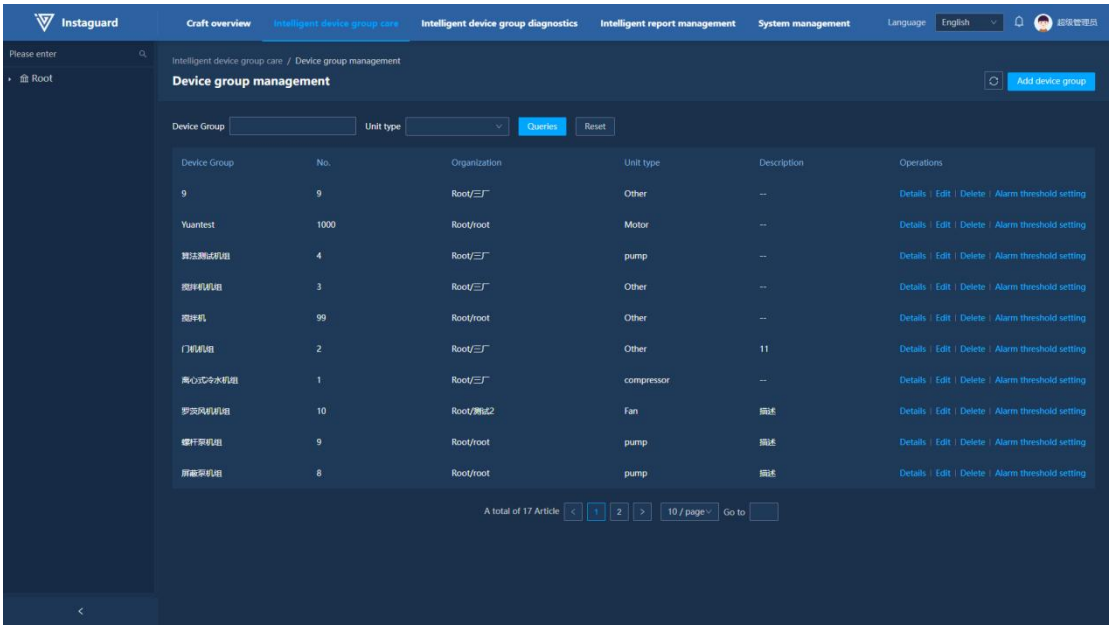
Navigation Path

「Intelligent Unit Care」 → 「Unit Management」



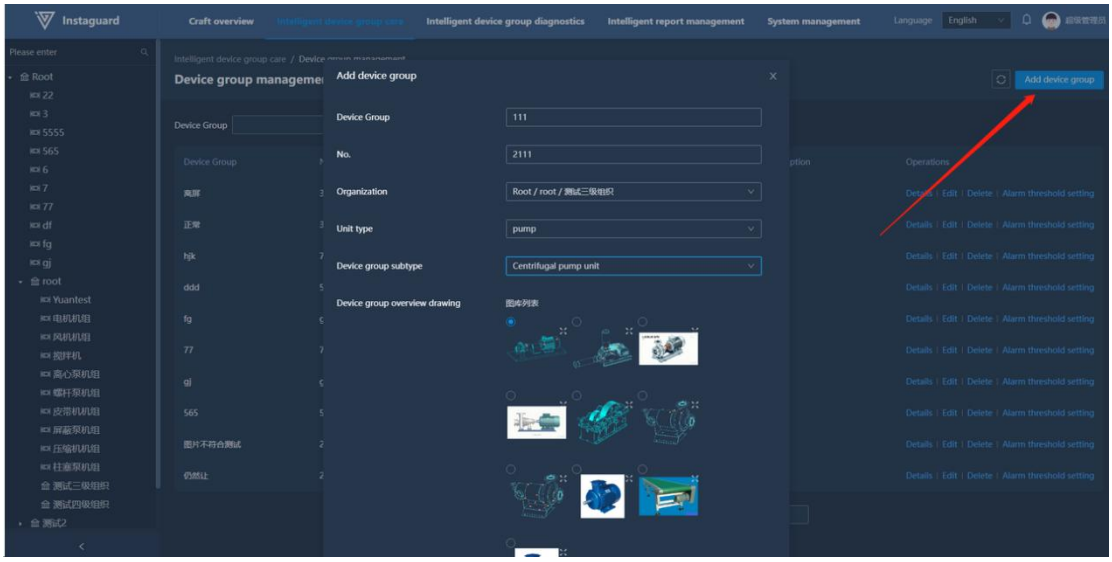
Function Overview

Unit management enables ledger management (account management) of all units within the governing organization and viewing parameters/information of subordinate devices. Unit tag numbers must be unique within the same organization.



Adding Units

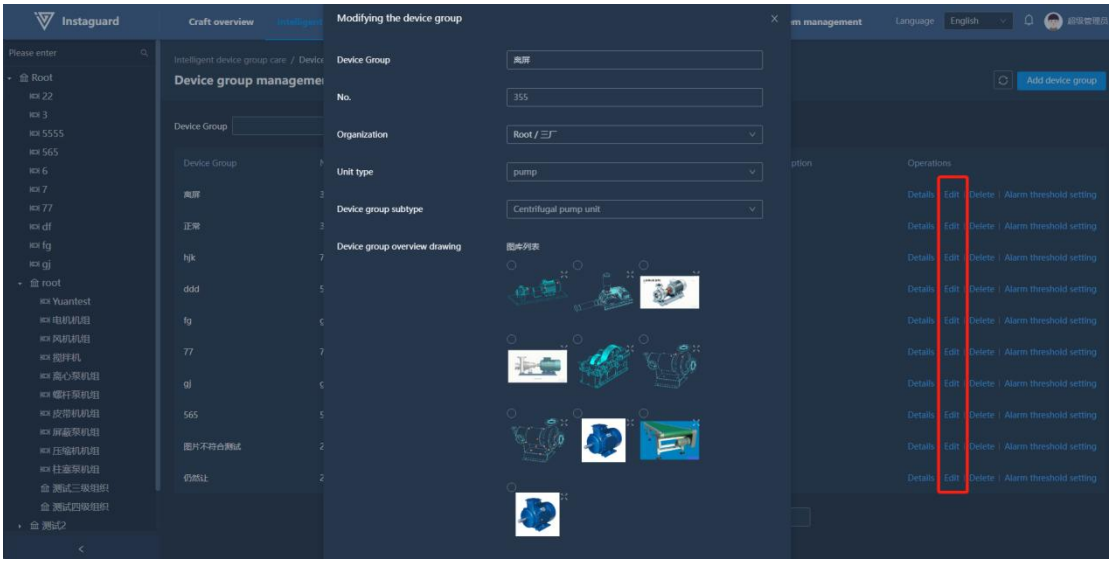
In Unit Management, click "Add Unit" in the upper-right corner to open the addition page.



- Unit tag numbers must be unique within the organization. Users can select the list of all thumbnails under a unit subtype from the unit overview diagram library list, and also can upload an overview image, which will display in the unit kanban, details, and intelligent dashboard. If not uploaded, the system assigns an image based on the unit type.

Editing Units

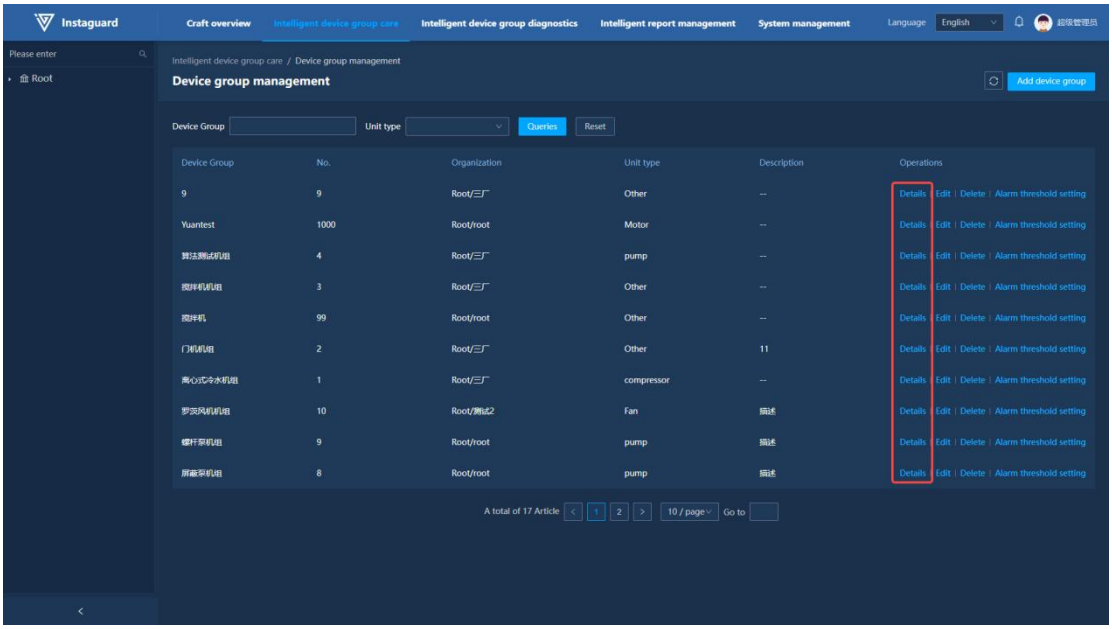
In Unit Management, click "Edit" for a specified unit to open the editing page.

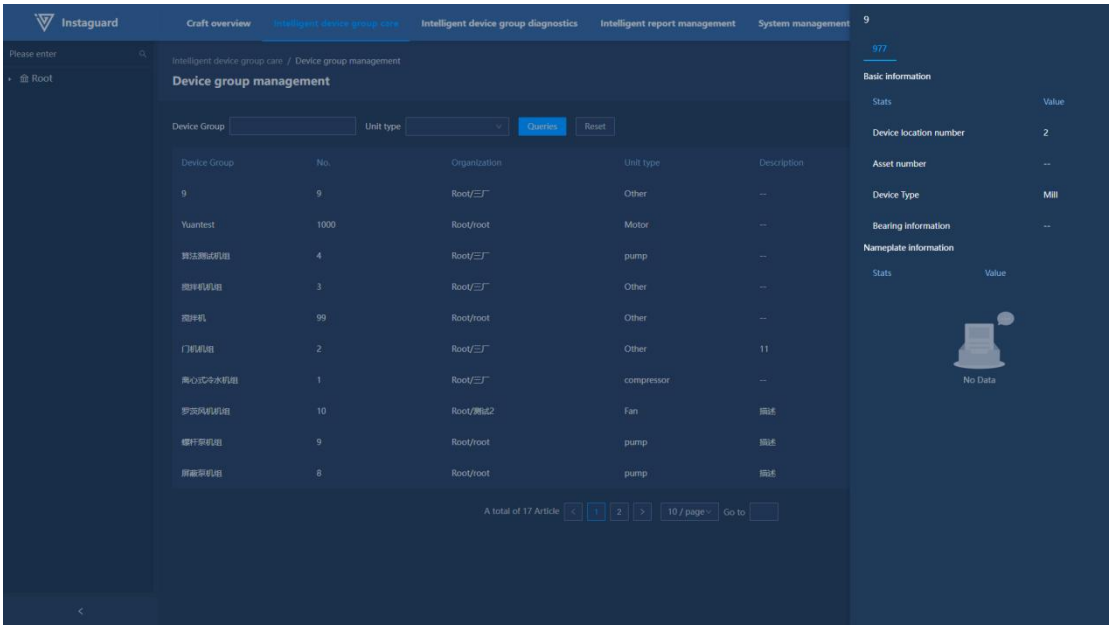


- Unit tag numbers, organization, and structure cannot be edited. Users unit overview diagram is displayed in the custom area, and can be selected from the library list only after deleting the custom image and also can upload/change the overview image as with adding units.

Unit Details

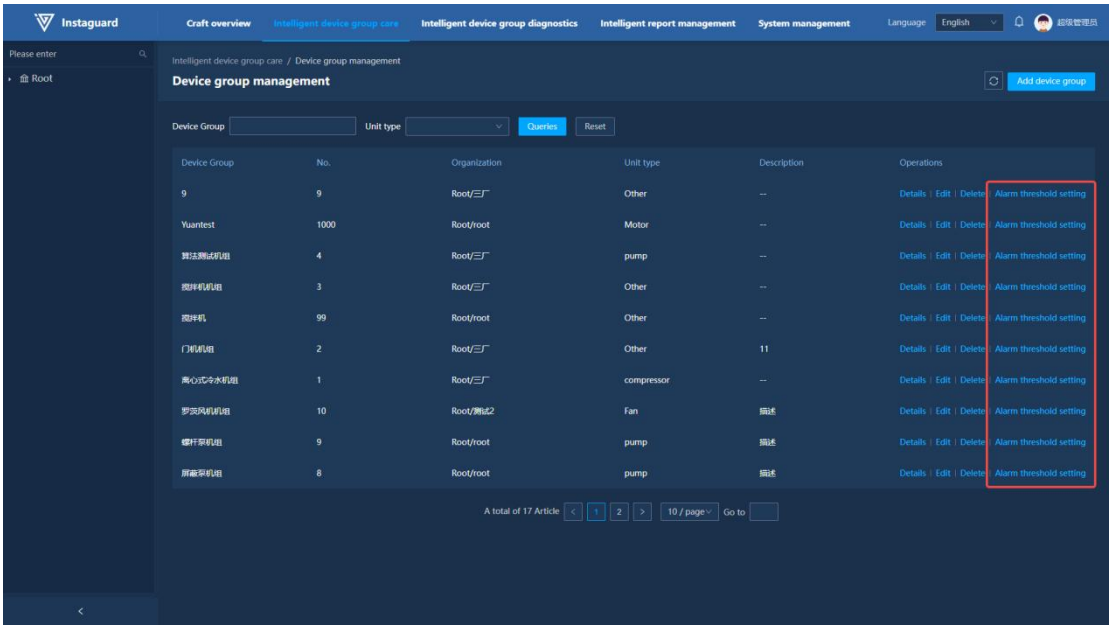
In Unit Management, click "Details" for a specified unit to display details of all subordinate devices on the right.





Alarm Threshold Setting

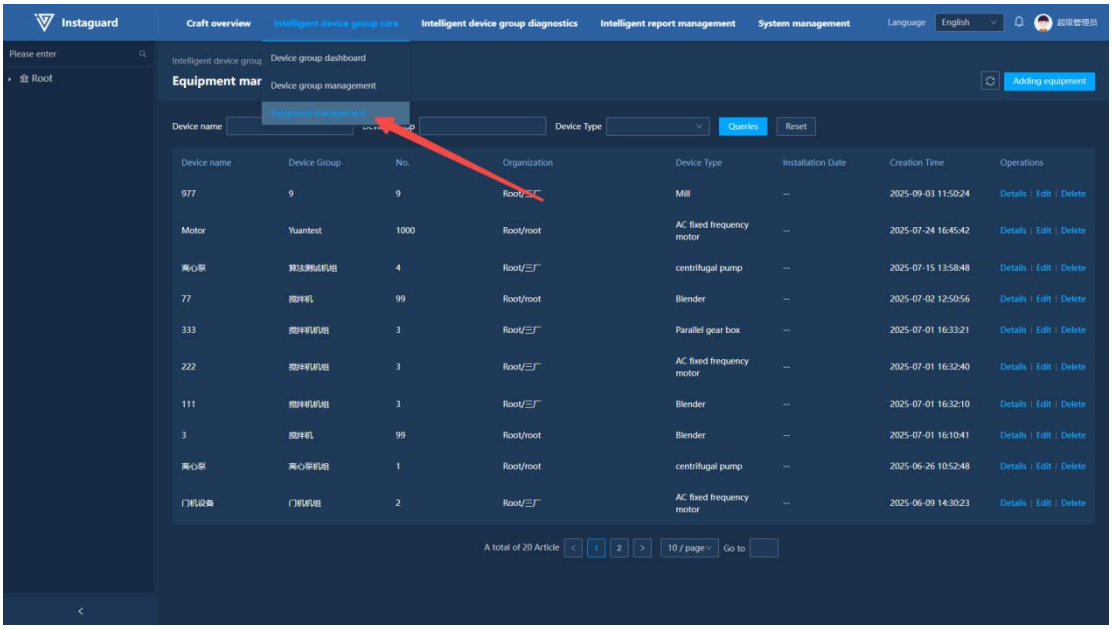
Click "Alarm Threshold Setting" to set thresholds in the pop-up window (same as unit details).



2.4.4Device Management

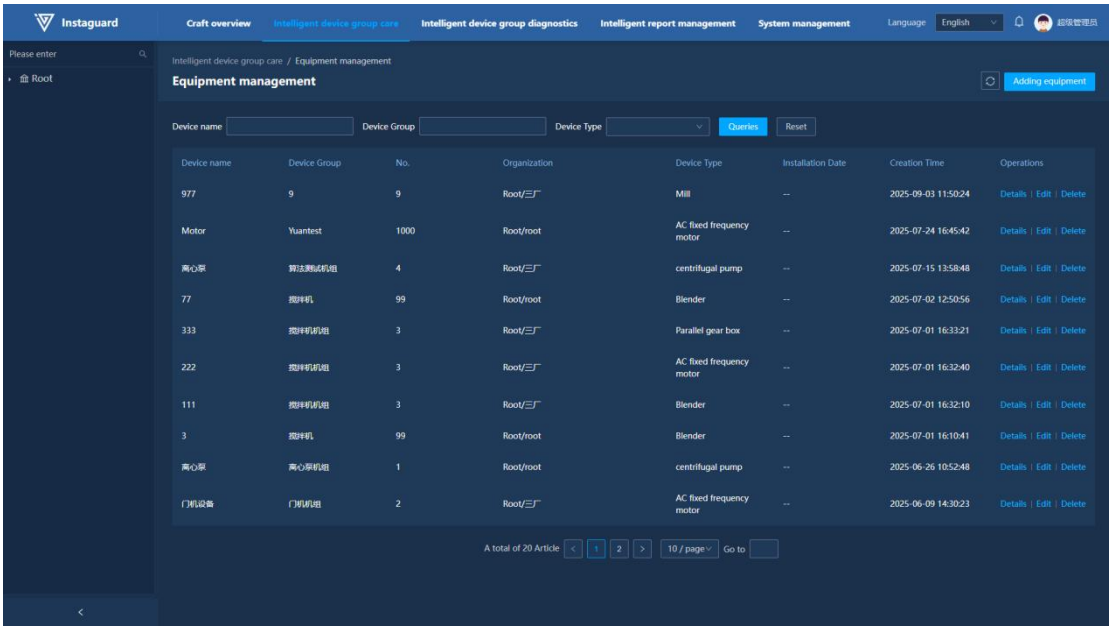
Navigation Path

「Intelligent Unit Care」 → 「Device Management」



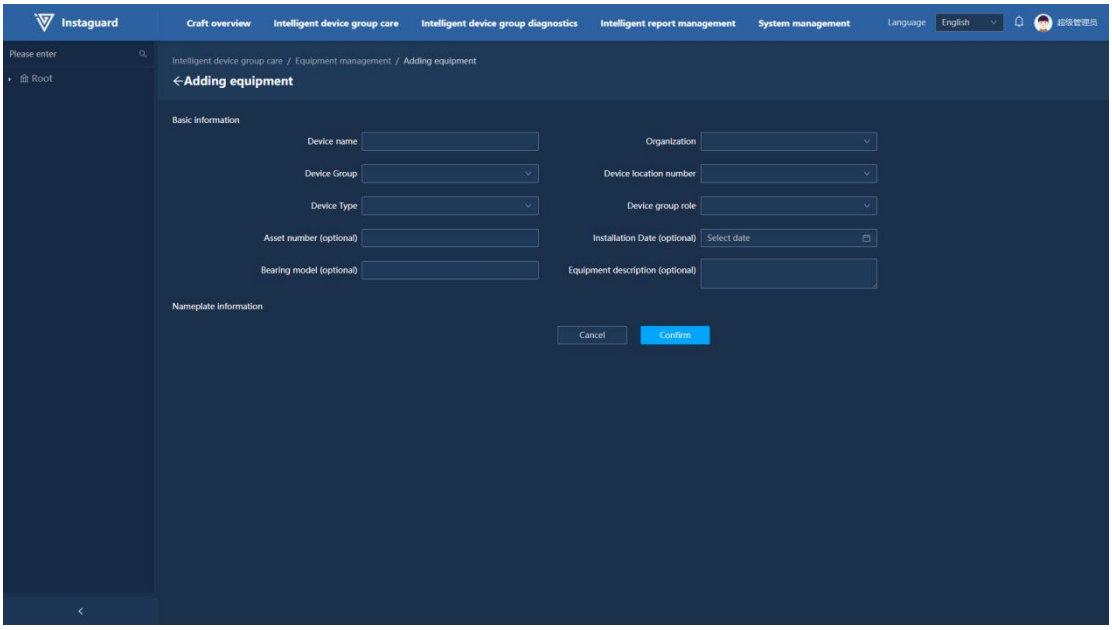
Function Overview

Device management enables ledger management (account management) of all devices within the governing organization and viewing parameter information of specified devices. Position numbers must be unique within the same unit.

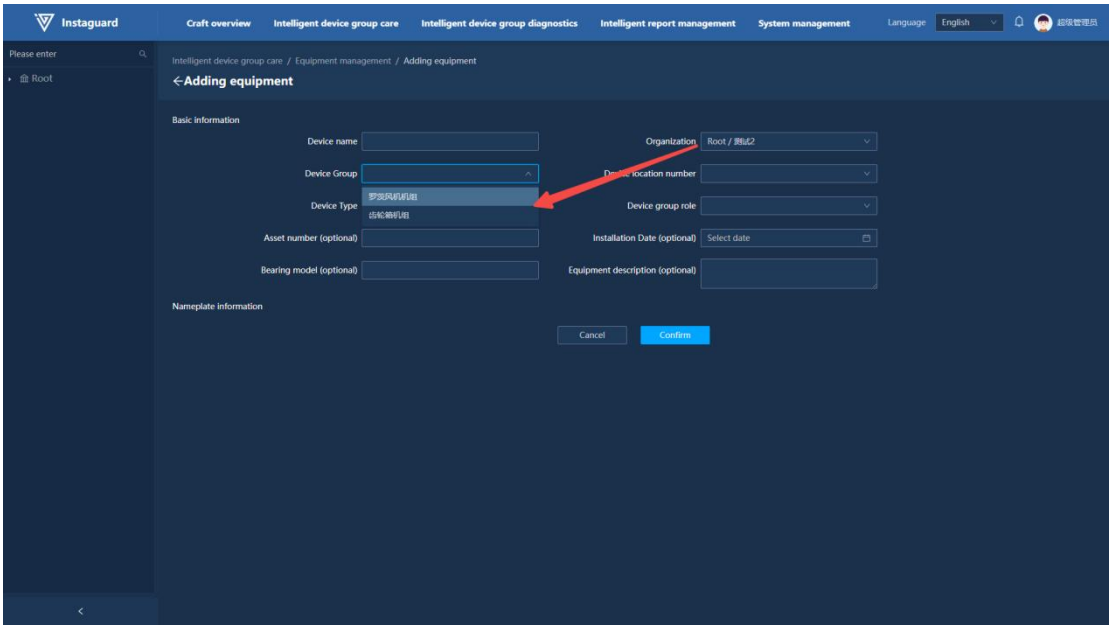


Adding Devices

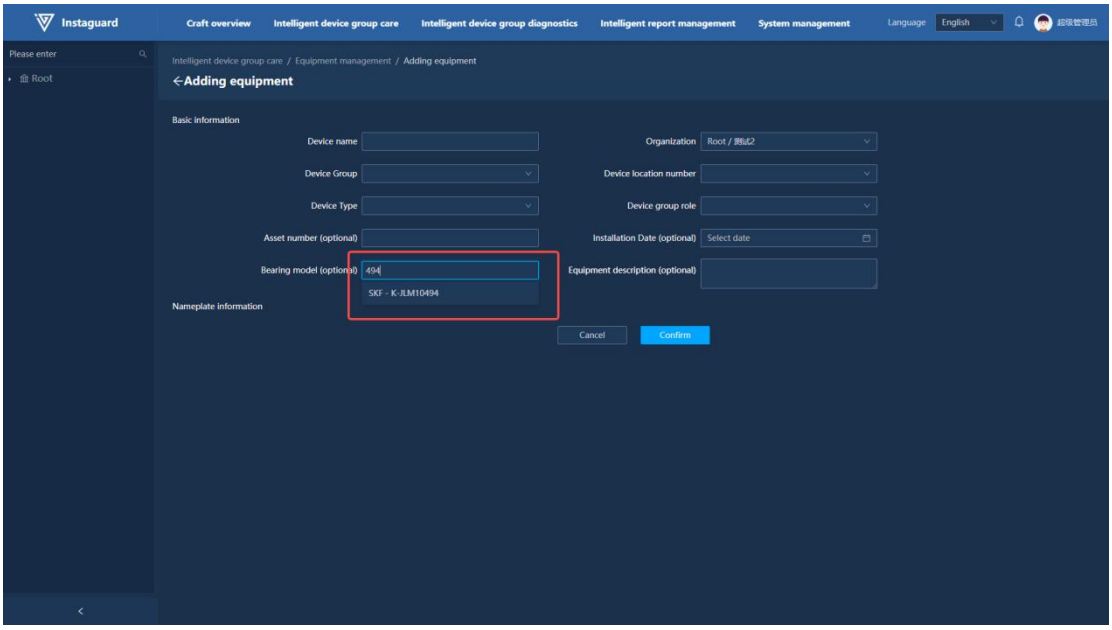
In Device Management, click "Add Device" in the upper-right corner to open the addition page.



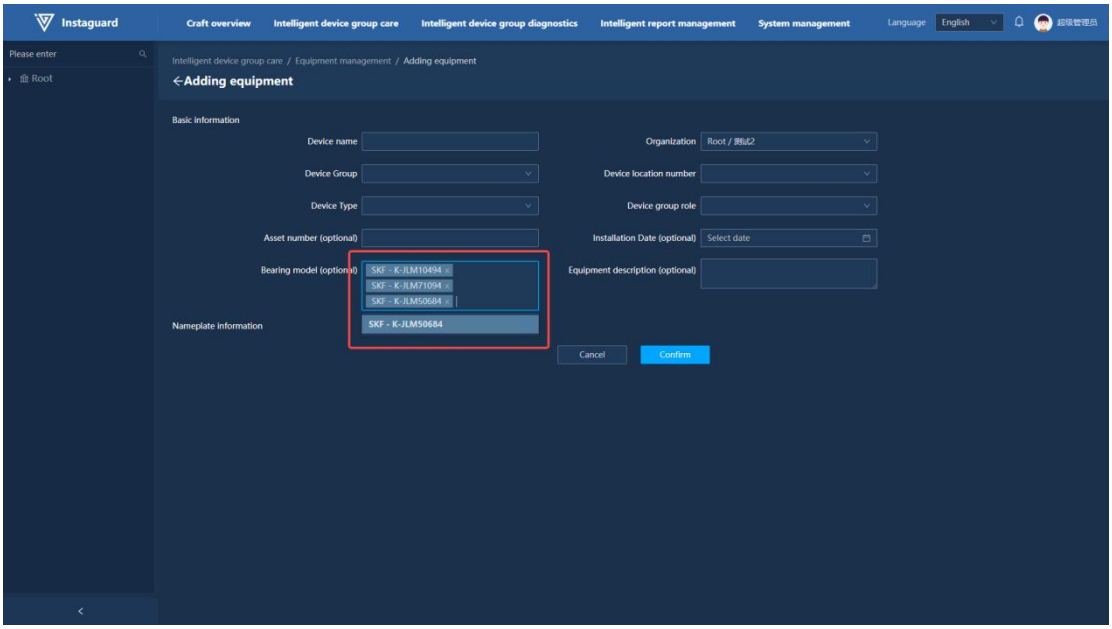
- Selecting an organization auto-populates corresponding units. Selecting a device type displays required nameplate parameters below. Each unit position number can only correspond to one device.



- Enter at least 3 characters of a bearing model to auto-display supported models (containing the keyword).

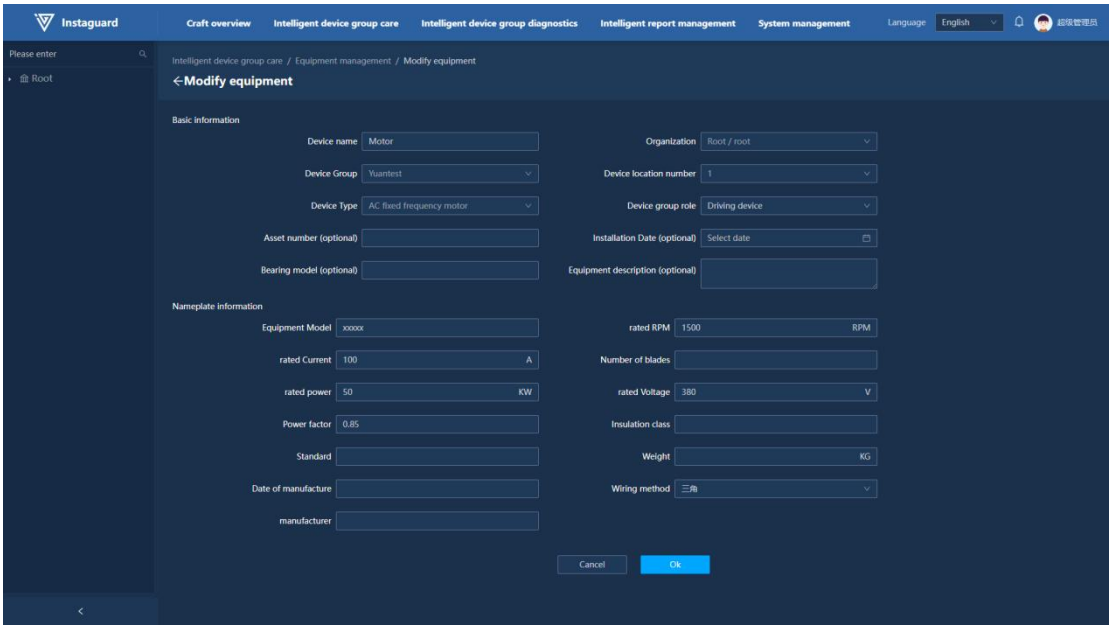


- Multiple bearing models can be selected.



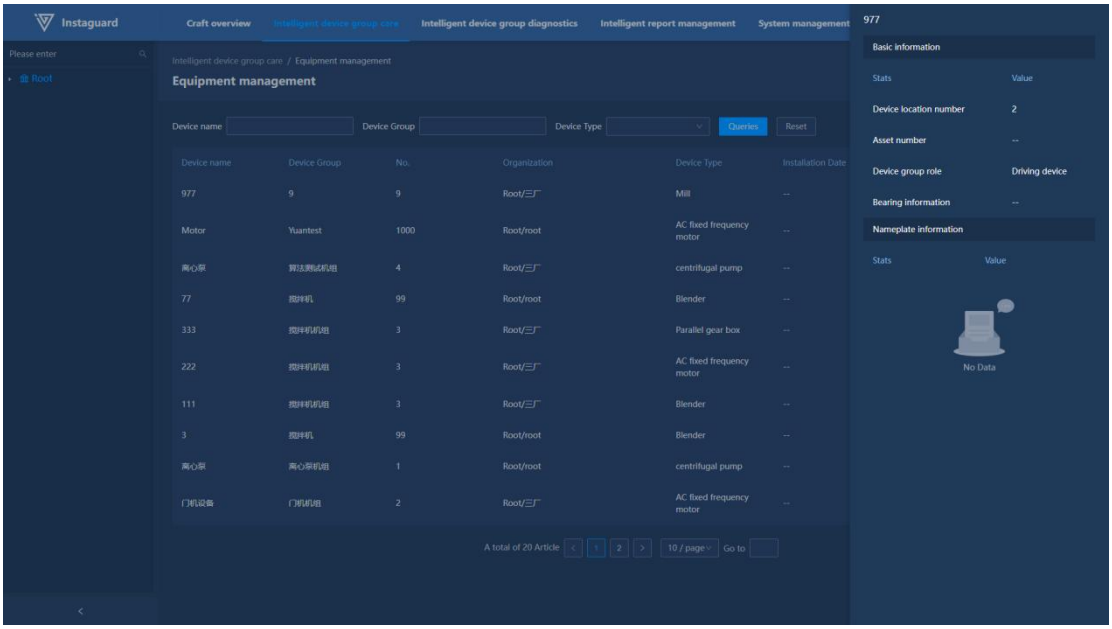
Editing Devices

In Device Management, click "Edit" for a specified device to open the editing page. The device's organization, unit name, position number, and type cannot be modified.



Device Details

In Unit Management, click "Details" for a specified device to display its detailed information on the right.

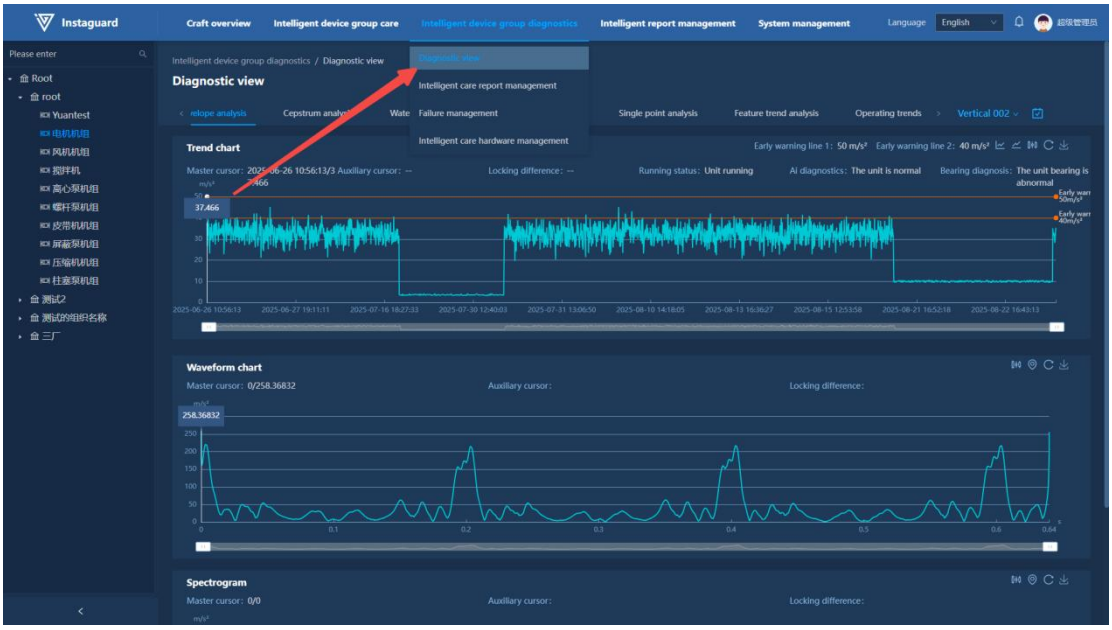


2.5Intelligent Unit Diagnosis

2.5.1Diagnostic View

Navigation Path

「Intelligent Unit Diagnosis」 → 「Diagnostic View」



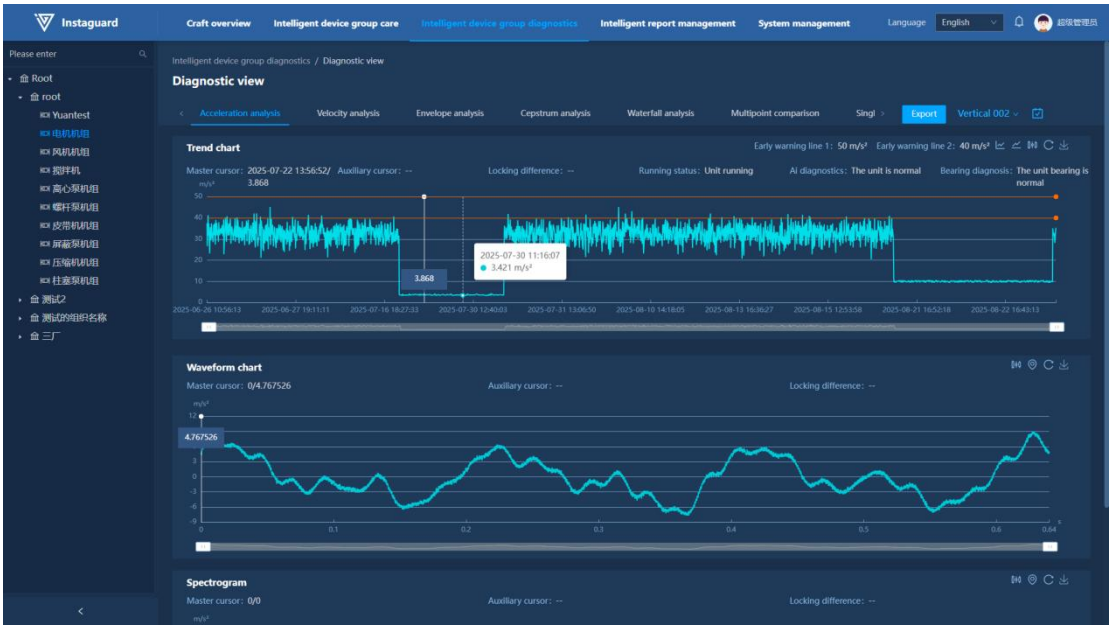
Function Overview

The intelligent diagnosis view enables users to perform data analysis on cared units. Diagnostic charts include acceleration view, velocity view, envelope view, cepstrum view, waterfall view, single-measuring-point comparison, multi-measuring-point comparison, characteristic trend analysis, and operation trend view. Views contain trend charts, waveform charts, and spectrum charts, supporting functions such as quick master cursor setting, multi-cursor viewing (2/3/5 cursors), main-auxiliary cursor difference viewing, and warning line display. Trend charts support showing/hiding trend points. Waveform and spectrum charts support multi-point annotation for easy data comparison. All charts support specified area zooming and quick positioning.

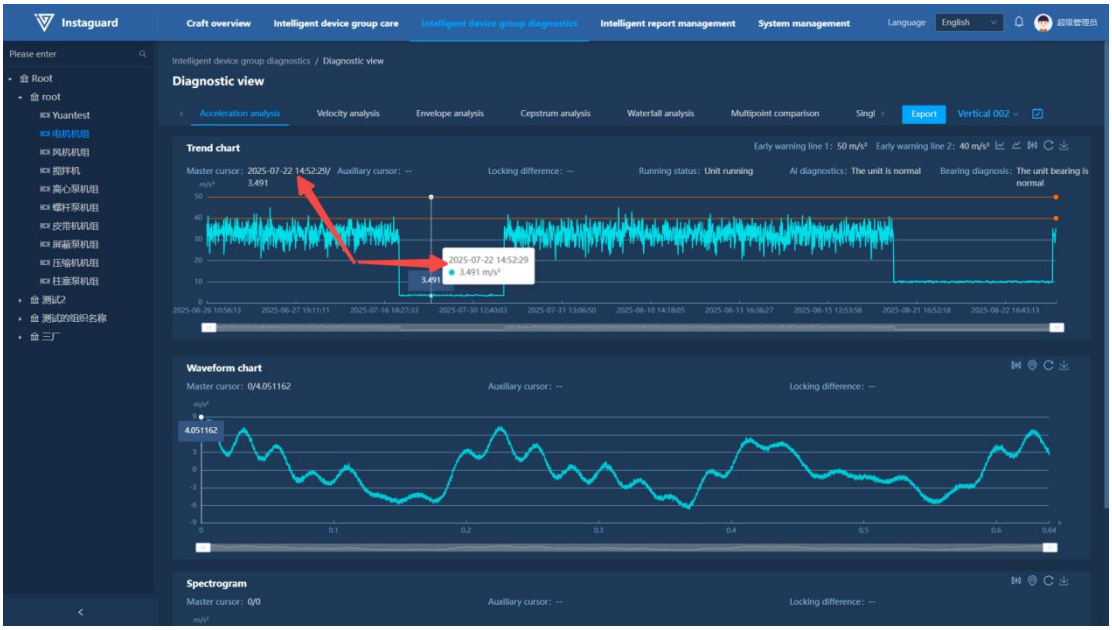
Waveform and Spectrum Display

By default, the first measuring point data of the first unit in the user's governing organization for the past 7 days are displayed. Left-click a data point in the trend chart

to show corresponding waveform and spectrum information below.

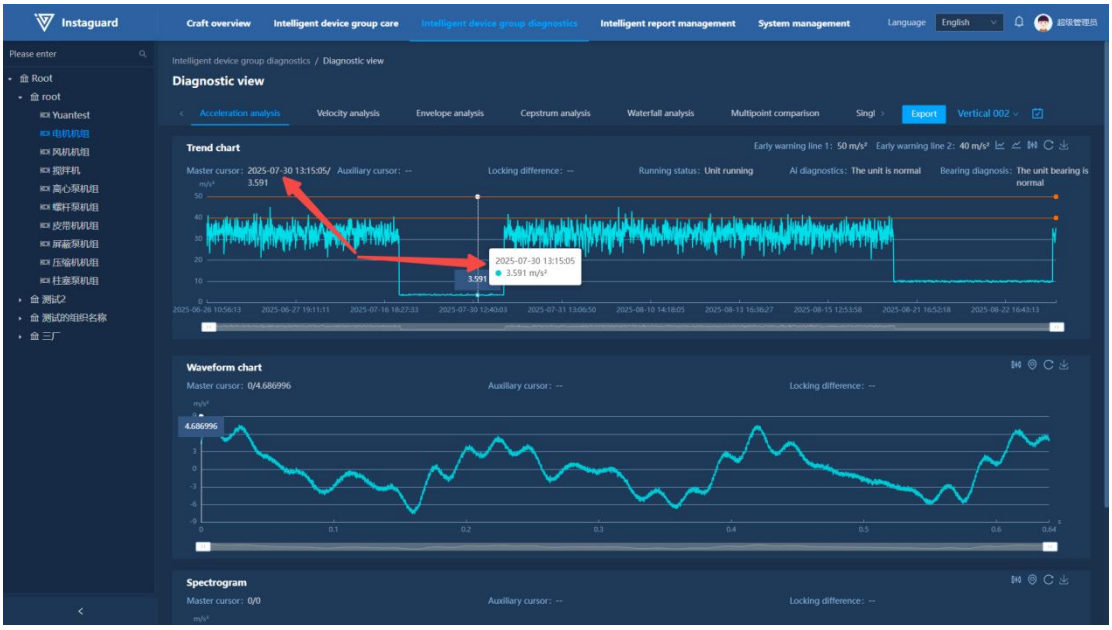


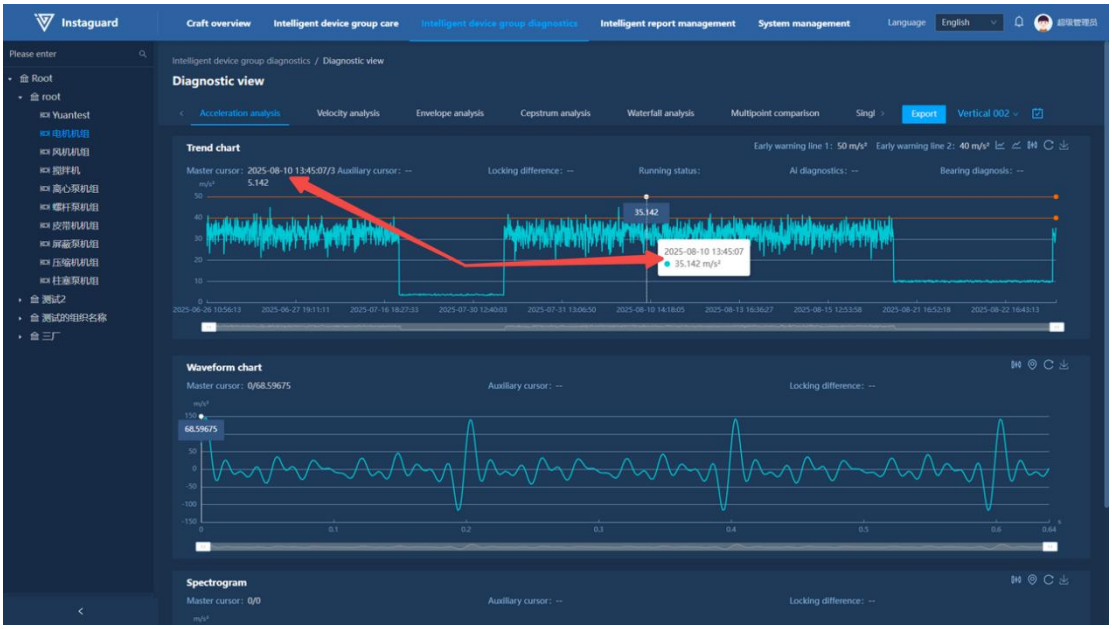
- The trend chart cursor displays information of the clicked trend point.



Master Cursor Switching

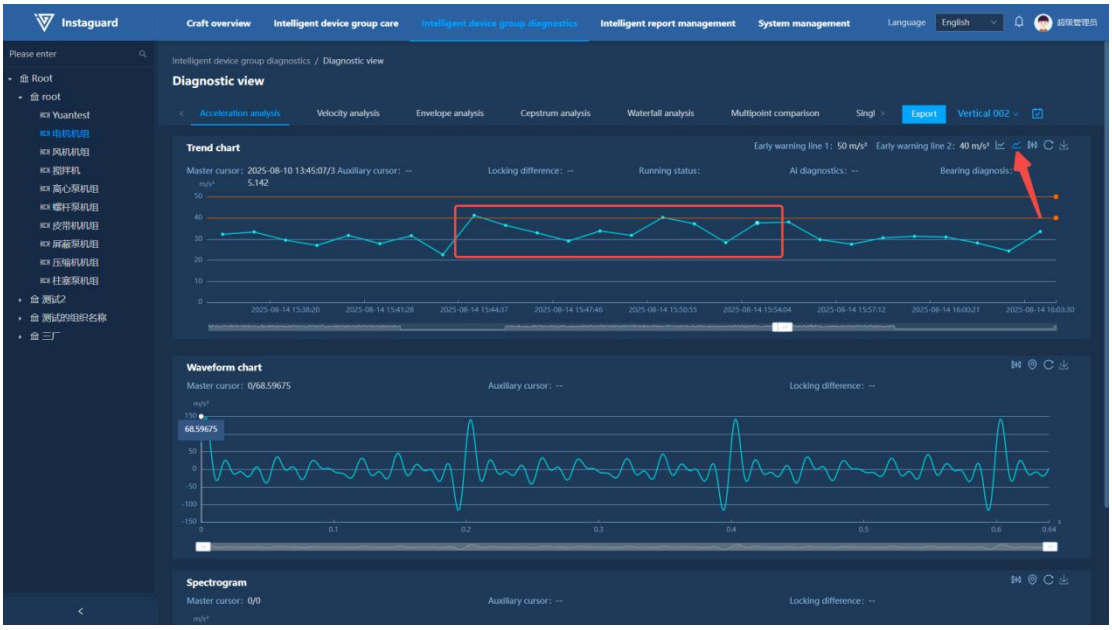
Click a data point in the chart to switch the master cursor, which will display information of the latest selected point.

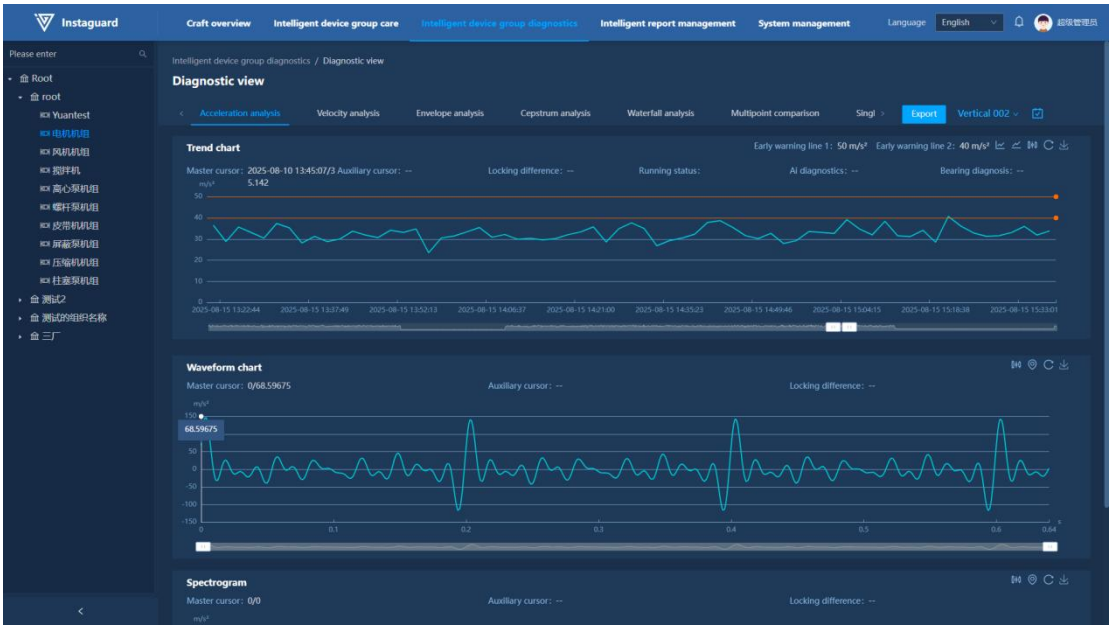




Trend Chart Point Display

Click the "Point Display" button at the upper-right of the trend chart to show/hide trend points.





Warning Line Display

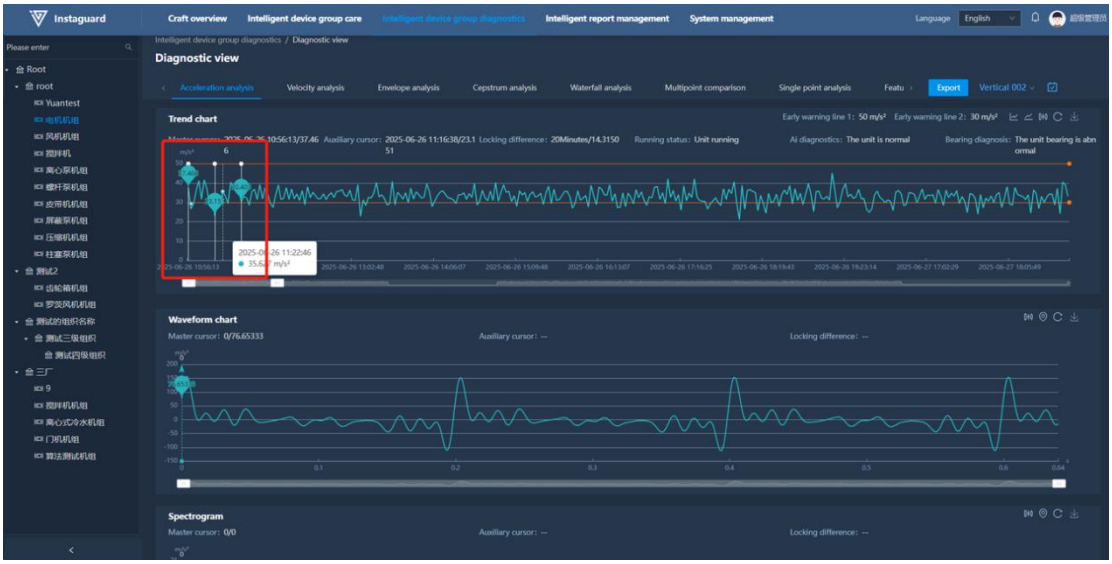
Click the "Warning Line Display" button at the upper-right of the trend chart to show/hide warning lines.

- Manually enter warning line values or use buttons to adjust their position on the trend chart.

Auxiliary Cursor Display

Click the "Auxiliary Cursor Display" button at the upper-right of the chart, then select the number of cursors.

- After selecting the cursor number, right-click a data point to add the second cursor (additional cursors are auto-placed based on the interval between the master and second cursor). The auxiliary cursor shows the second cursor's value, and the locked difference is the value between the master and second cursor.



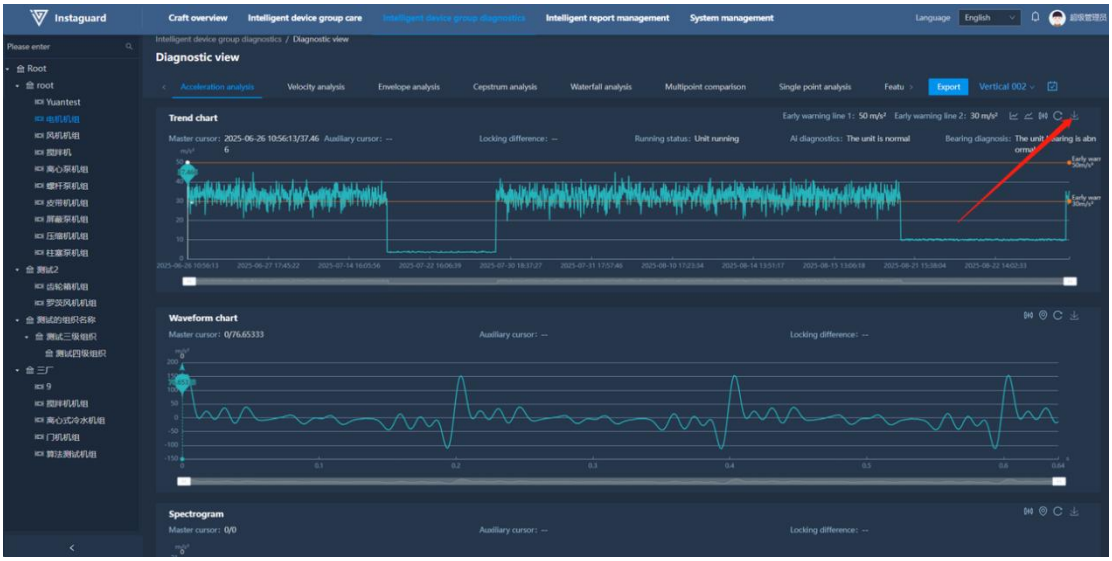
- Click "Close" in the auxiliary cursor display menu to hide all cursors and clear auxiliary cursor information.

Clear

Click the "Clear" button at the upper-right of the chart to restore the default display.

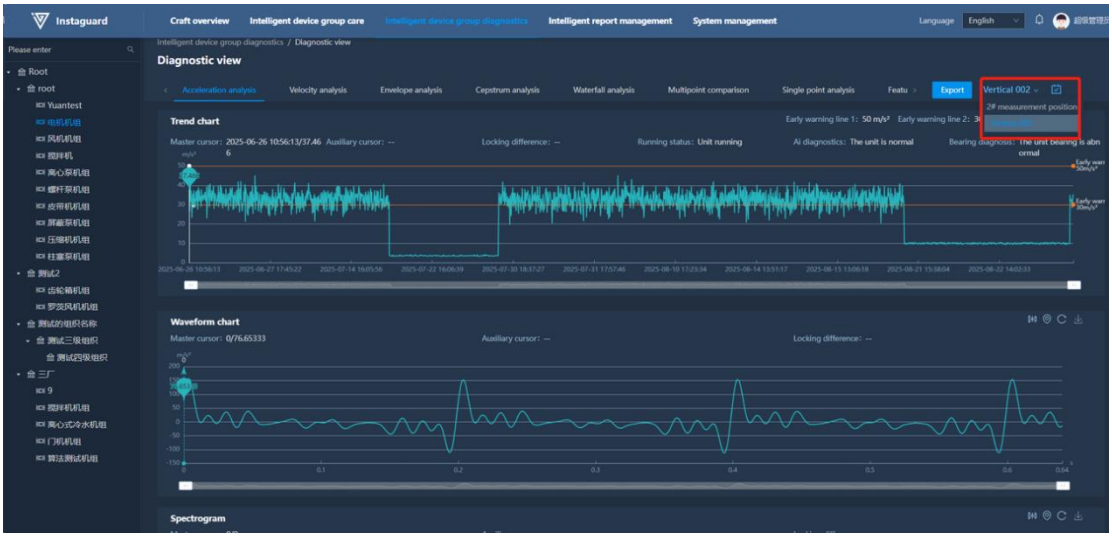
Chart Download

Click the "Download" button at the upper-right of the chart to save the chart as a PNG image locally.



Measuring Point Switching

Click the measuring point drop-down list at the right of "View Switching" to switch to a specified measuring point.



Time Selection

Click the "Time Selection" button at the right of "View Switching" to open the time selection page.

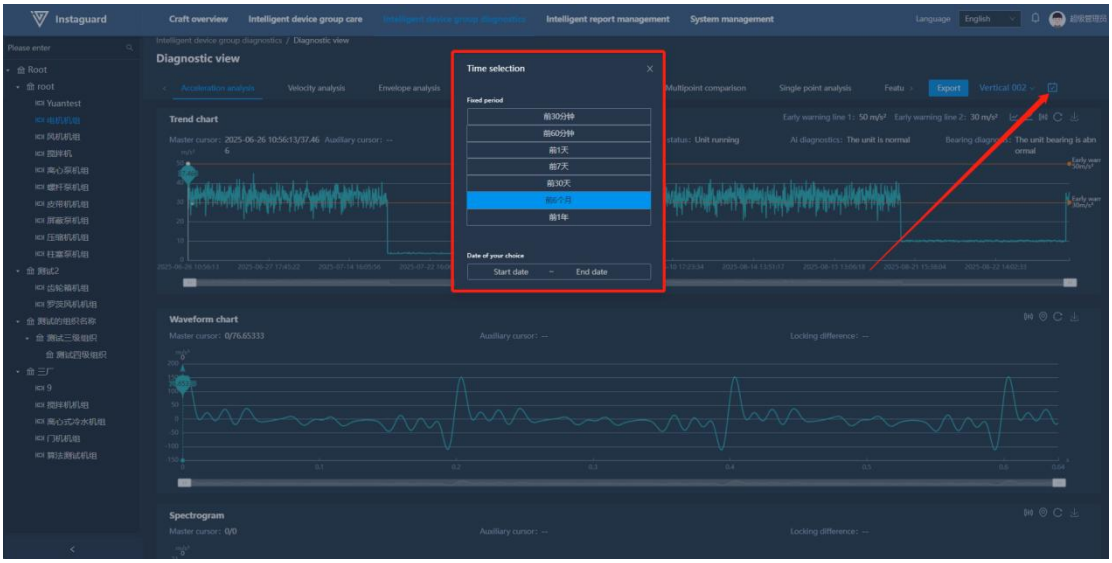
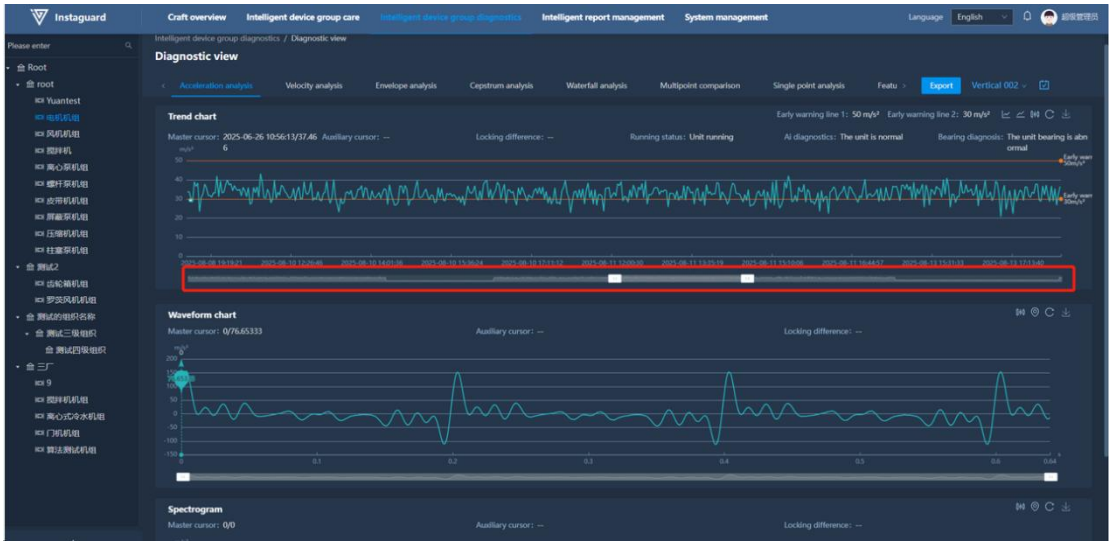


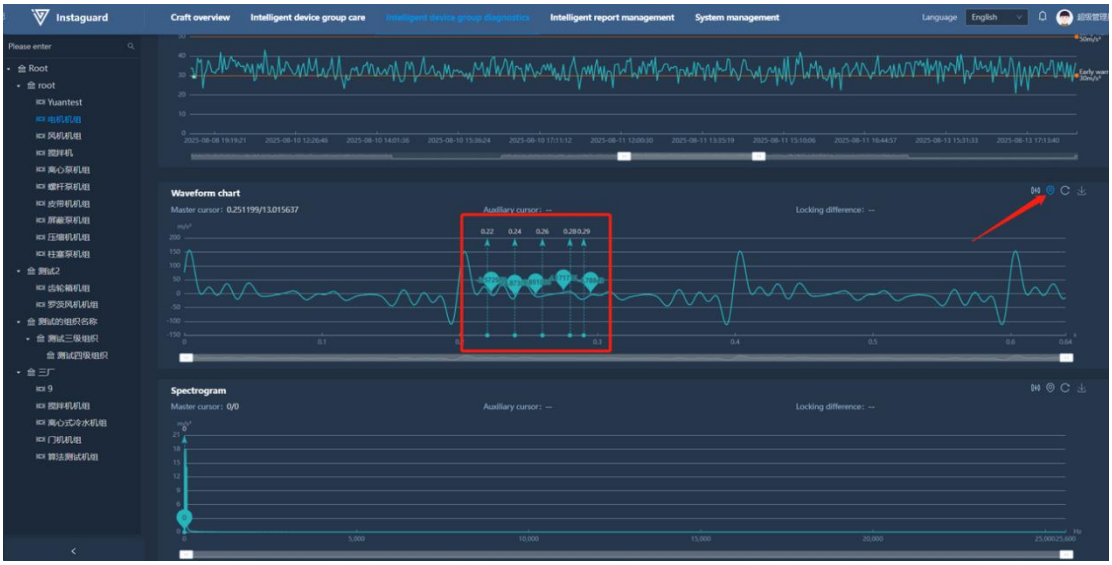
Chart Zooming

Use the mouse wheel to zoom in/out on the chart, or use the zoom bar below the chart to adjust scale and pan left/right.



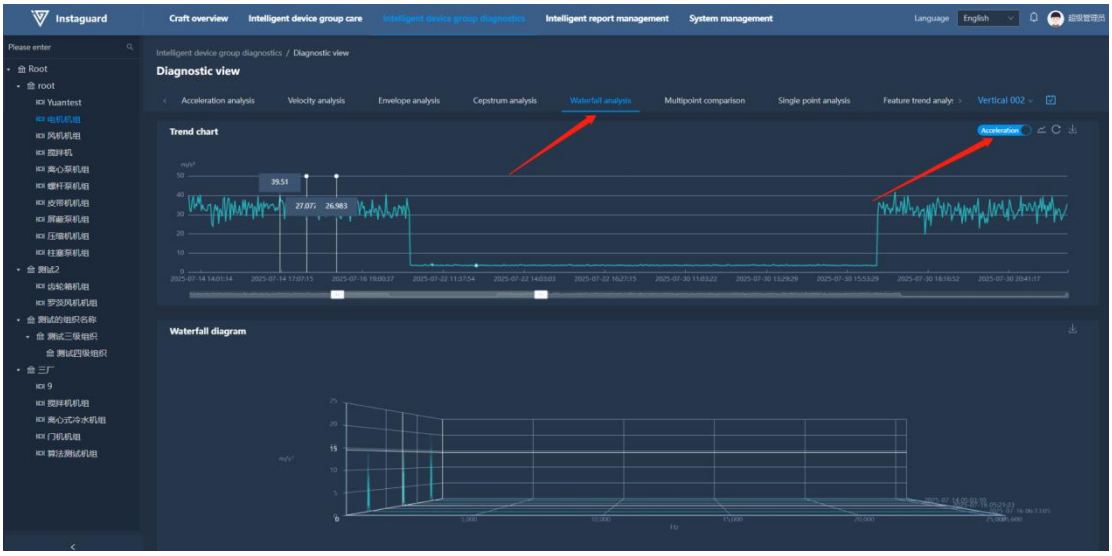
Multi-point Annotation

Enable multi-point annotation on waveform and spectrum charts by clicking the annotation button. Use Ctrl+left-click to annotate points (up to 5 points, displaying specific values).



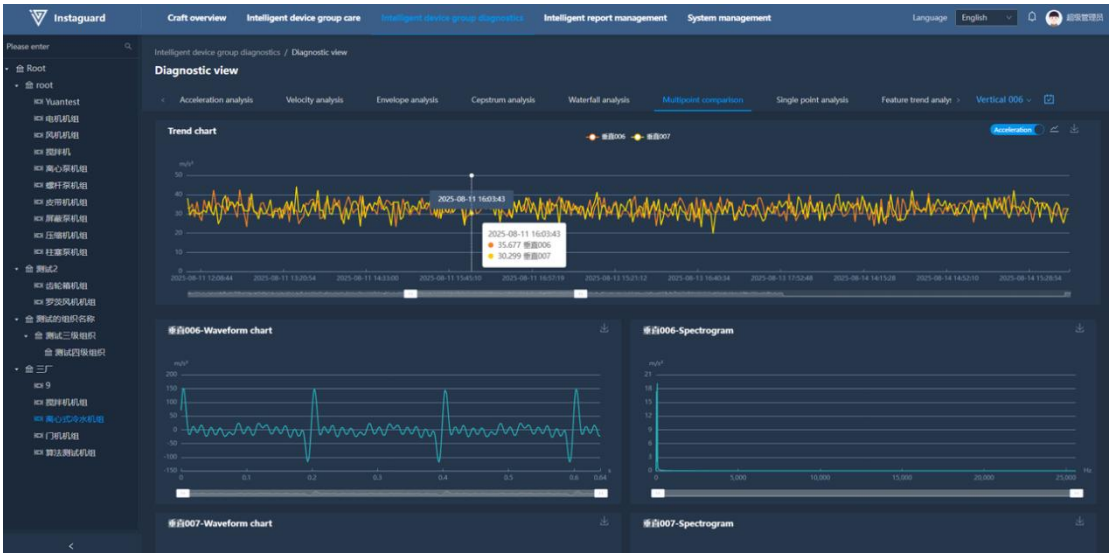
Waterfall View

Click "Waterfall Analysis" to jump to the waterfall view. Use the slider to switch data display types and Ctrl+left-click to select points (up to 5).



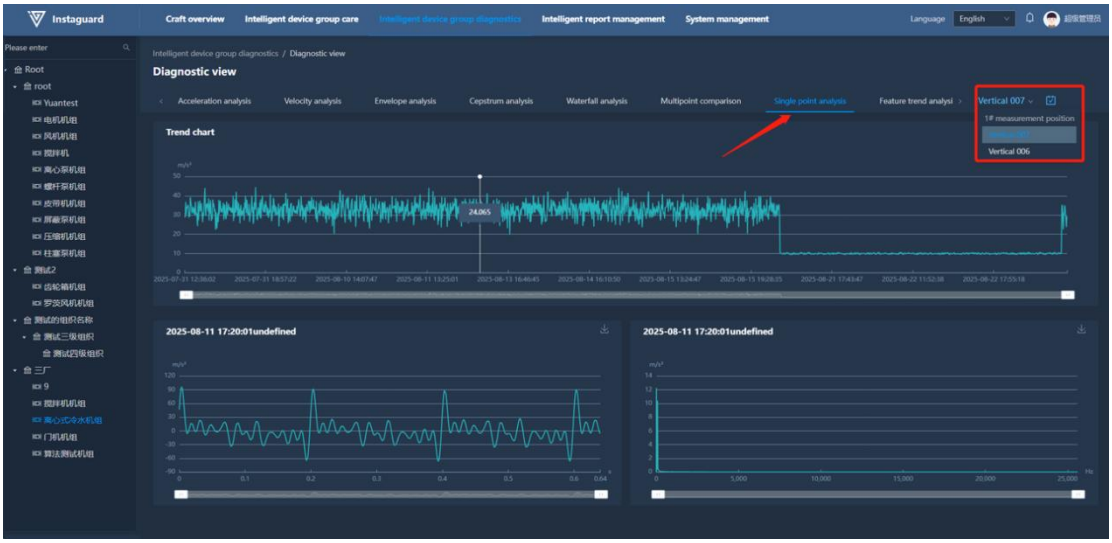
Multi-measuring-point Comparison

Click "Multi-measuring-point Comparison" to jump to the comparison view. Use the slider to switch display types, select measuring points in the drop-down list (up to 5), and view trend data. Click a trend point to show corresponding waveforms/spectra below.



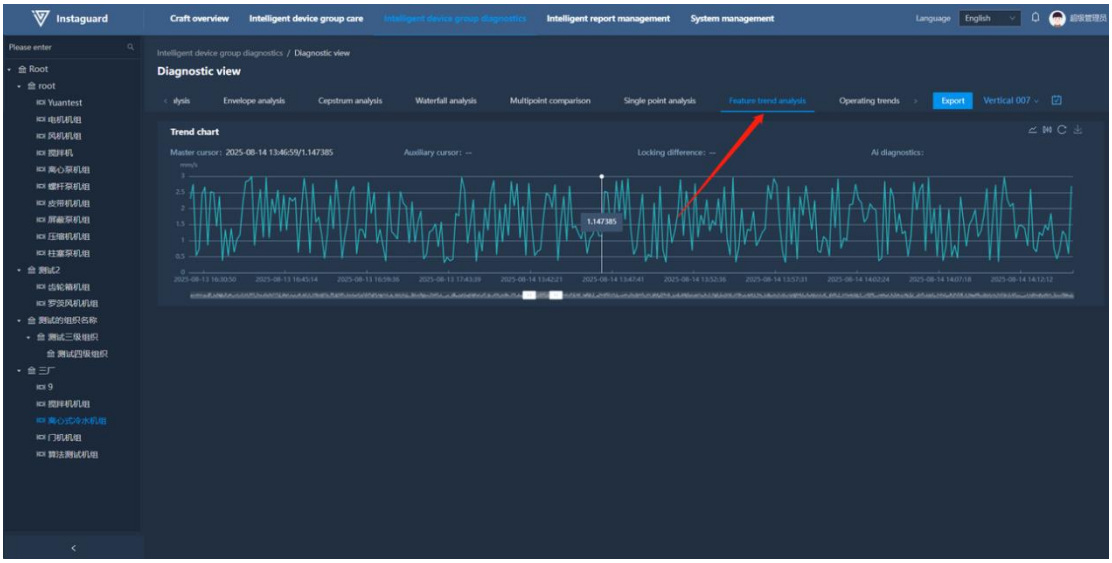
Single-measuring-point Comparison

Click "Single-measuring-point Analysis" to jump to the analysis view. Use the slider to switch display types and Ctrl+left-click to select points (up to 5), with clicked time points shown below.



Characteristic Trend Analysis

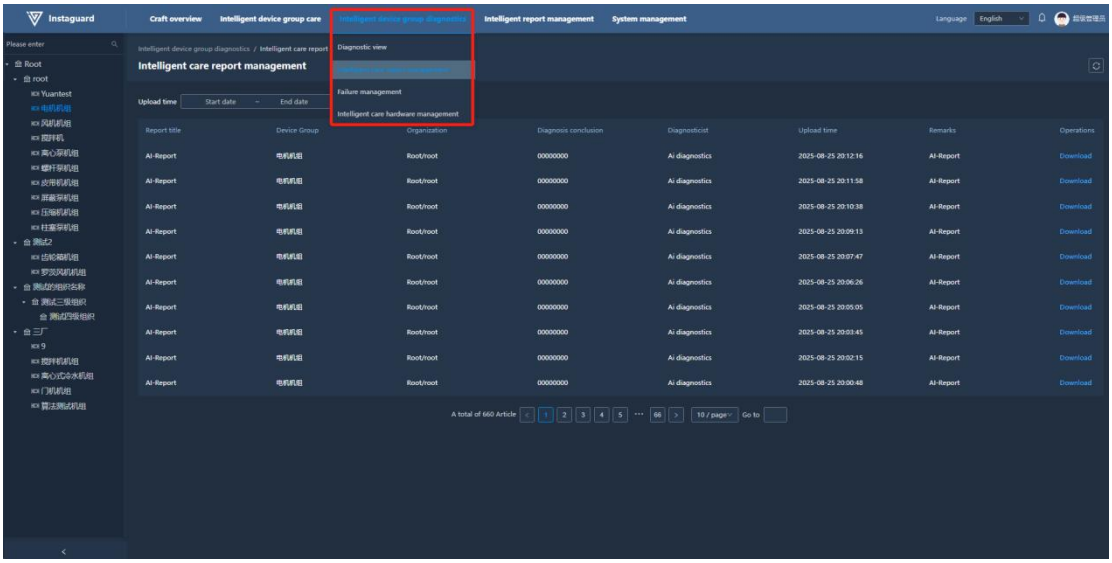
Click "Characteristic Trend Analysis" to jump to the analysis view. Switch between characteristic trend displays via the measuring point drop-down list, with clicked time points shown below.



2.5.2Intelligent Care Report Management

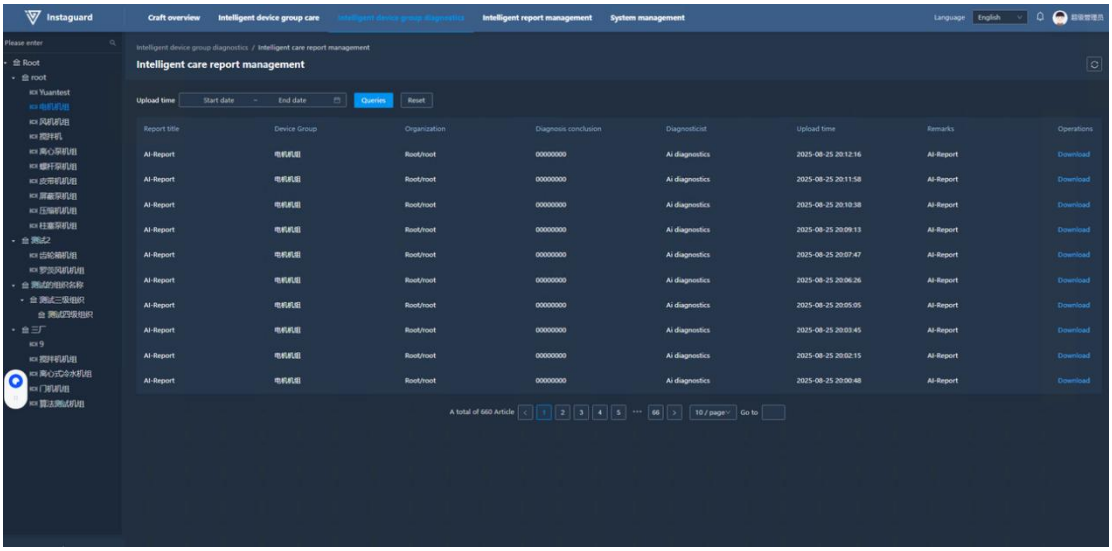
Navigation Path

「Intelligent Unit Diagnosis」 → 「Intelligent Care Report Management」



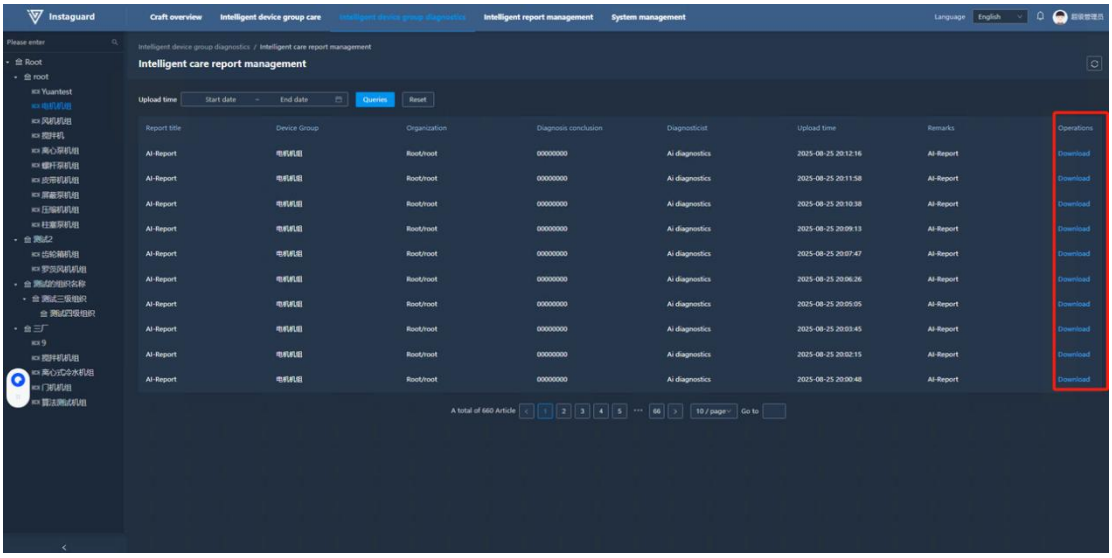
Function Overview

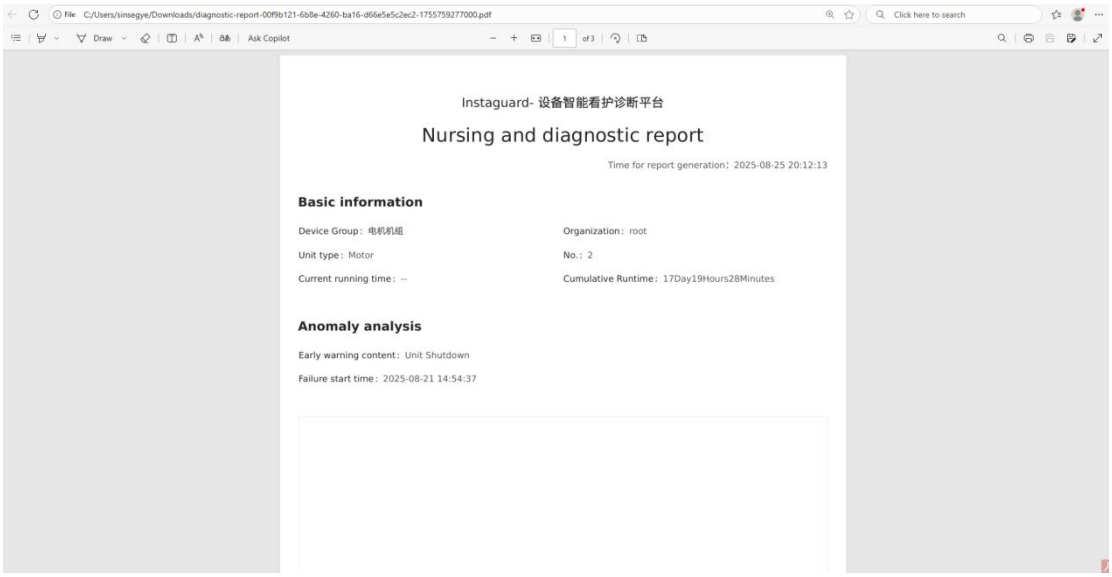
Manage and query intelligent care reports to help users efficiently obtain and analyze relevant data.



Download

Click the "Download" button behind a report to download the intelligent care report.

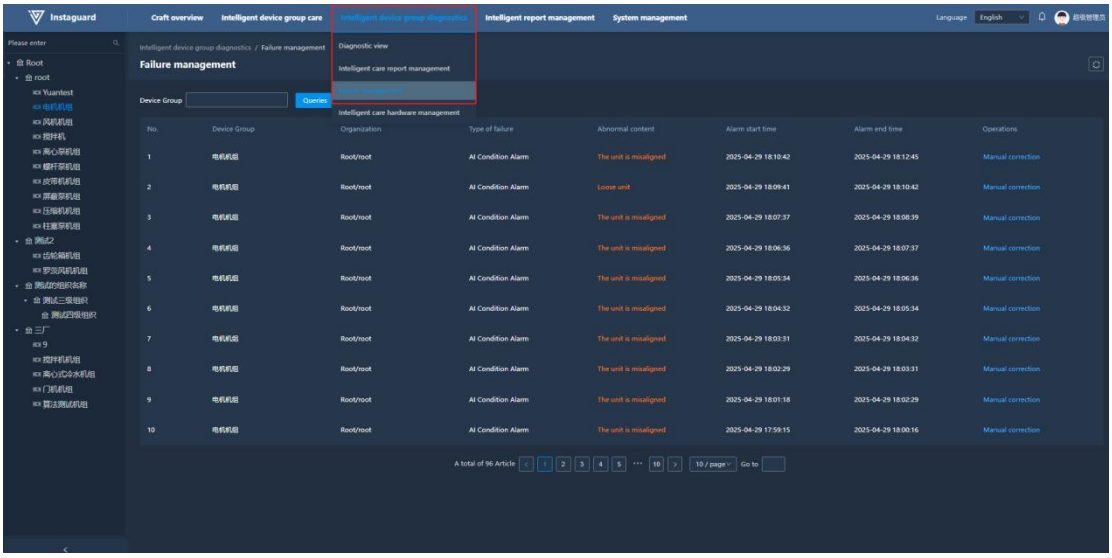




2.5.3Abnormality Management

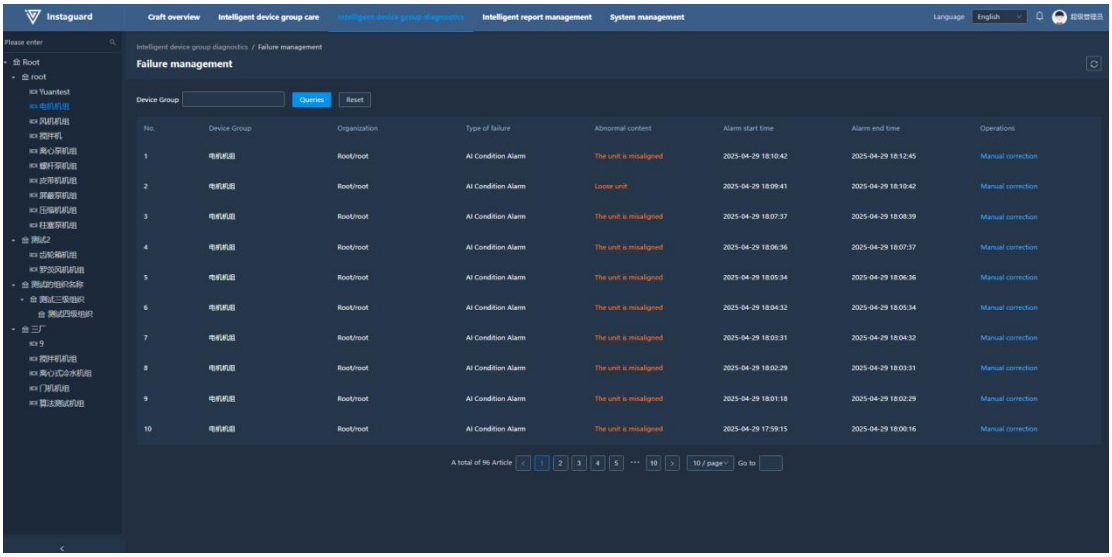
Navigation Path

「Intelligent Unit Diagnosis」 → 「Abnormality Management」



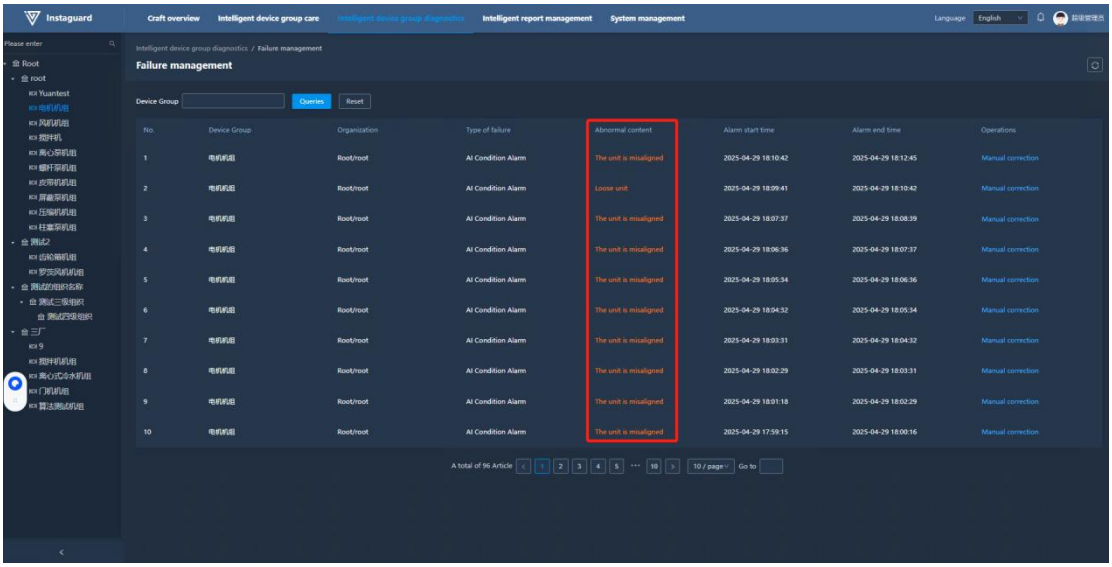
Function Overview

Monitor and manage production abnormalities in real-time, enabling timely actions to ensure production safety and efficiency.



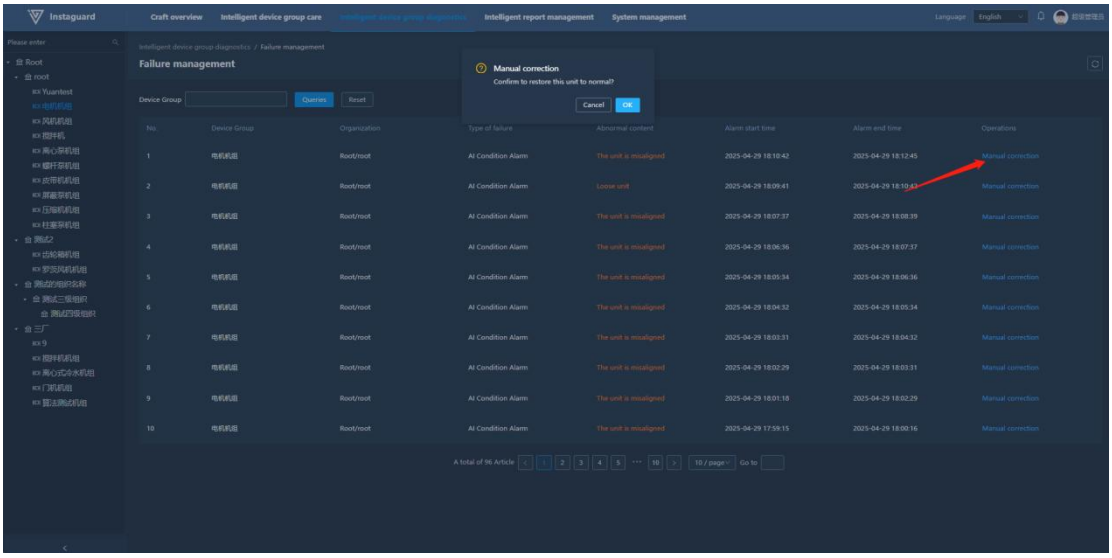
Abnormality Content

Click "Abnormality Content" to jump to the corresponding diagnostic view.



Manual Correction

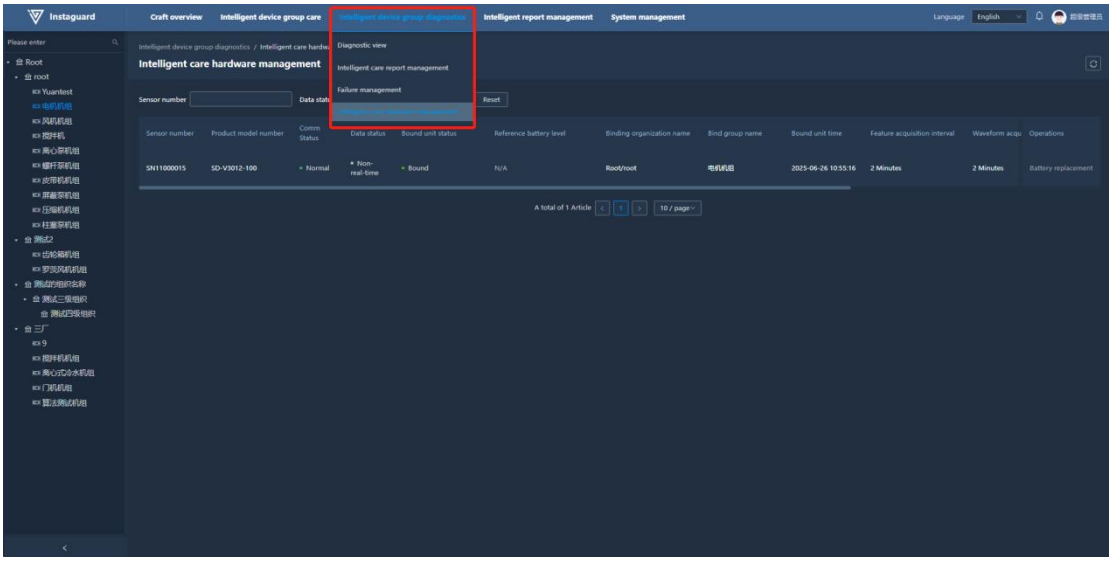
Click the "Manual Correction" button behind an abnormality to mark it as normal.



2.5.4ntelligent Care Hardware Management

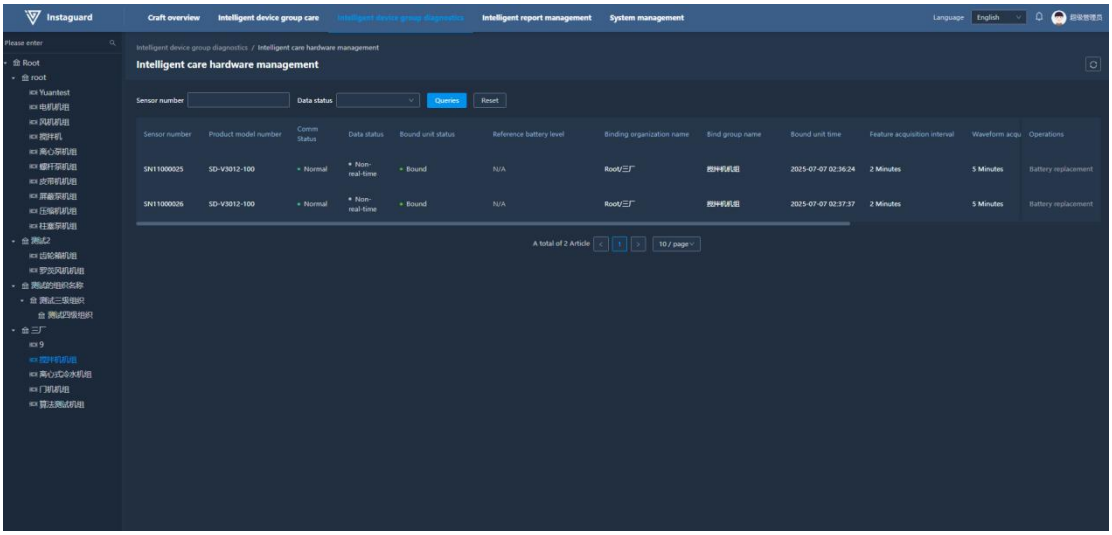
Navigation Path

「Intelligent Unit Diagnosis」 → 「Intelligent Care Hardware Management」



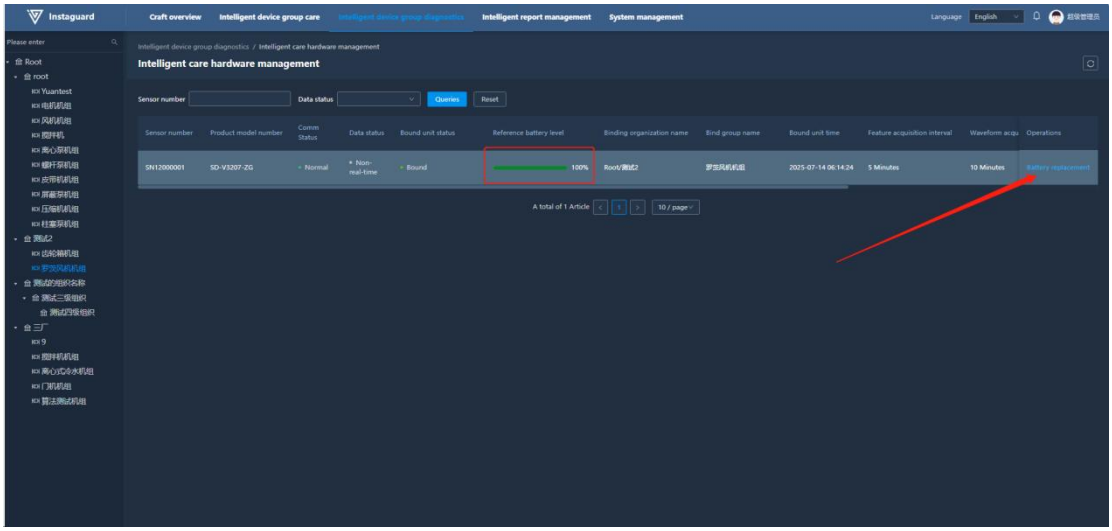
Function Overview

Monitor and manage the status of intelligent care hardware to ensure normal operation and maintenance.



Battery Replacement

Click the "Battery Replacement" button after replacing the battery to reset the battery level, which will be displayed as:



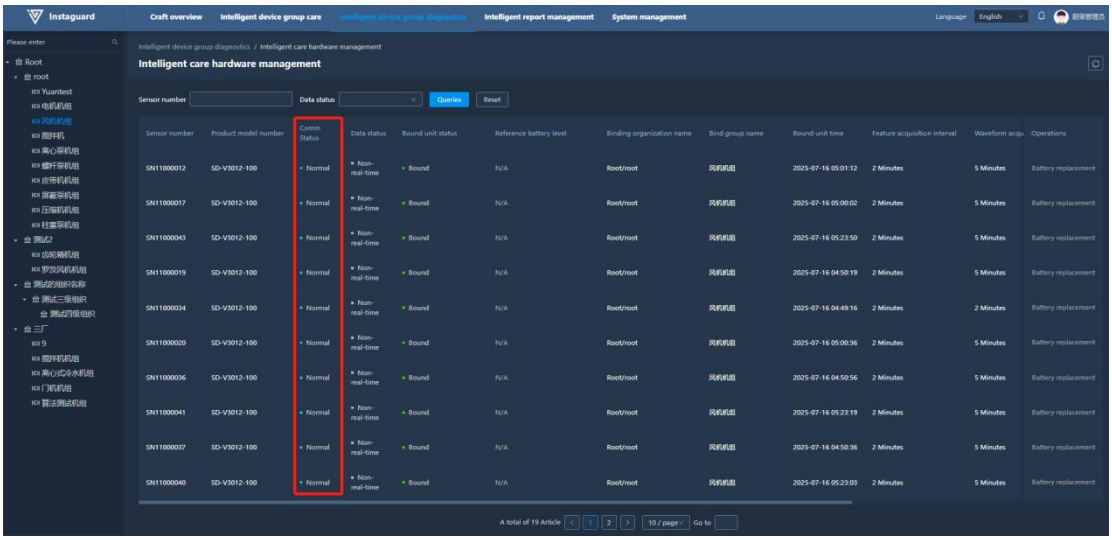
Communication Status

The communication status is categorized into Normal, Delayed, and Offline.

Normal: The status is considered normal when sensor waveform data is uploaded at the set data upload frequency.

Delayed: The status is marked as delayed when no sensor waveform data has been uploaded for a period greater than or equal to two times the set data upload frequency.

Offline: The status is considered offline when no sensor waveform data has been uploaded for a period greater than or equal to ten times the set data upload frequency.

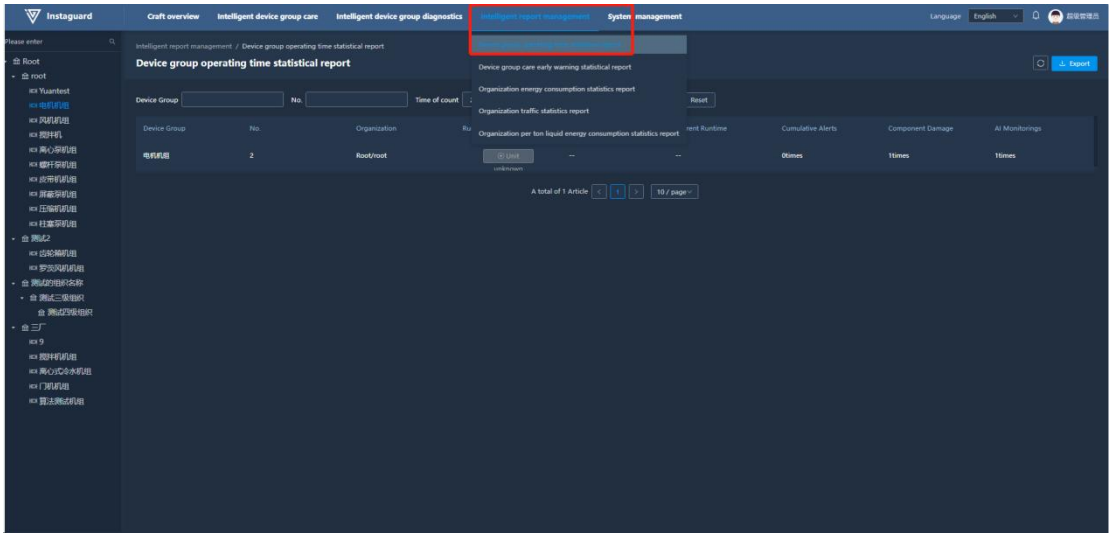


2.6Intelligent Report Management

2.6.1Unit Operation Time Statistical Report

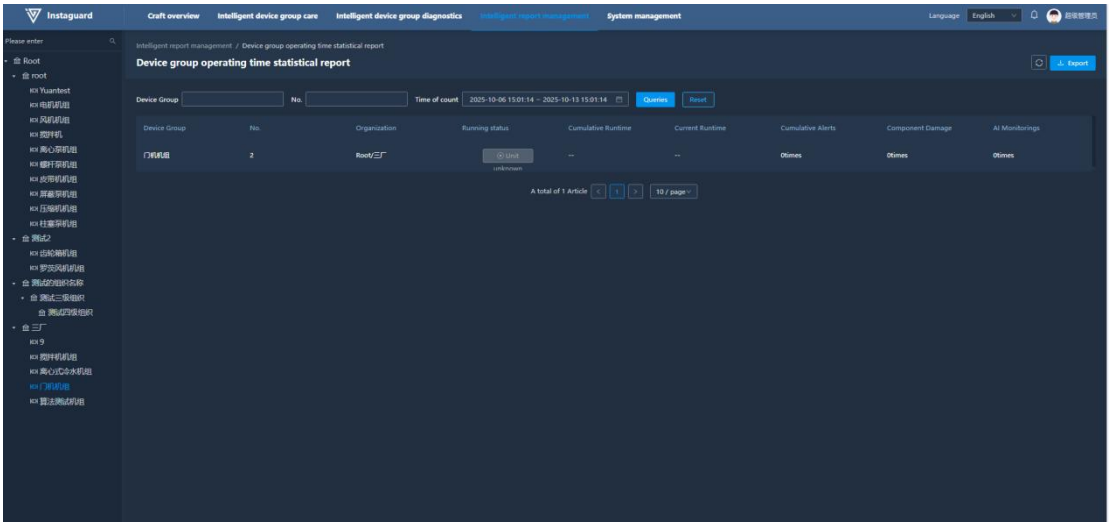
Navigation Path

「Intelligent Report Management」 → 「Unit Operation Time Statistical Report」



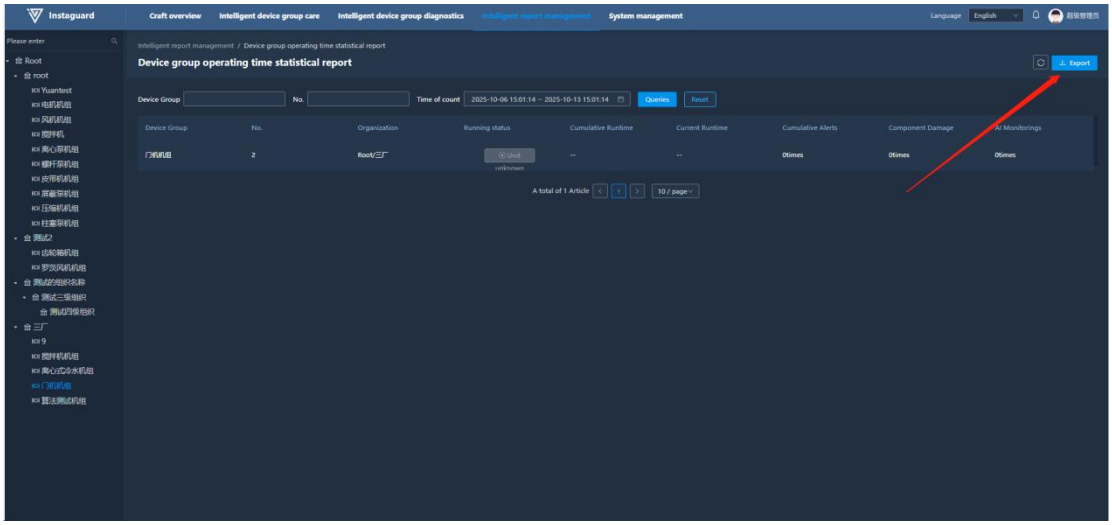
Function Overview

Monitors and collects the operating hours and other relevant data of the equipment unit, helping users understand the operational status of the unit for effective management and maintenance.



Data Export

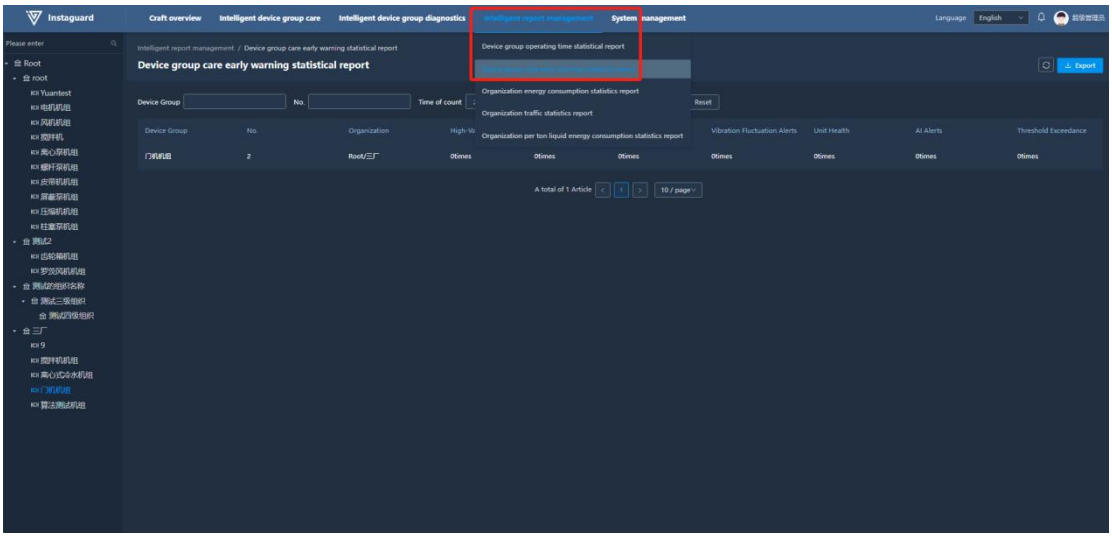
Click the "Export" button at the upper-right of the report to export displayed data as an XLS file named "Unit Operation Time Statistical Report".



2.6.2Equipment Unit Monitoring Alert Statistical Report

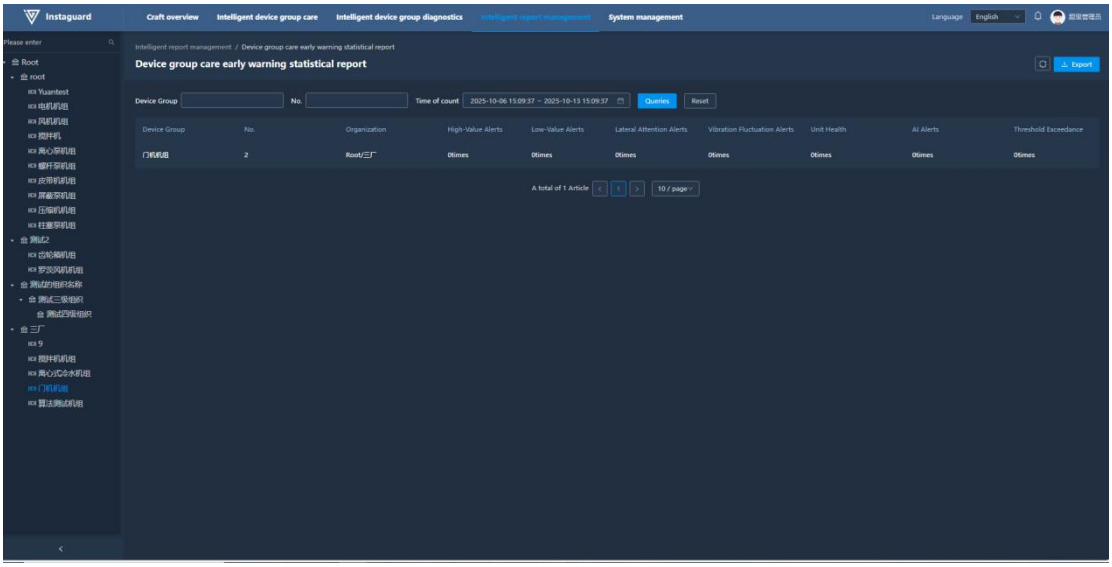
Navigation Path

Intelligent Report Management→ Equipment Unit Monitoring Alert Statistical Report



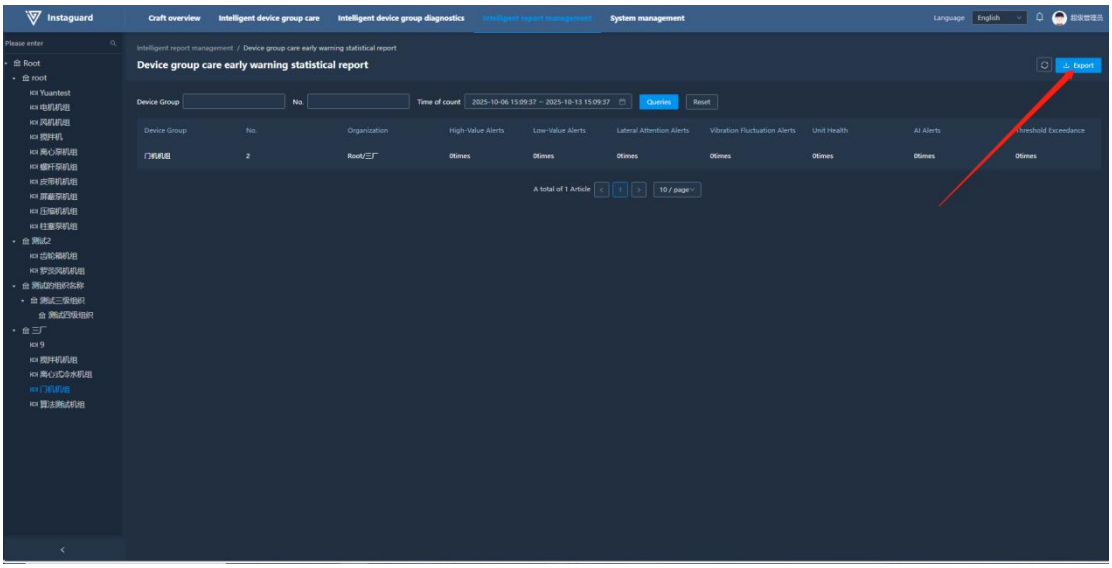
Function Overview

Monitors and manages the operational status of equipment units. By counting the occurrences of various alerts, it helps users promptly identify and address potential issues, ensuring the normal operation and maintenance of the units.



Data Export

After entering the report, click the export button in the upper right corner to export the currently displayed data. The export format is XLS, and the file name is: Equipment Unit Monitoring Alert Statistical Report.

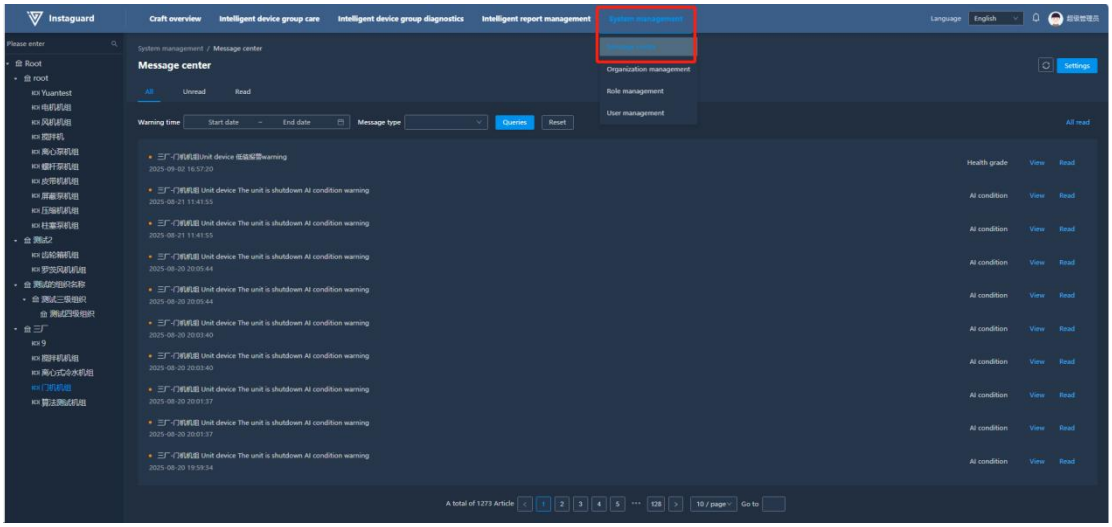


2.7System Management

2.7.1Message Center

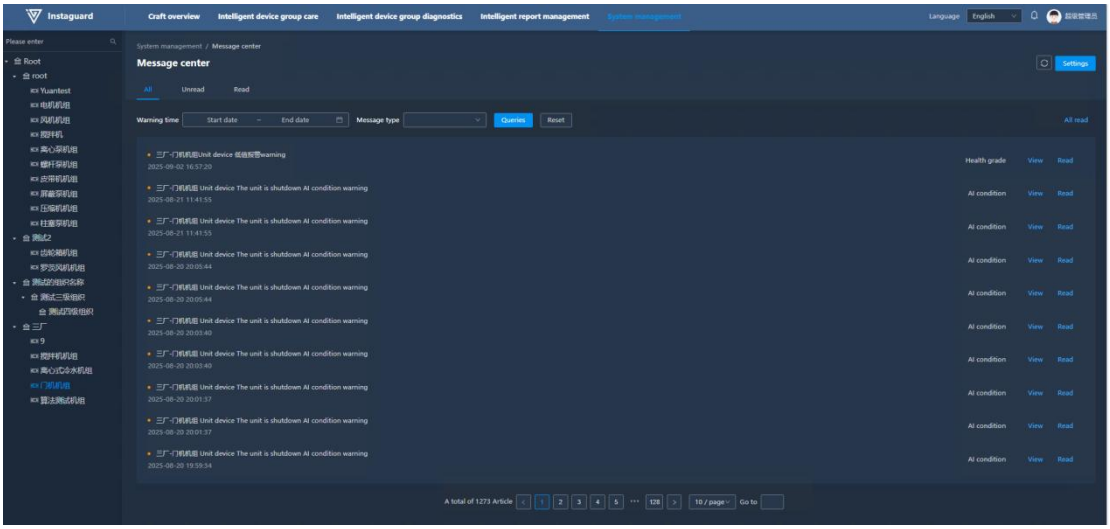
Navigation Path

「System Management」 → 「Message Center」



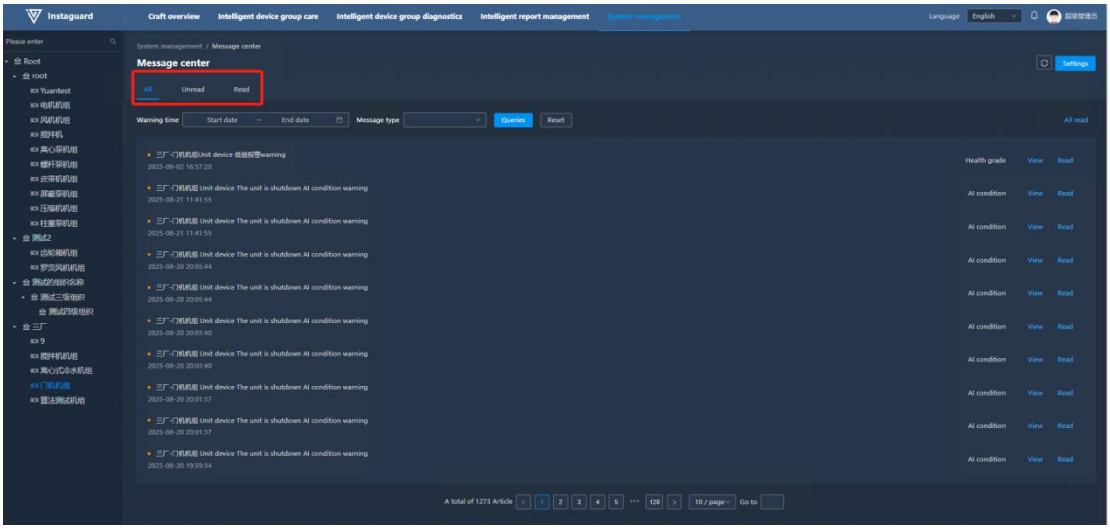
Function Overview

View system notifications in detail and set notification frequency, method, and unit scope as needed.



Message List

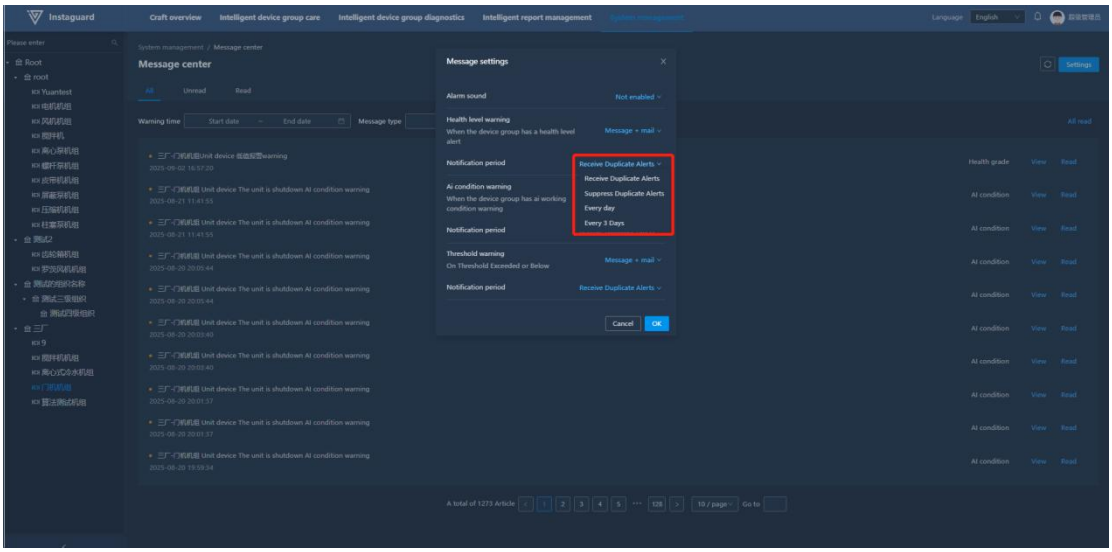
View system messages receivable by the current user, filtered by read status.

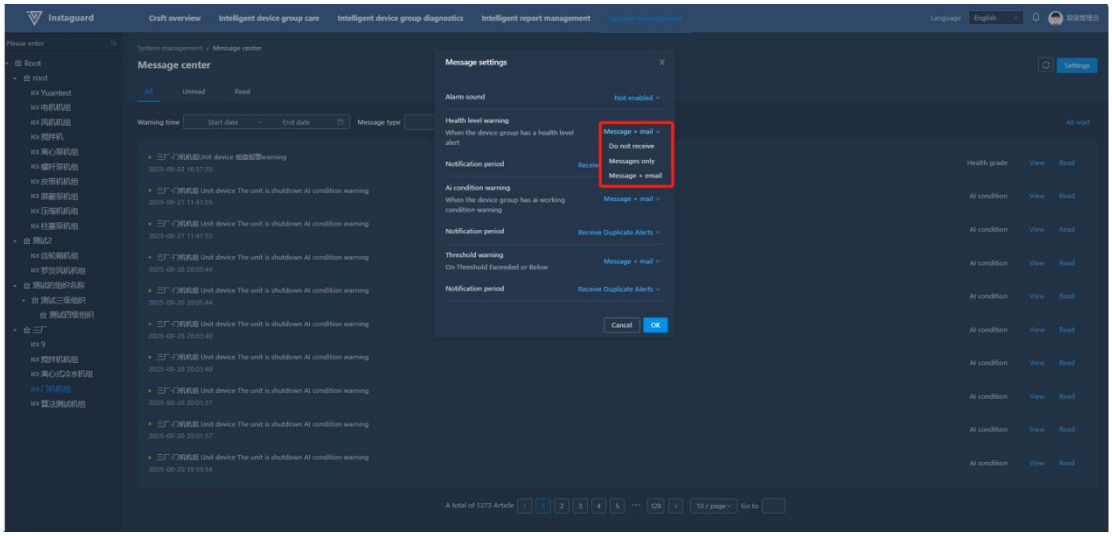


Message Settings

Click "Settings" at the upper-right to configure notification periods and methods for four message types:

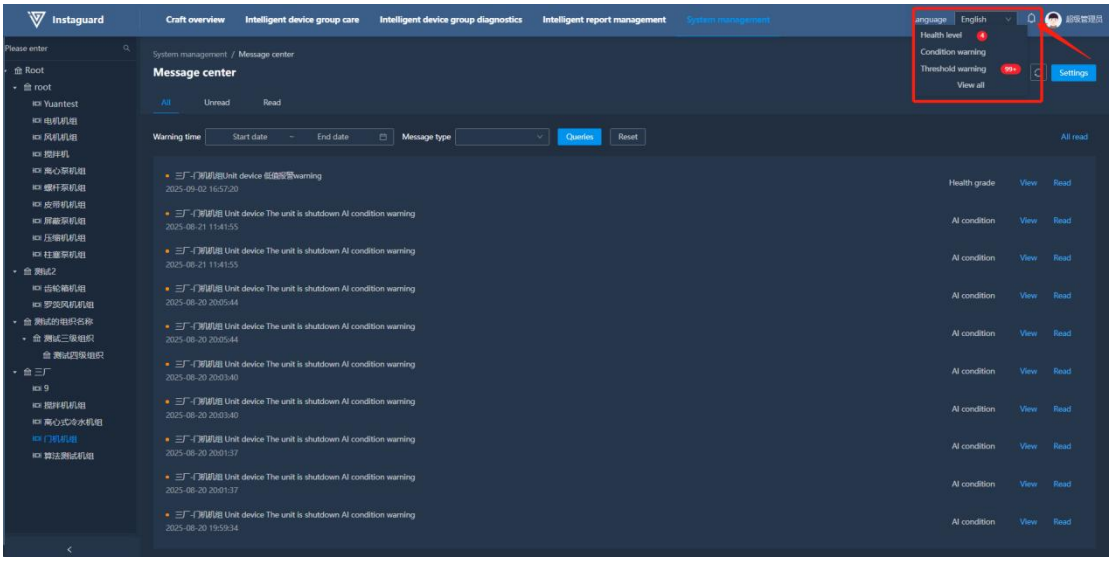
- Notification periods: "When Occurs", "Every 6 Hours" (9:00, 15:00, 21:00, 3:00), "Daily" (9:00).
- Receiving methods: "Only Message", "Message + SMS + Email", "Do Not Receive".





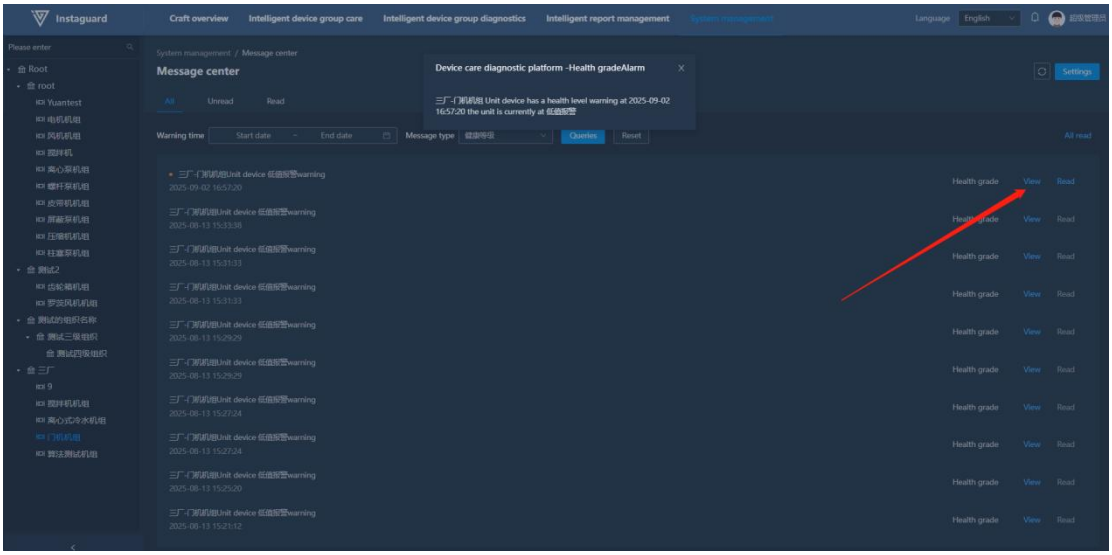
Message Count Overview

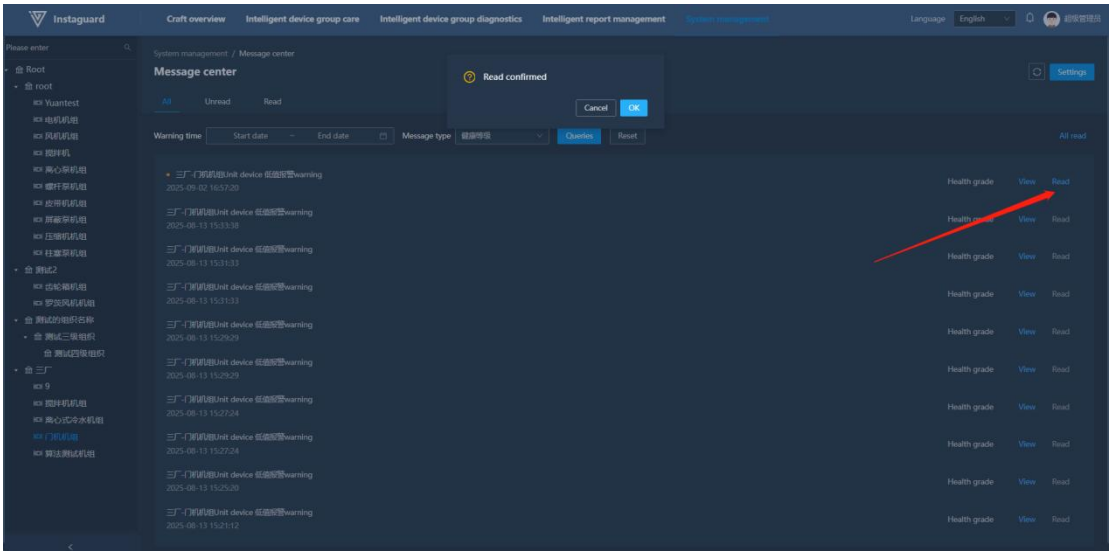
After setting cared units and enabling message reception, view unread message counts by type via the message icon next to the user avatar. Click to jump to the message management page.



View/Mark as Read

Select a message and click "View" to show details, or "Mark as Read" to update its status.

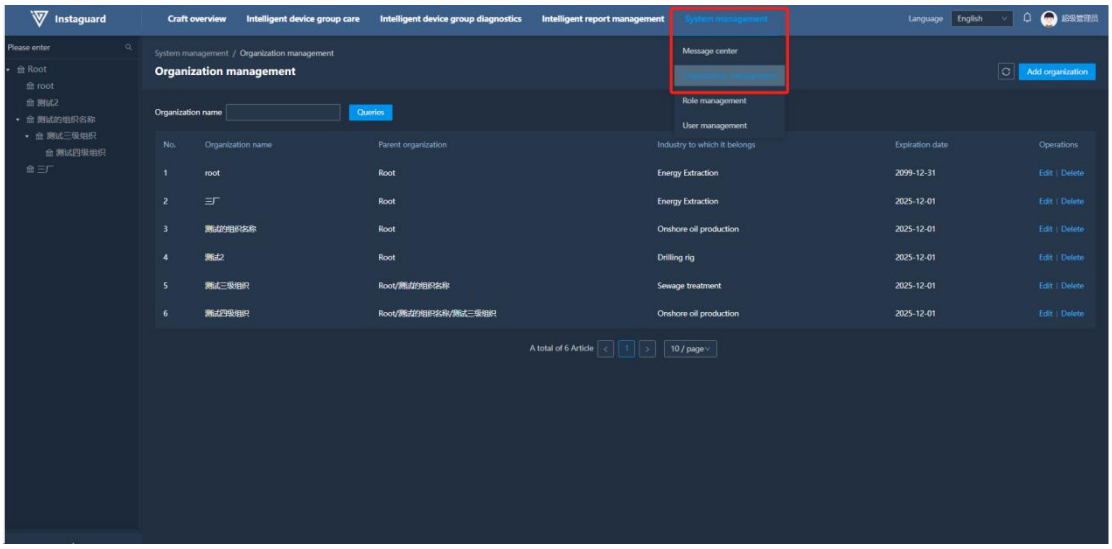




2.7.2Organization Management

Navigation Path

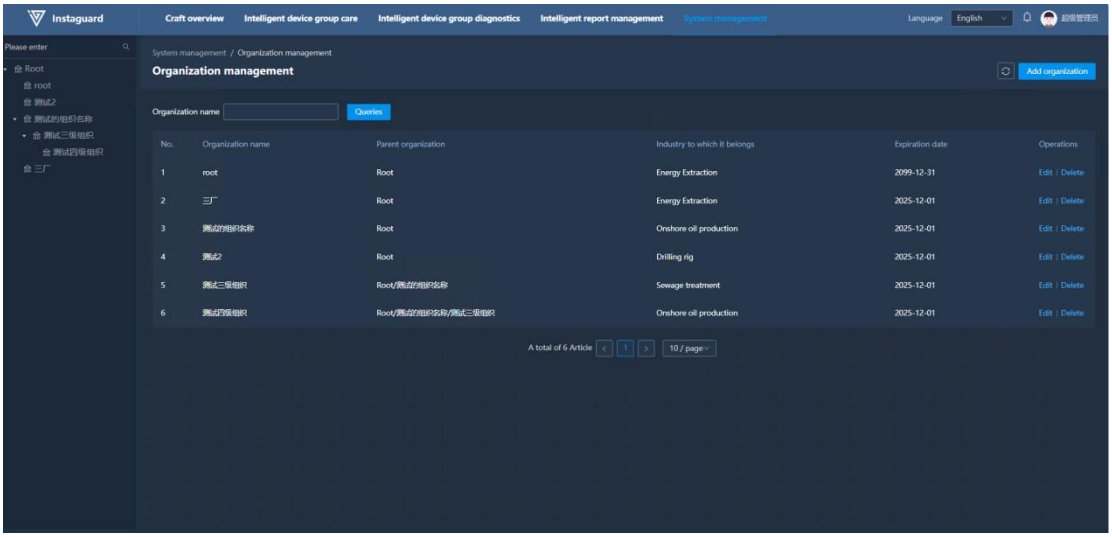
「System Management」 → 「Organization Management」



Function Overview

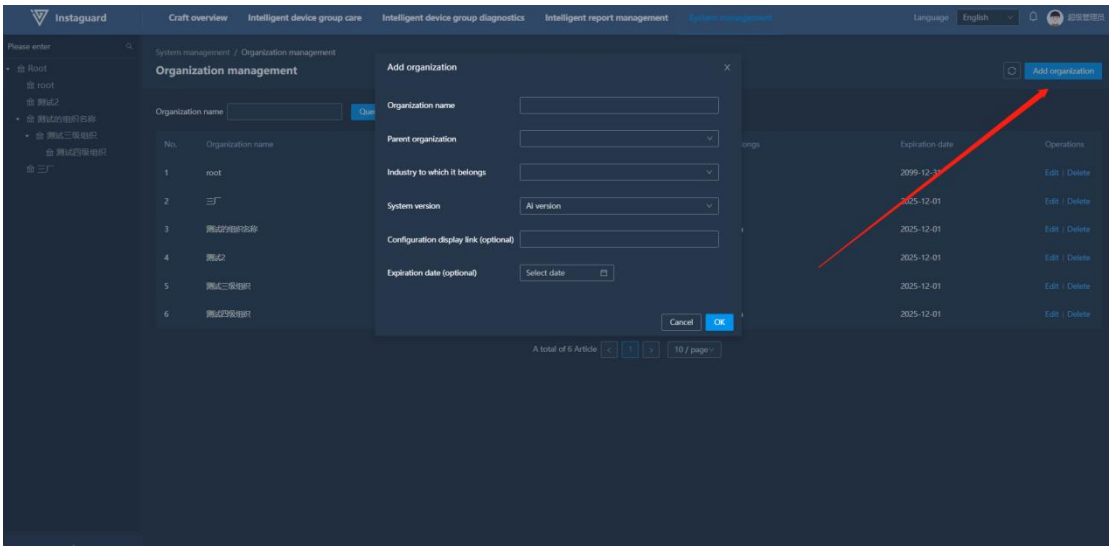
Add/delete organizations and adjust their position in the organization tree.

Sub-organization names must be unique under the same parent organization.



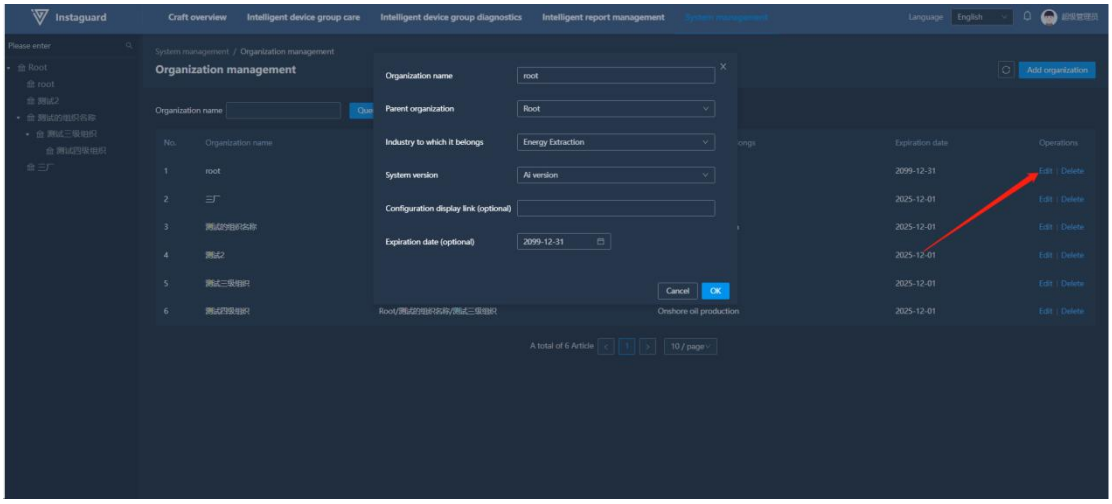
Adding Organizations

Click "Add Organization" at the upper-right in Organization Management to open the addition page.



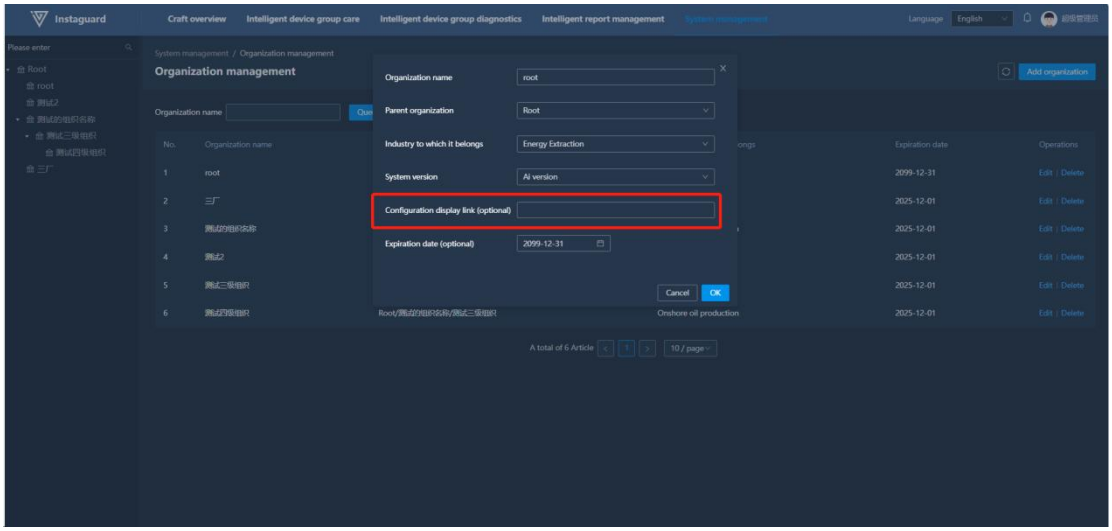
Editing Organizations

Click "Edit" for an organization to open the editing page (sub-organization names must be unique).



Configuration Address Editing

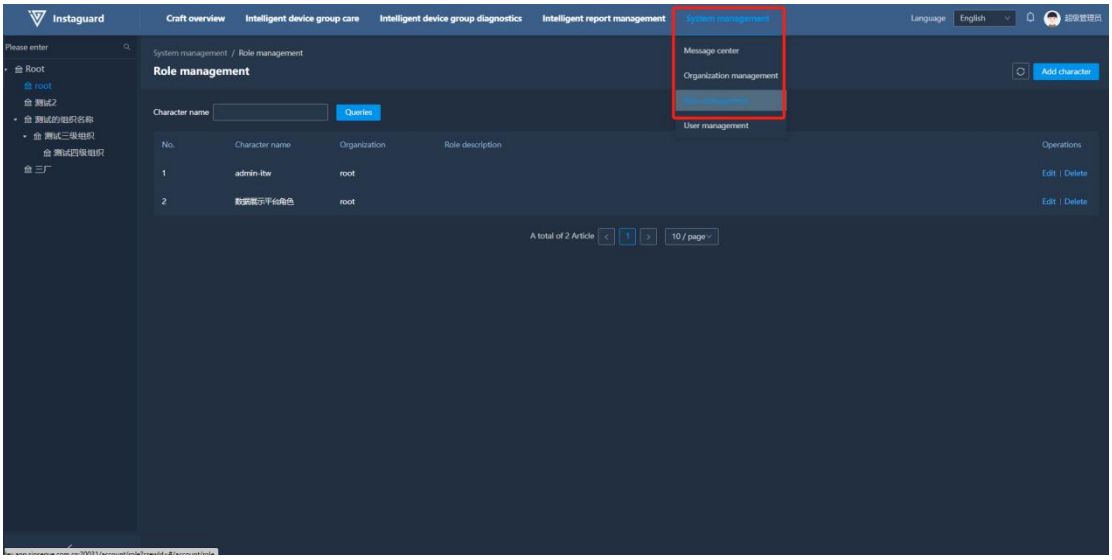
Enter the configuration chart URL (drawn by Instaguard or third-party) in "Configuration Display Link" when editing an organization. Saved configurations will display in the process configuration page.



2.7.3Role Management

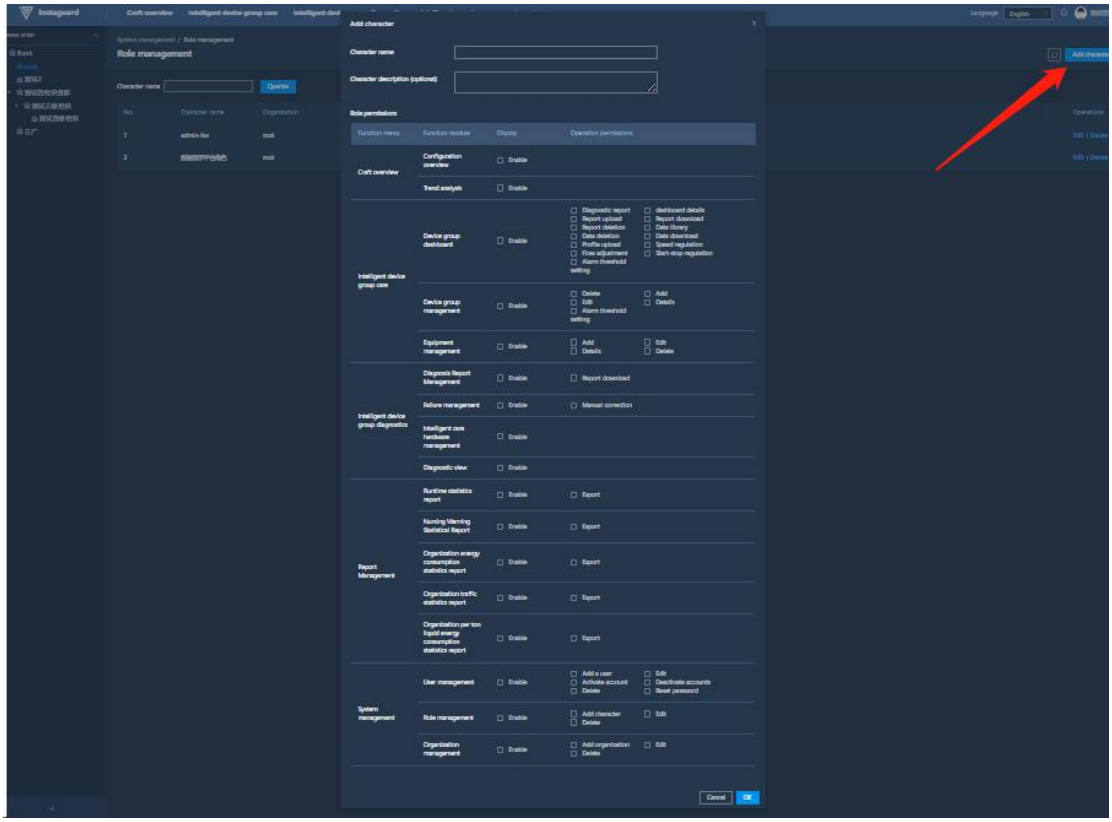
Navigation Path

「System Management」 → 「Role Management」



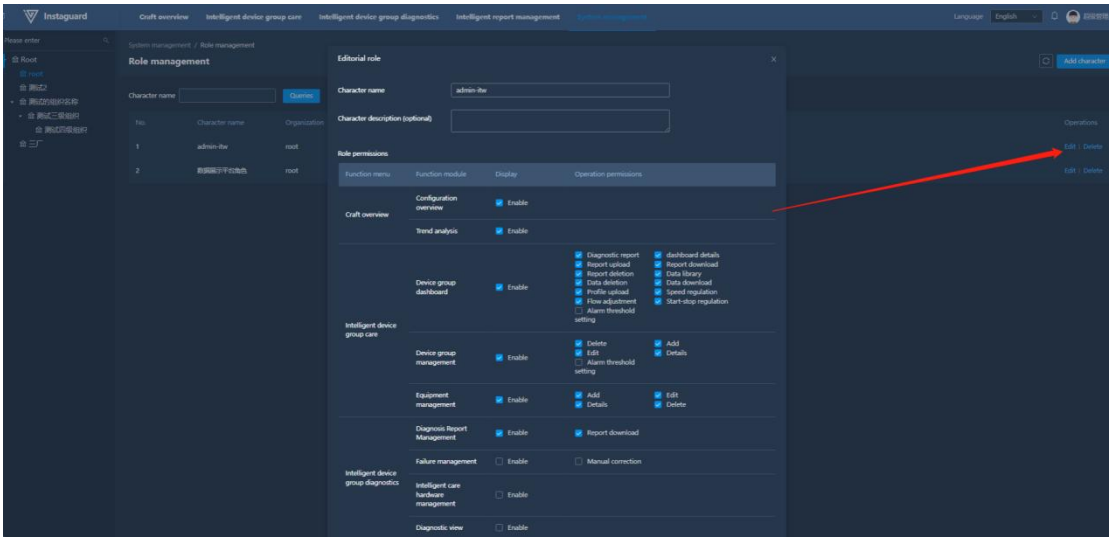
Adding Roles

Click "Add Role" at the upper-right in Role Management to open the addition page (roles belong to selected organizations, with unique names and customizable permissions).



Editing Roles

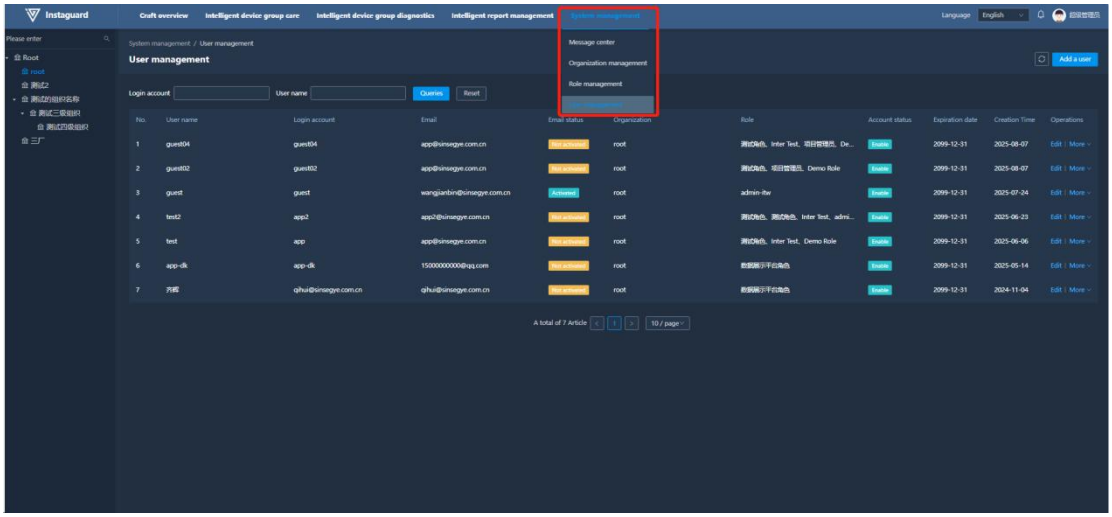
Click "Edit" for a role to modify its permissions (role names must be unique).



2.7.4User Management

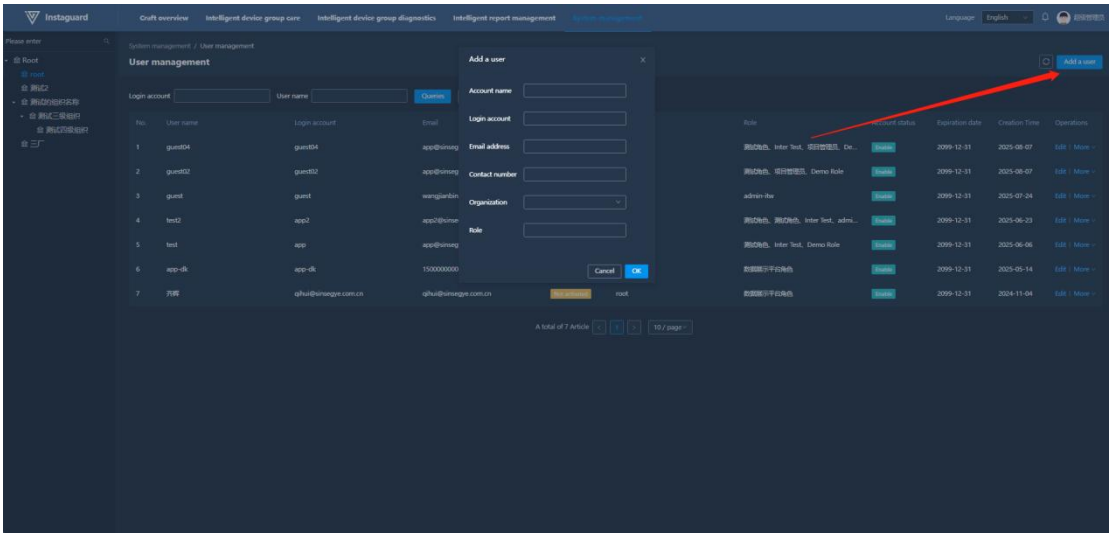
Navigation Path

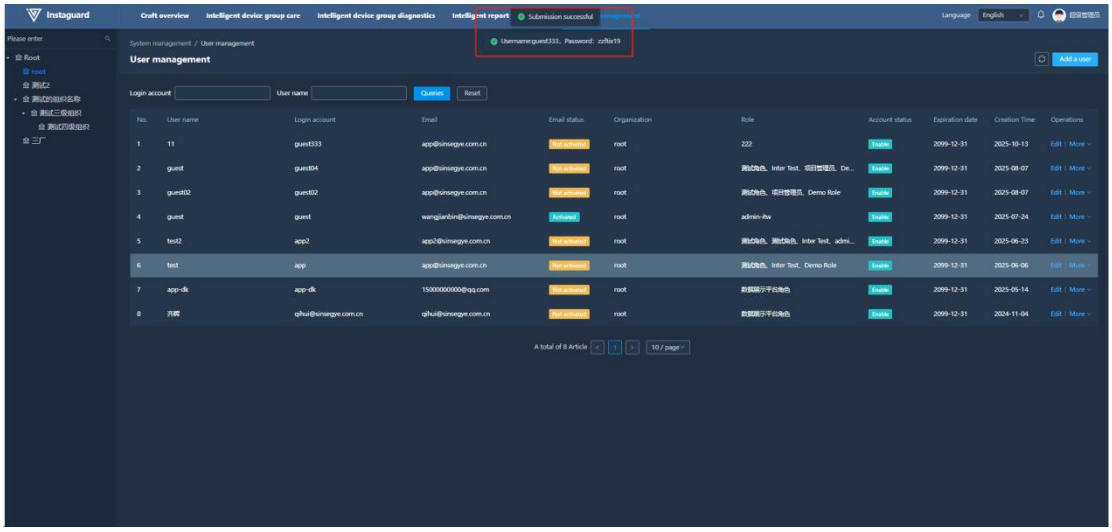
「System Management」 → 「User Management」



Adding Users

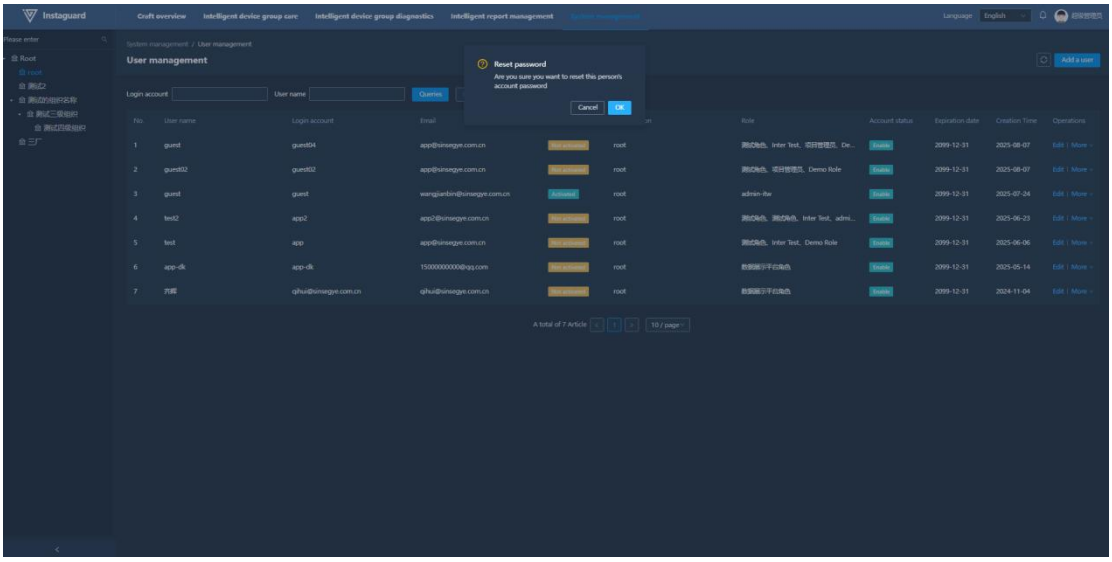
Click "Add User" at the upper-right in User Management to open the addition page (login accounts are unique, ≥8 characters).

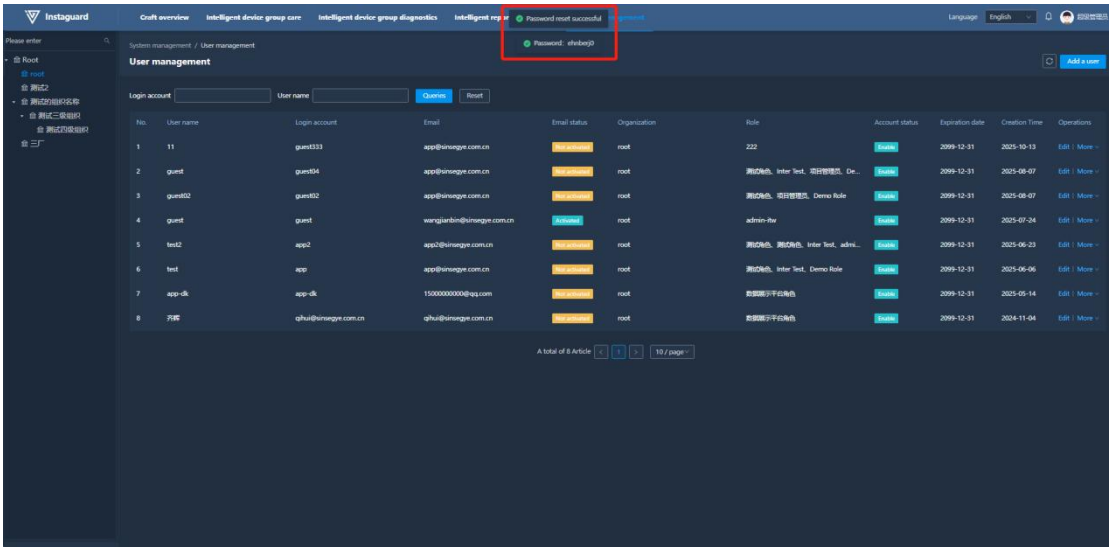




Resetting Passwords

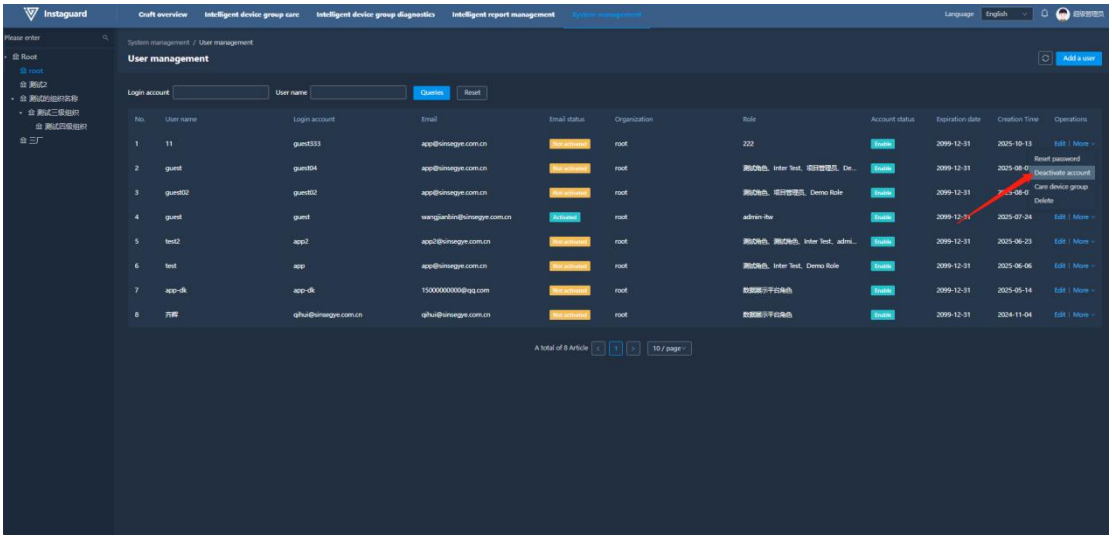
Click "Reset Password" for a user to reset their password.





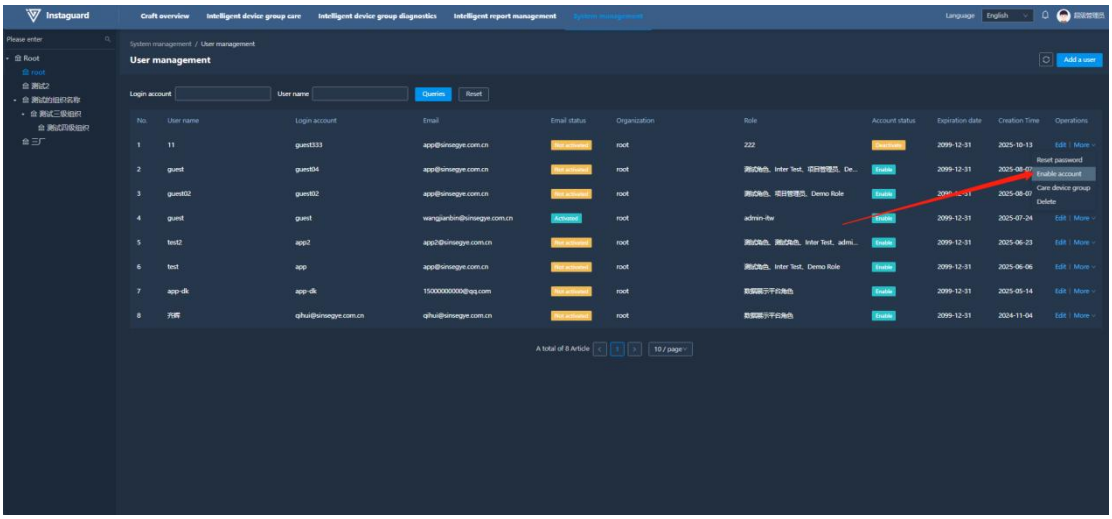
Disabling Accounts

Click "Disable Account" for an enabled account to disable it.



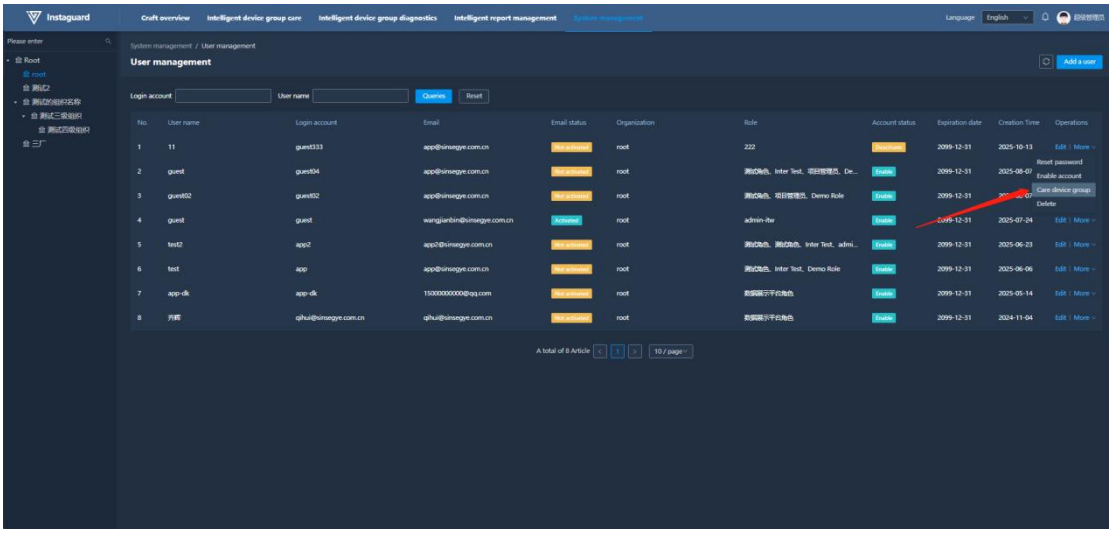
Enabling Accounts

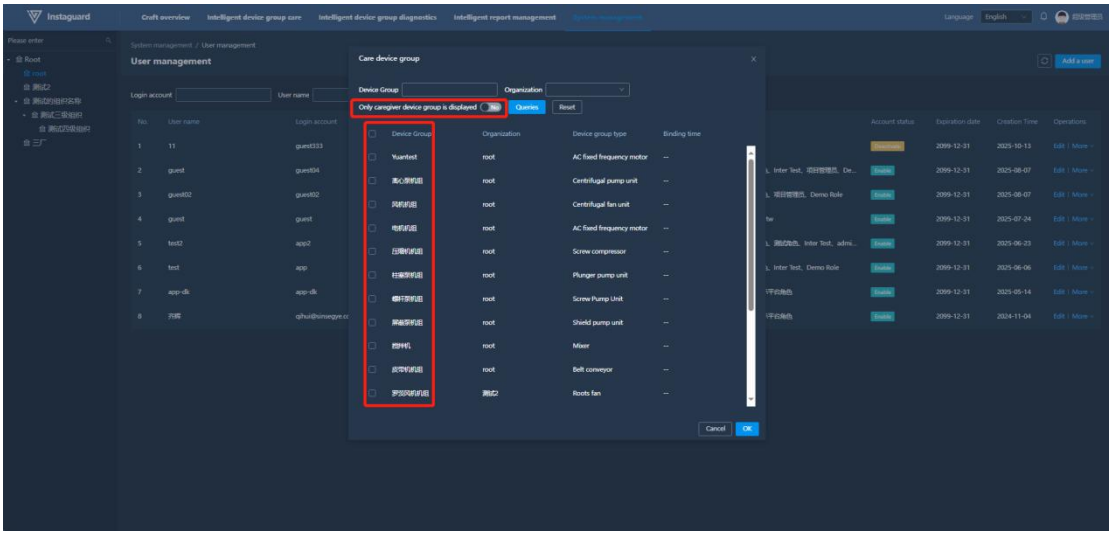
Click "Enable Account" for a disabled account to re-enable it.



Setting Cared Units

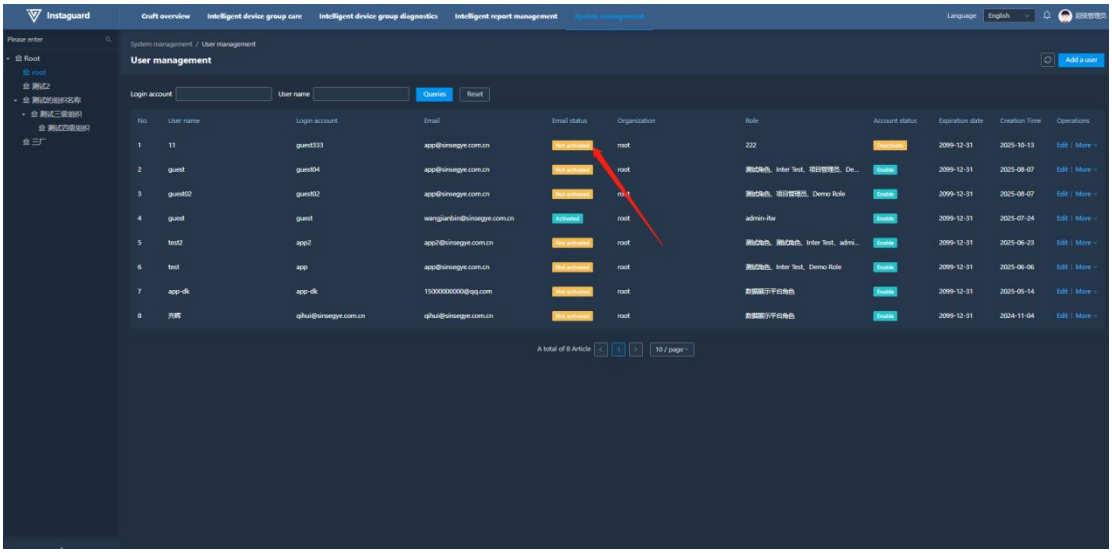
Click "Cared Units" in User Management to configure message reception scope. Search units by name/organization or switch via the "Only Show Cared Units" slider.





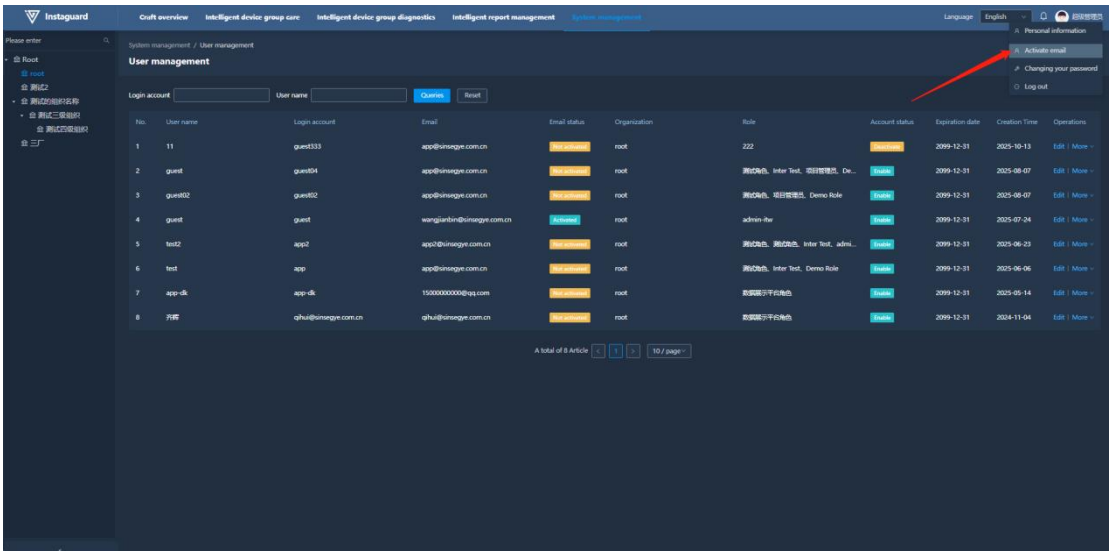
Email Activation and Email Change

When an administrator creates a new user, the email status defaults to "Inactive." Existing users' emails are also in an inactive state. Users need to log in to the platform and activate their email addresses themselves. Users with inactive email addresses will not receive notifications from the email system (such as alerts or password reset emails).

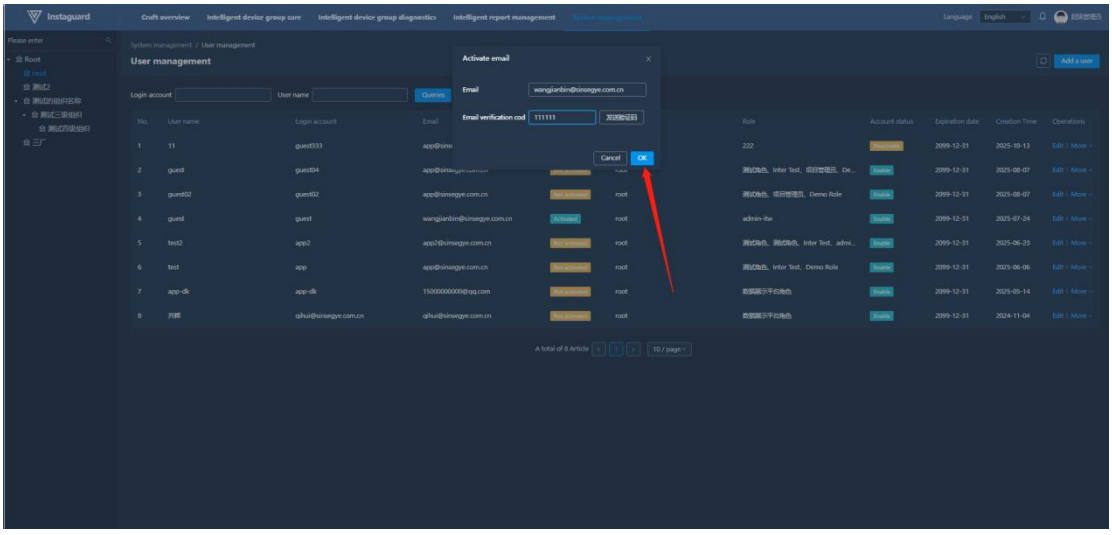


Email Activation

Path: Top-right corner user avatar → Activate Email



Steps:



1.Click "Send Verification Code." A 60-second countdown will begin, after which the code can be resent. Check the email inbox (including the junk folder) to obtain the 6-digit verification code.

2.Enter the verification code. The system validates it in real-time: ✓ Verification successful, ✗ Verification code error.

3.After successful verification, click "Confirm." The email status will be updated to "Activated."

Email Change

Path: User Avatar → Change Email

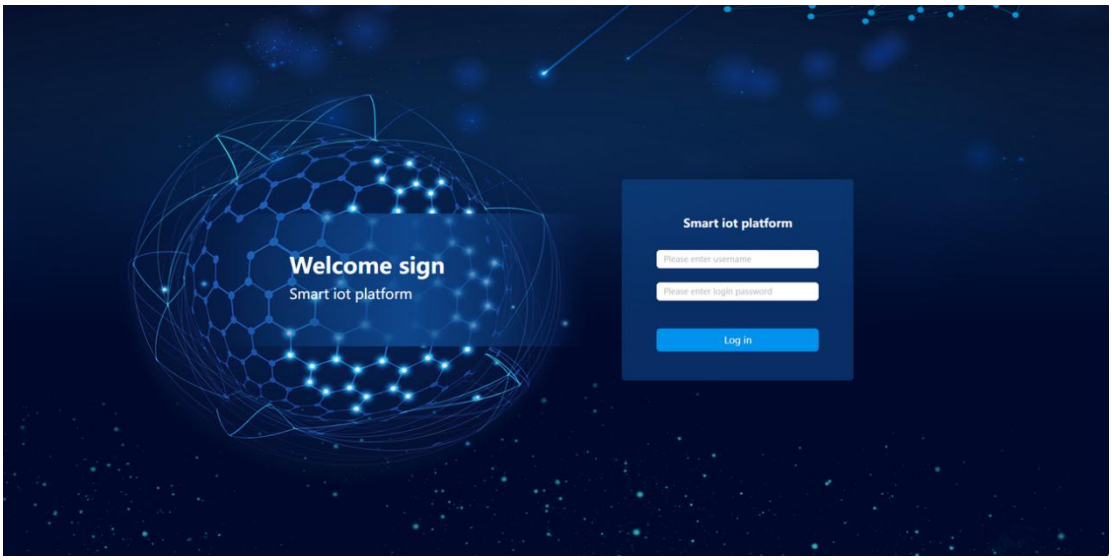
The process is the same as activating the email, requiring confirmation via the new email's verification code.

3.IOTHub Functions

3.1Login Page

3.1.1Function Overview

This interface serves as the login entry for the intelligent IOT platform, realizing user identity verification through a simple interface design to ensure the security of device operations and data management.



3.1.2Operation Process

Accessing the System
Display resolution ≥ 1920×1080, and access via a Google kernel browser (version ≥ 92):
Industrial intelligent computer IP address: 20021 (e.g., 192.168.111.174:20021)

Identity Verification
Step 1: Enter the employee number/registered account in the **Username** input field.

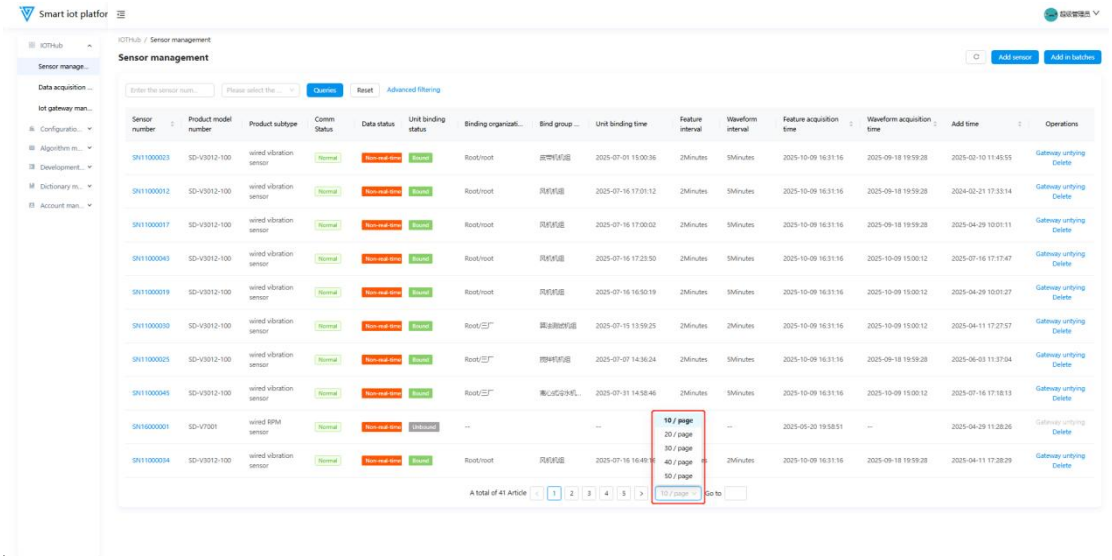
Step 2: Enter the corresponding password in the **Password** input field (password is hidden by default).
Step 3: Click the blue **Login** button to submit for verification.

3.2Auxiliary Functions (General)

3.2.1Pagination Control

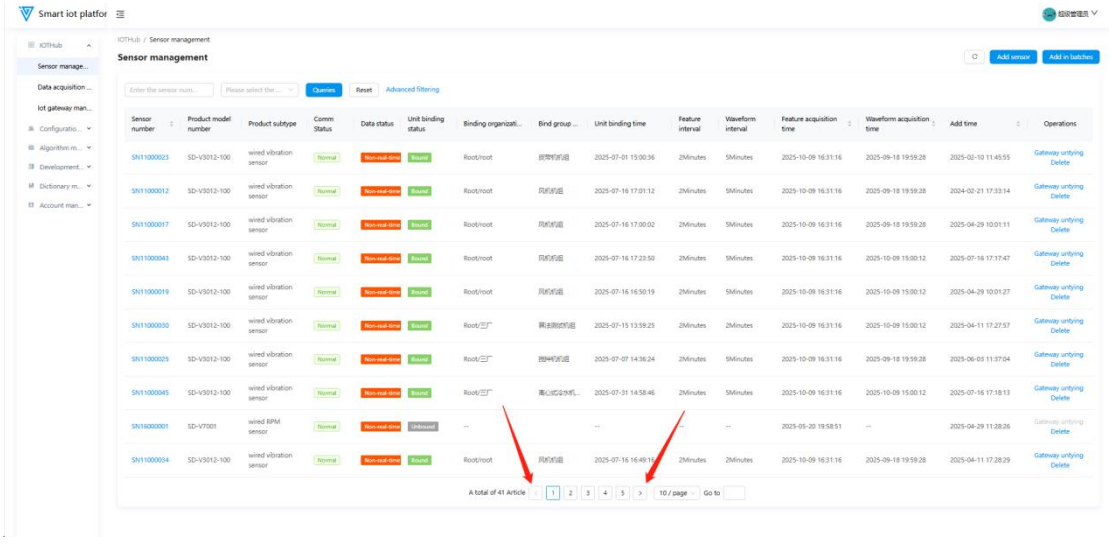
Pagination Capacity

Switchable to display 10/20/30/40/50 pieces of information per page.

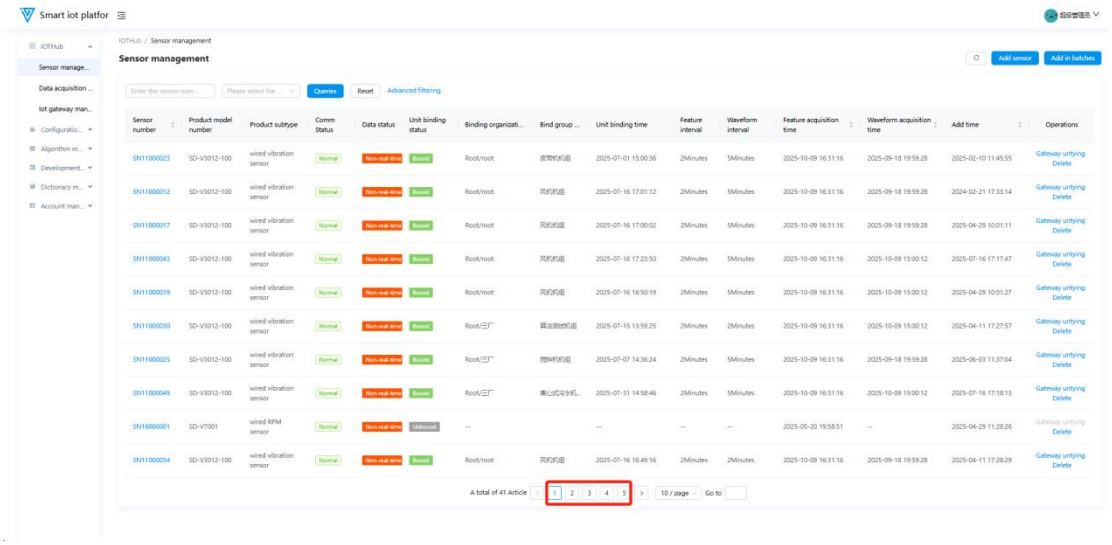


Page Navigation

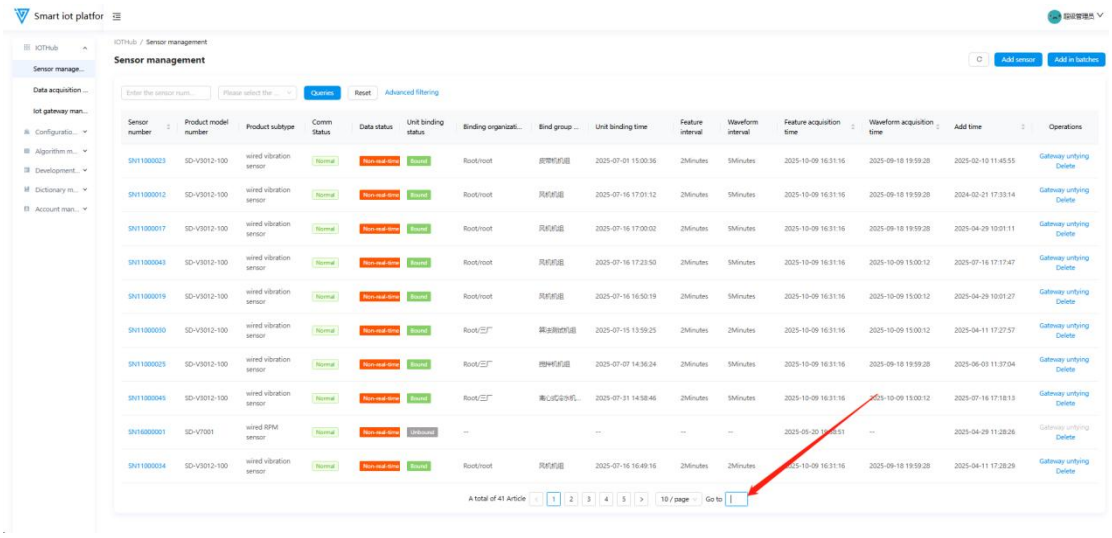
- Click the **< >** buttons to navigate between pages.



- Click the target page number to jump directly.

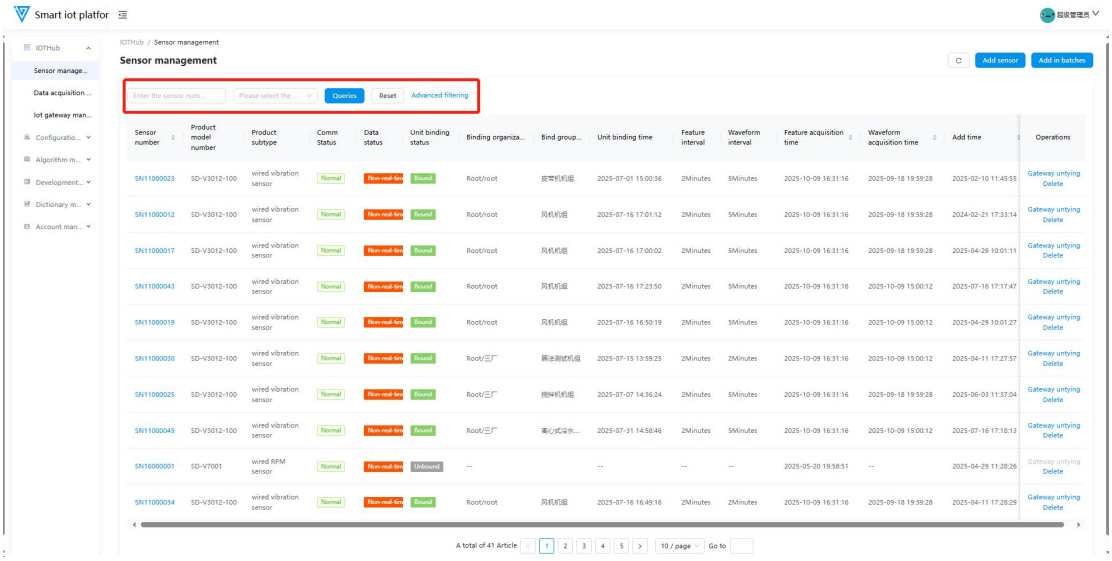


- Enter the page number in the input field and press Enter to jump.

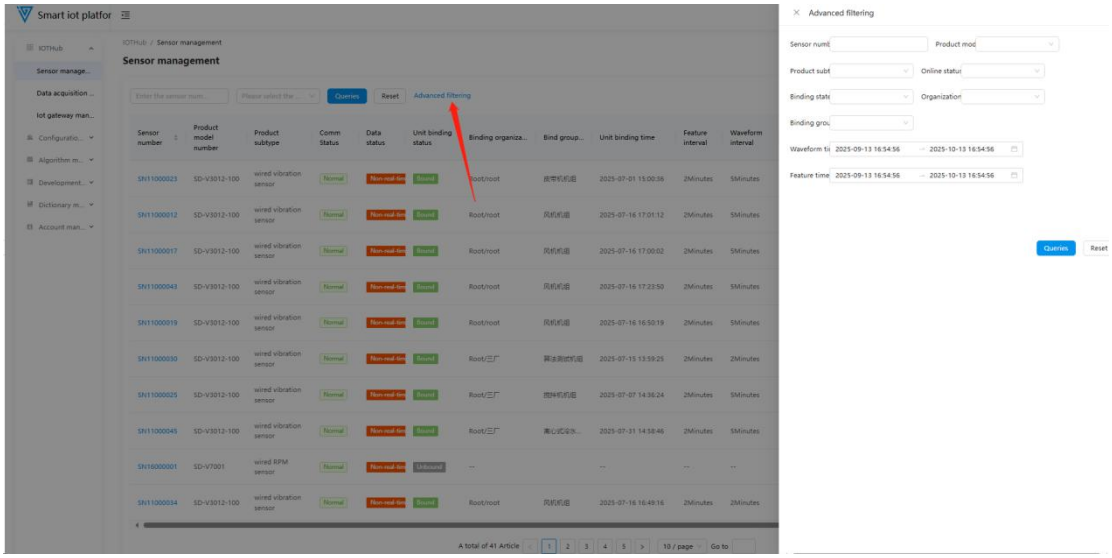


3.2.2Filter Query

Select or enter filter criteria as prompted, then click **Query**. Click **Reset** to clear all criteria.

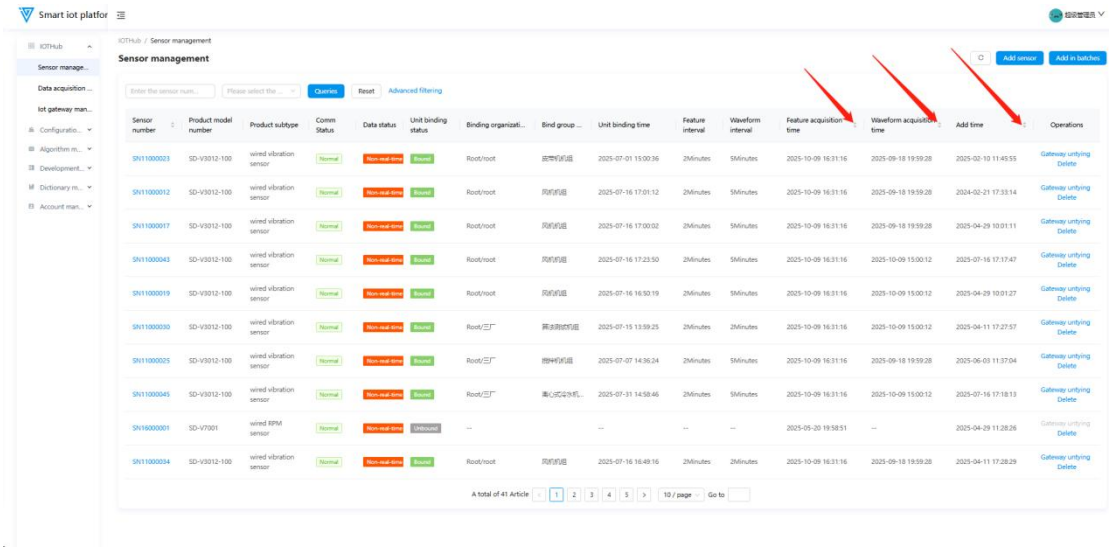


- The Sensor Management page has an exclusive **Advanced Filter** button. Click to open the sidebar for more filtering conditions (other operations remain the same).



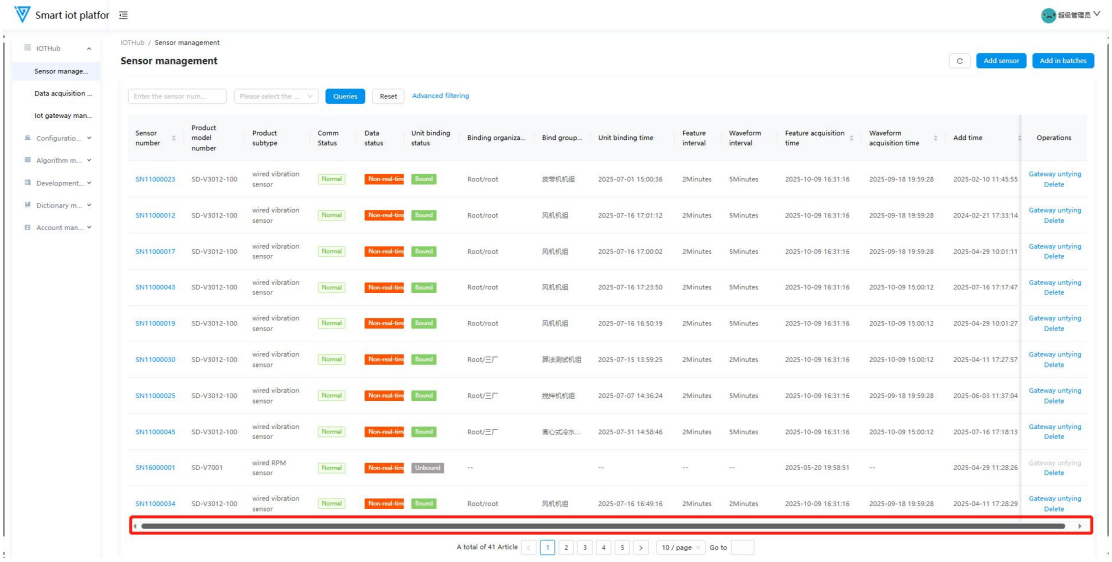
3.2.3Data Sorting

Some data columns support sorting. Click the header to sort in ascending/descending order or cancel sorting.



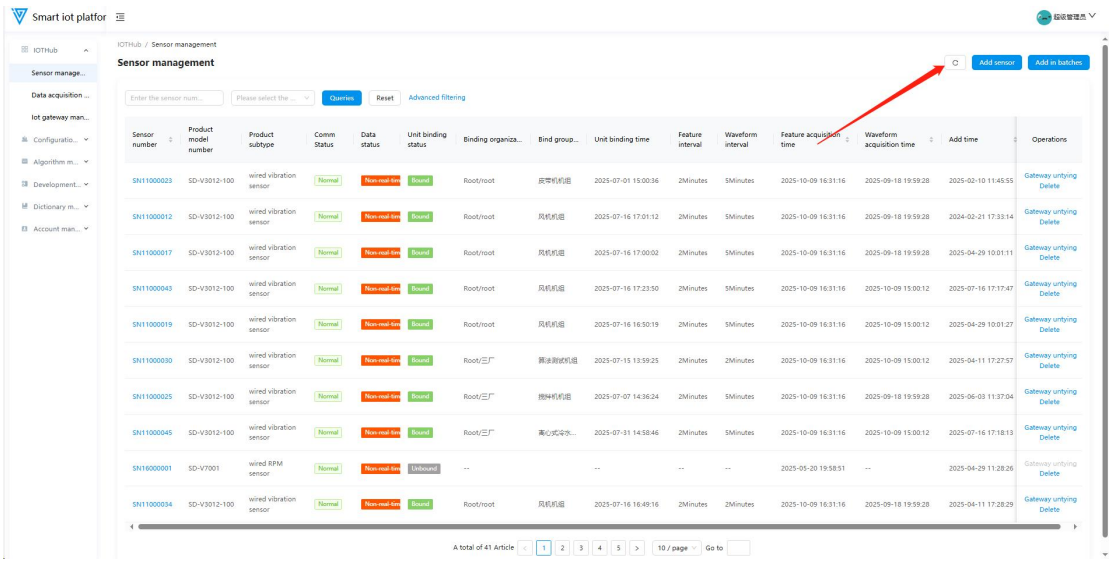
3.2.4Page Layout

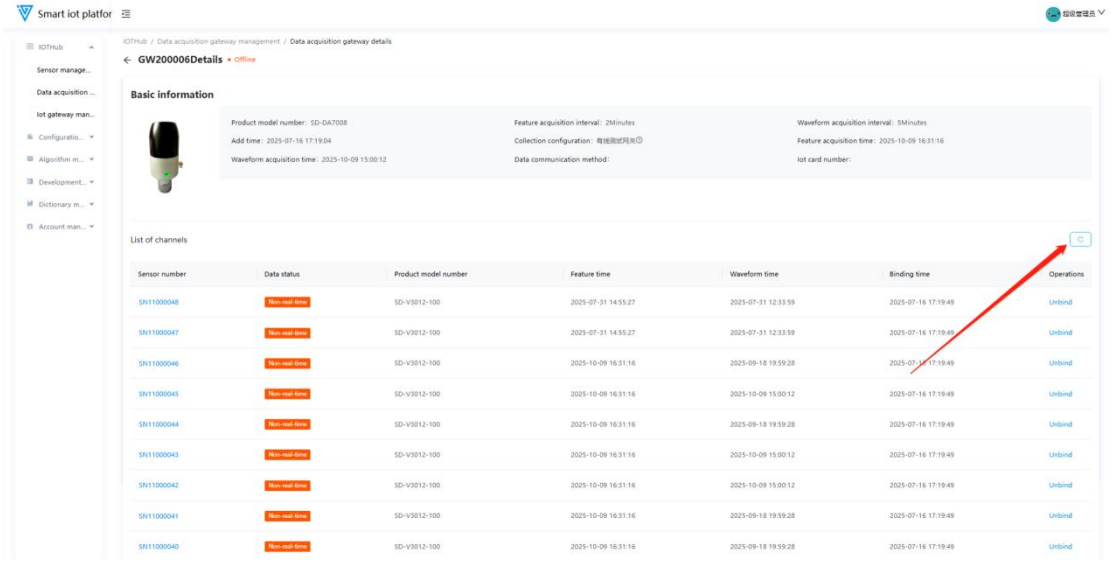
On pages with excessive data columns, use the horizontal scroll bar below to view all content.



3.2.5Data Refresh

Click **Refresh** to force an update of the page content.



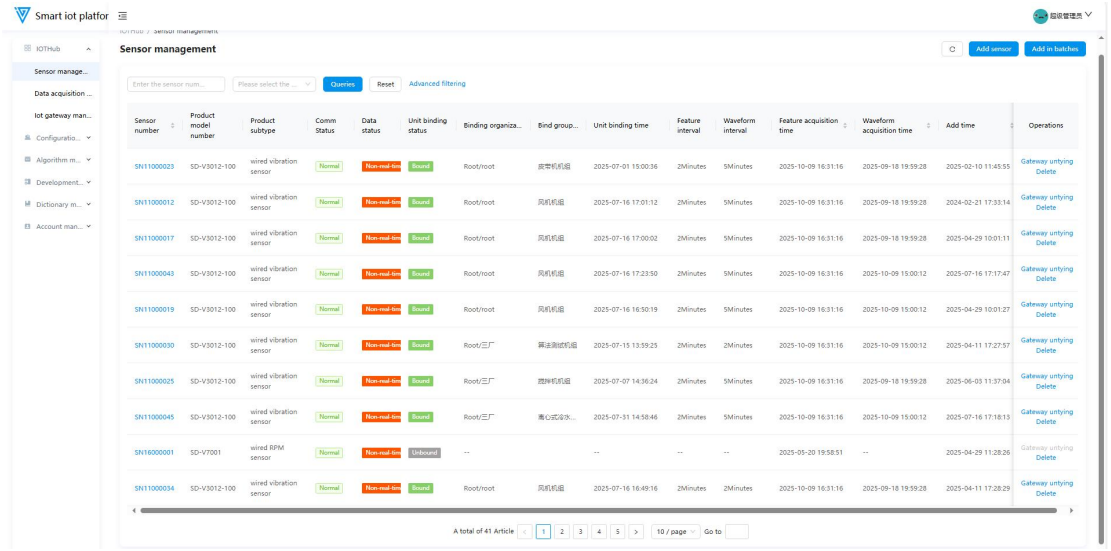


3.3IOTHub

3.3.1Sensor Management (Home Page)

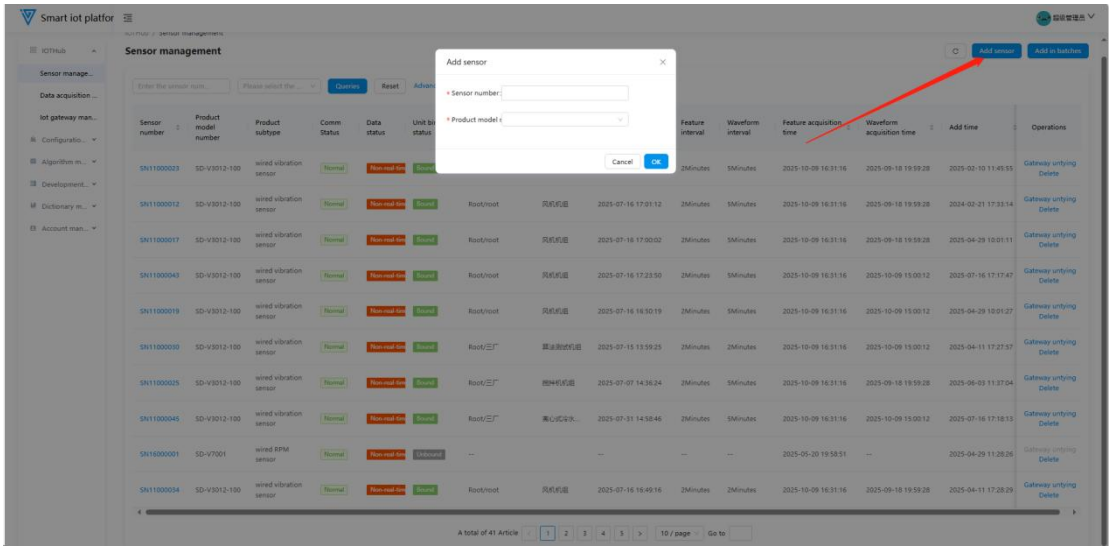
Function Overview

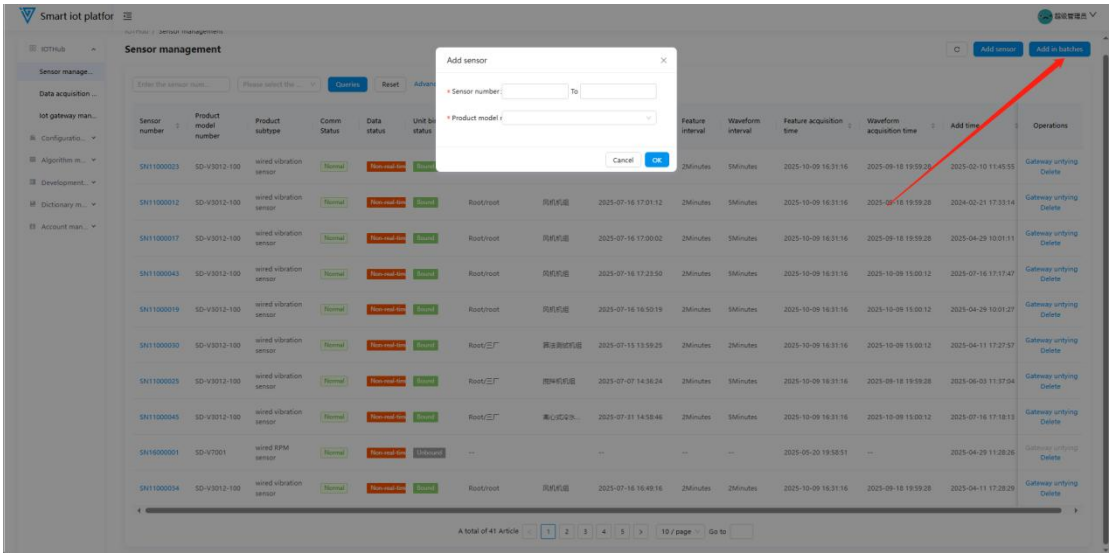
Operations personnel can use this function to add, delete, edit, and configure wired/wireless sensors.



Adding Sensors

Click **Add Sensor** or **Batch Add** in the upper-right corner of the Sensor Management page. Fill in the number information according to the rules, select the product model, and click **OK** to add.



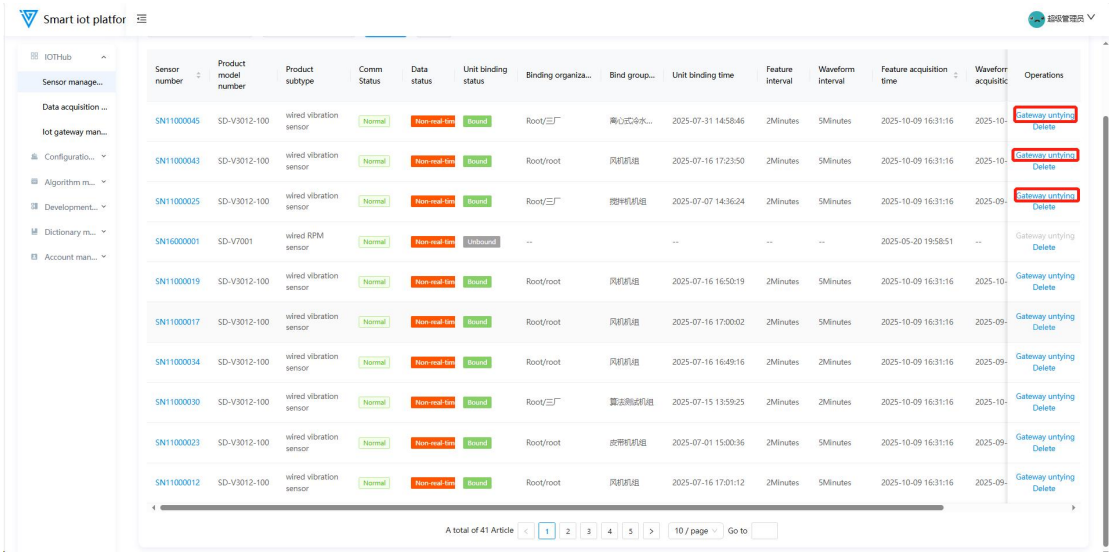


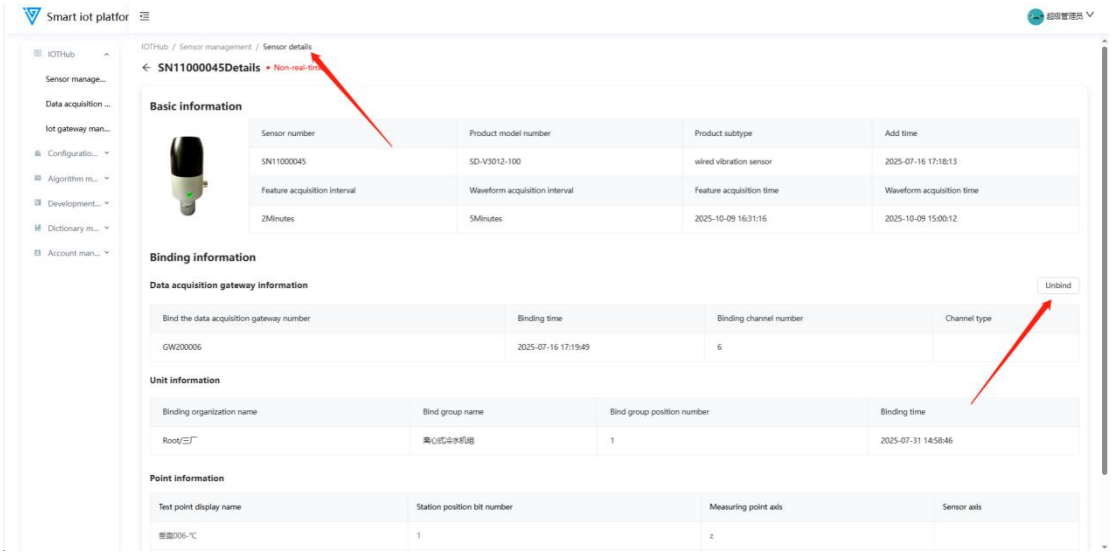
- **Sensor Numbering Rules**: Starts with **SN**, 10 digits total. The middle 2 digits indicate the monitoring type, and the last 6 digits are a unique serial number.

Product Model	Number Format	Product Type	Characteristics
SD-V3012-100	SN11XXXXXX	Single-axis wired acceleration sensor	100mg
SD-V3012-500	SN11XXXXXX	Single-axis wired acceleration sensor	500mg
SD-V3207-ZG	SN12XXXXXX	Three-axis wireless ZigBee sensor	10k
SD-V3207-4G	SN13XXXXXX	Three-axis wireless 4G-cat1 sensor	10k, 4G-cat1

Sensor Gateway Unbinding

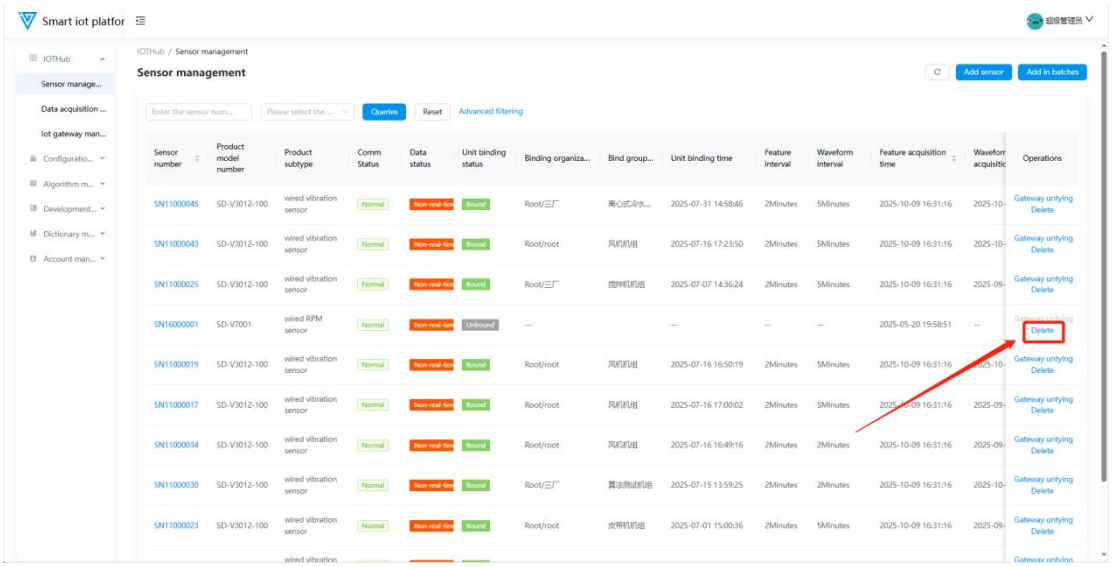
Unbind the gateway via the sensor list page or sensor details page before deleting a bound sensor.

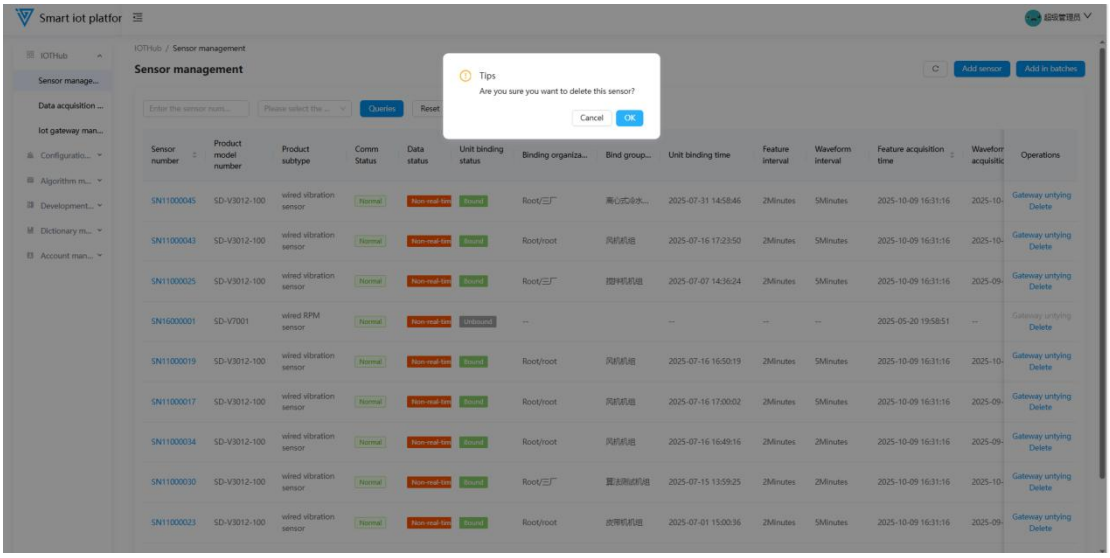




Deleting Sensors

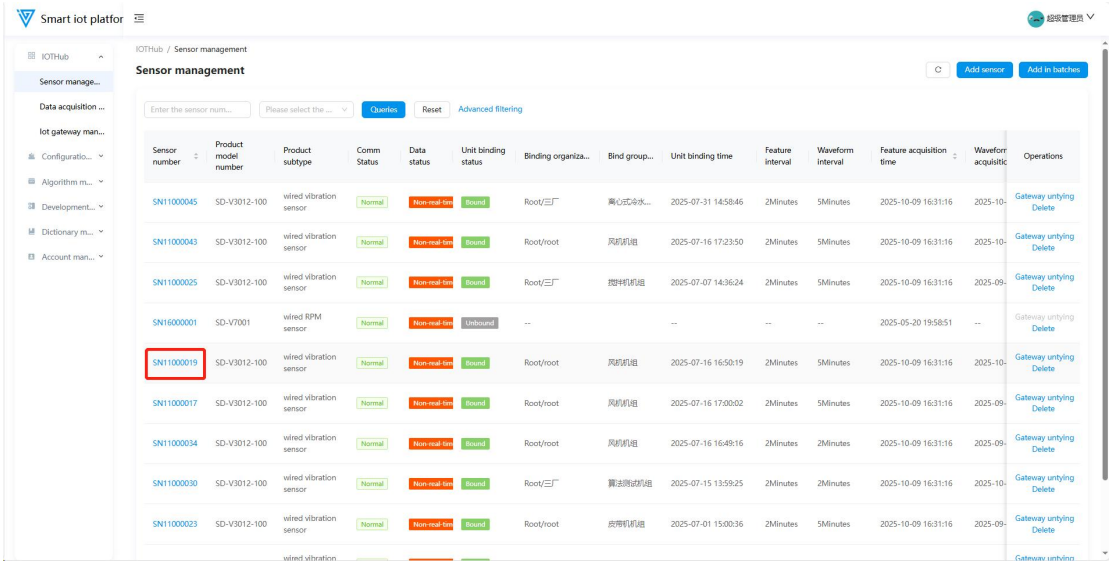
- Sensors not bound to a gateway can be deleted directly (the **Gateway Unbind** button is disabled).
- Bound sensors must be unbound from the gateway before deletion.

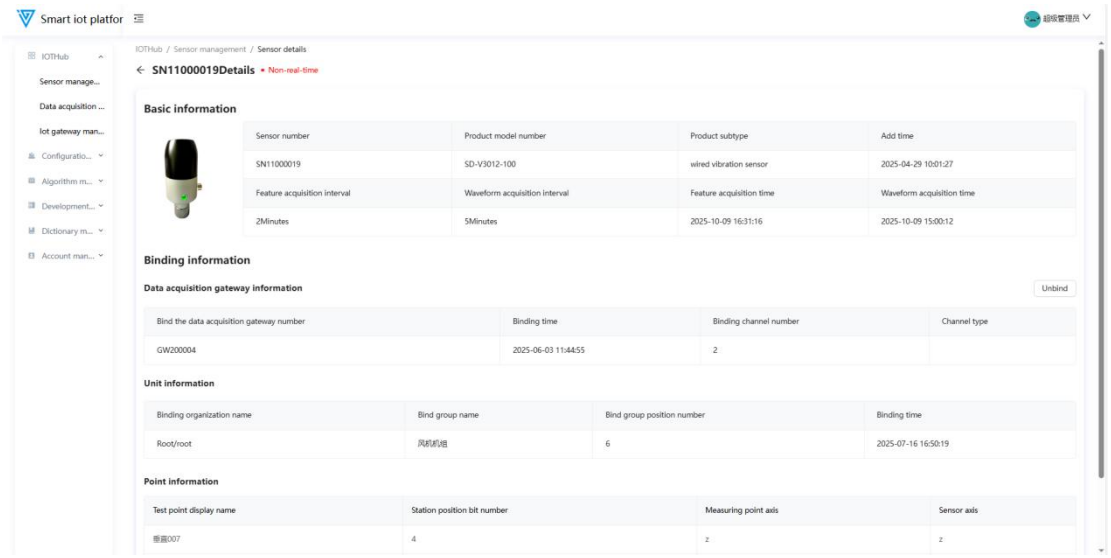




Sensor Details

Click **Details** in the sensor list to view transmission status, basic information, and binding details.

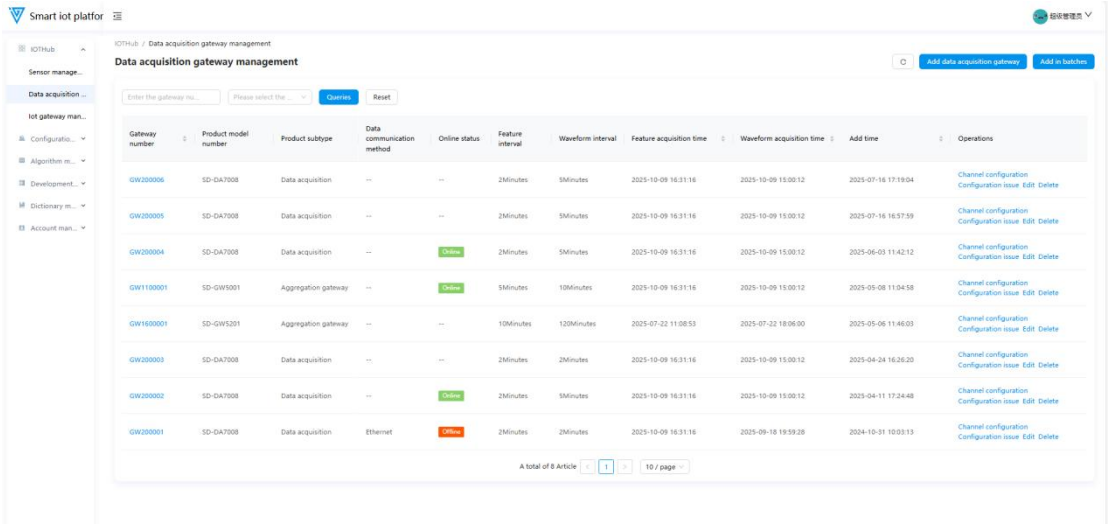




3.3.2Data Acquisition Gateway Management

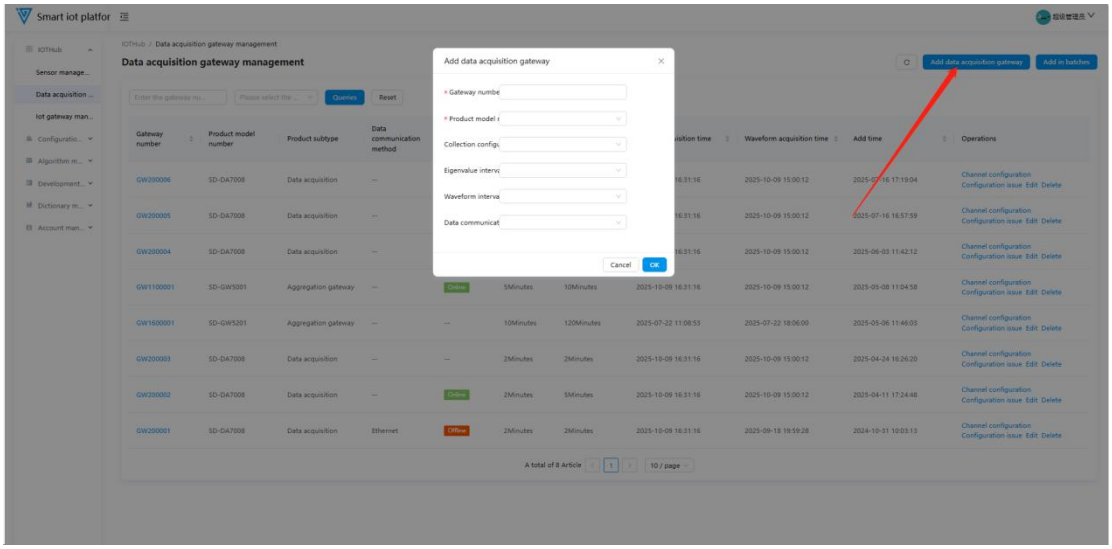
Function Overview

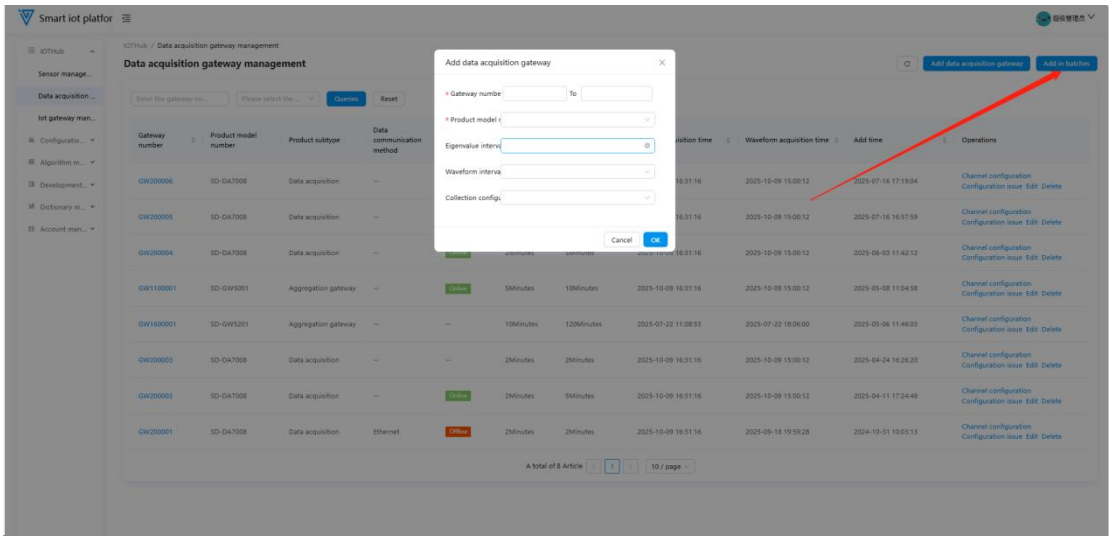
Operations personnel can use this function to add data collectors/gateways, bind sensors, deploy acquisition configurations, edit, and delete.



Adding Data Acquisition Gateways

Click **Add Data Acquisition Gateway** or **Batch Add** in the upper-right corner. Fill in **Gateway No.**, **Product Model**, **Acquisition Configuration**, **Eigenvalue Interval**, **Waveform Interval**, and **Data Communication Mode** (units for intervals are seconds by default; acquisition configurations must be added in **Dictionary Management > Acquisition Configuration**).





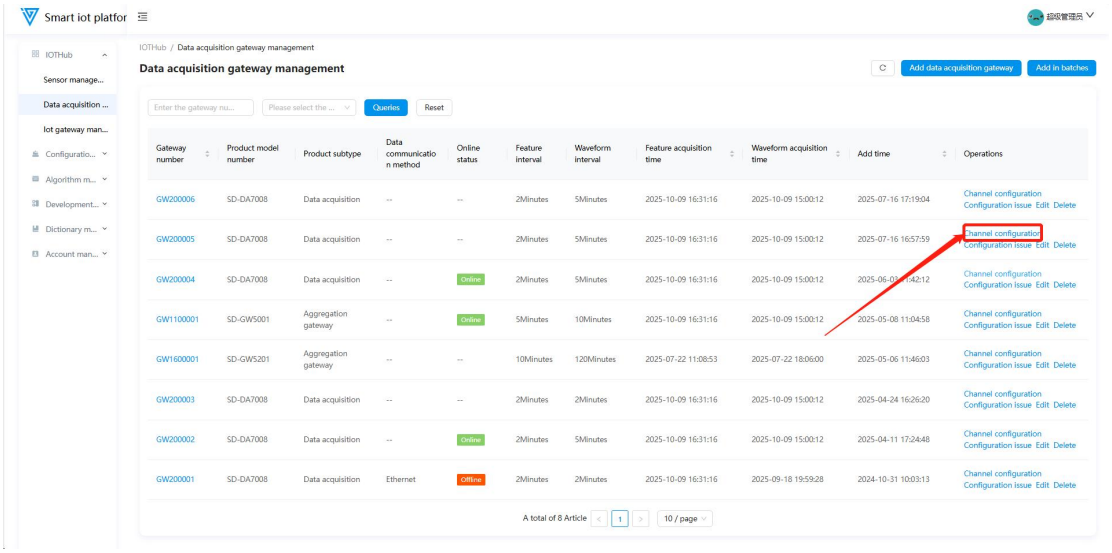
- **Gateway Numbering Rules**: Starts with **GW**, 8 digits total. The first two digits are fixed as **GW**, the middle digit indicates the gateway type, and the last 5 digits are unique.

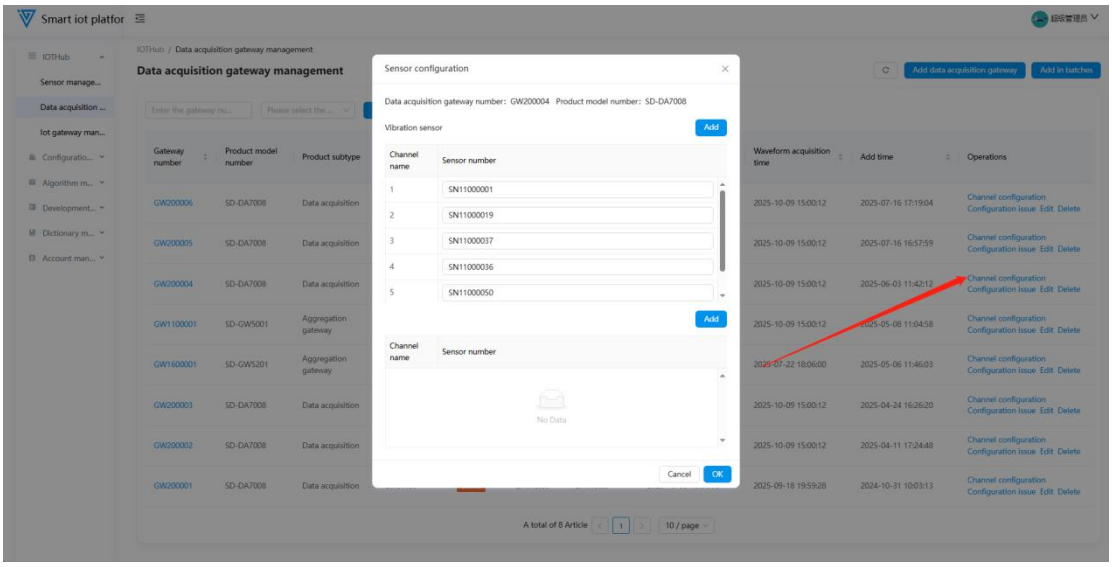
Product Model	Gateway Number Format	Product Type
SD-DA7008	GW2XXXXX	8-channel vibration collector
SD-DA7016	GW2XXXXX	16-channel vibration collector
SD-DA7024	GW2XXXXX	24-channel vibration collector
SD-GW5001/5101	GW11XXXXX-GW15XXXXX	Vibration gateway
SD-GW5200/5201	GW16XXXXX-GW19XXXXX	4G virtual gateway

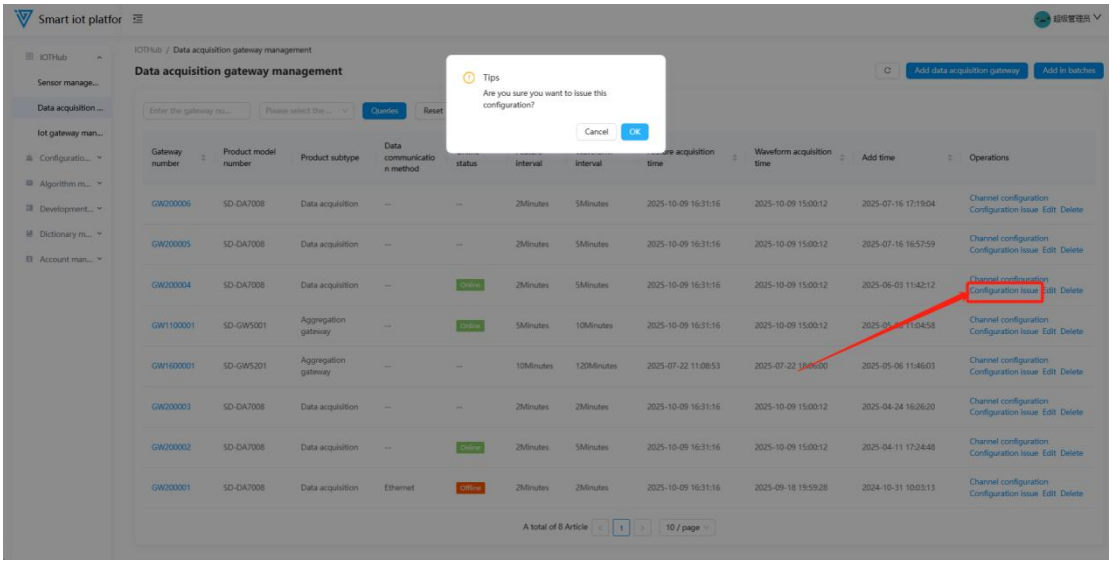
Gateway Configuration and Deployment

1. Click **Channel Configuration** to bind sensors: enter the sensor number and click **OK**.

2. Click **Configuration Deployment** to push gateway and sensor information to the data acquisition platform (requires secondary confirmation).

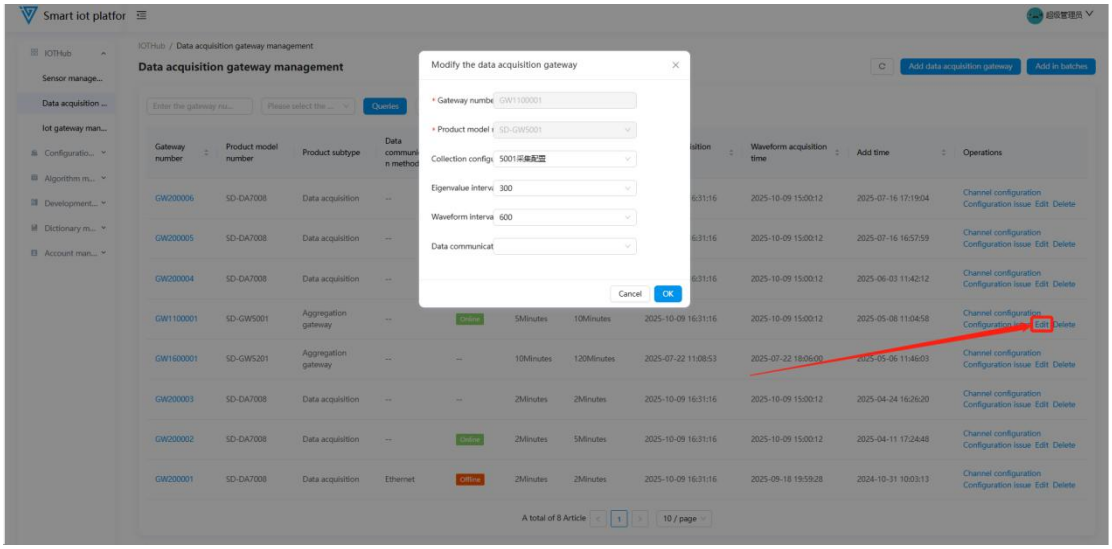

Smart iot platfor
IOTHub / Data acquisition gateway management
Data acquisition gateway management
Add data acquisition gateway
Add in batches
Queries
Reset
Gateway number
Product model number
Product subtype
Data communication method
Online status
Feature interval
Waveform interval
Feature acquisition time
Waveform acquisition time
Add time
Operations
GW200006 SD-DA7008 Data acquisition -- -- 2Minutes 5Minutes 2025-10-09 16:31:16 2025-10-09 15:00:12 2025-07-16 17:19:04
GW200005 SD-DA7008 Data acquisition -- -- 2Minutes 5Minutes 2025-10-09 16:31:16 2025-10-09 15:00:12 2025-07-16 16:57:59
GW200004 SD-DA7008 Data acquisition -- Online 2Minutes 5Minutes 2025-10-09 16:31:16 2025-10-09 15:00:12
GW1100001 SD-GW5001 Aggregation gateway -- Online 5Minutes 10Minutes 2025-10-09 16:31:16 2025-10-09 15:00:12 2025-05-08 11:04:58
GW1600001 SD-GW5201 Aggregation gateway -- -- 10Minutes 120Minutes 2025-07-22 11:08:53 2025-07-22 18:06:00 2025-05-06 11:46:03
GW200003 SD-DA7008 Data acquisition -- -- 2Minutes 2Minutes 2025-10-09 16:31:16 2025-10-09 15:00:12 2025-04-24 16:26:20
GW200002 SD-DA7008 Data acquisition -- Online 2Minutes 5Minutes 2025-10-09 16:31:16 2025-10-09 15:00:12 2025-04-11 17:24:48
GW200001 SD-DA7008 Data acquisition Ethernet Offline 2Minutes 2Minutes 2025-10-09 16:31:16 2025-09-18 19:59:28 2024-10-31 10:03:13
Channel configuration
Configuration issue Edit Delete
A total of 8 Article
10 / page


Smart iot platfor
Data acquisition gateway management
Sensor configuration
Data acquisition gateway number: GW200004 Product model number: SD-DA7008
Vibration sensor
Add
Channel name
Sensor number
1 SN11000001
2 SN11000019
3 SN11000037
4 SN11000036
5 SN11000050
No Data
Cancel
OK


Smart iot platfor
Data acquisition gateway management
Tips
Are you sure you want to issue this configuration?
Cancel
OK
Configuration issue

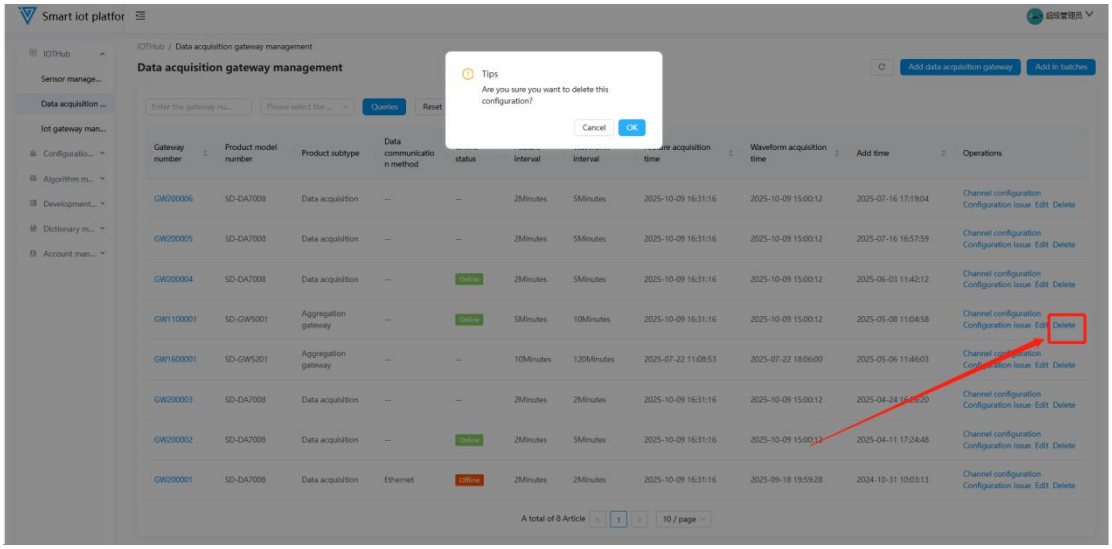
Editing Gateways

Click **Edit** to modify gateway information (**Gateway No.** and **Product Model** cannot be edited).



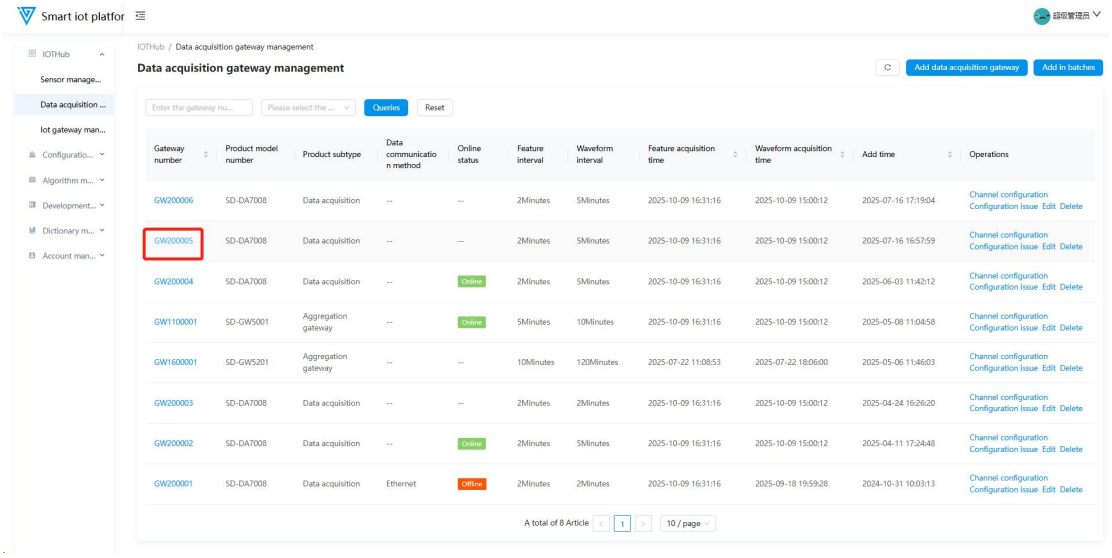
Deleting Gateways

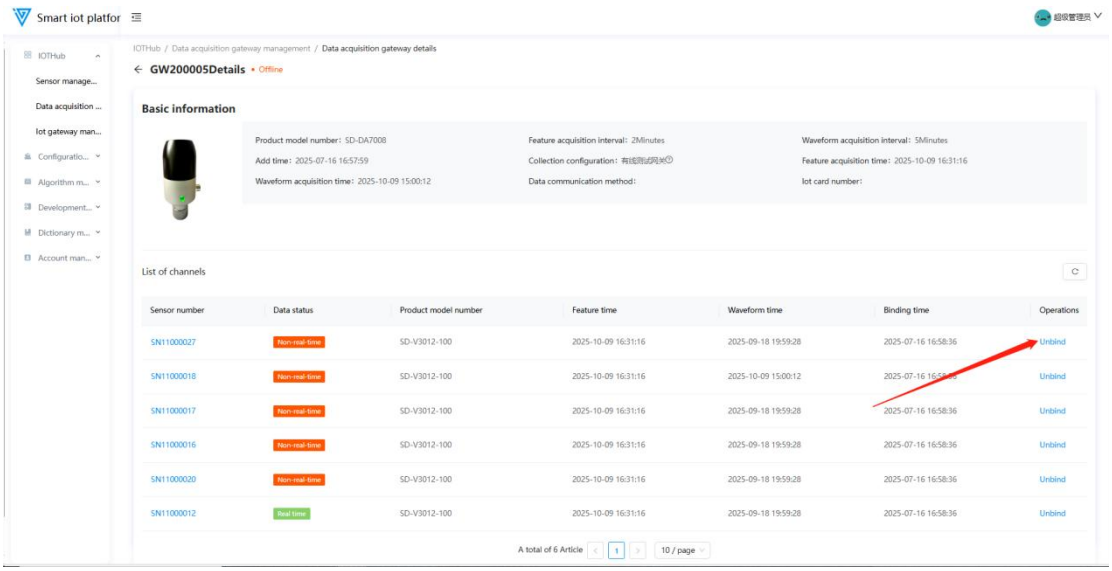
- Unbind all sensors before deleting a gateway (deletion is disabled for bound gateways).
- Delete directly if no sensors are bound.



Gateway Details

Click the gateway number in the list to view basic information and bound sensors (unbind sensors on the details page).

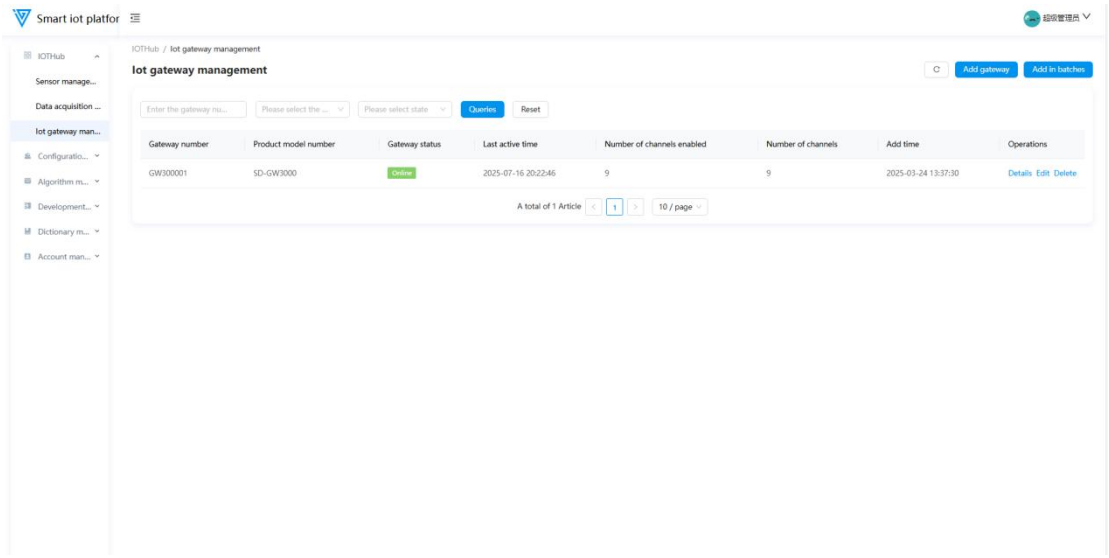




3.3.3IOT Gateway Management

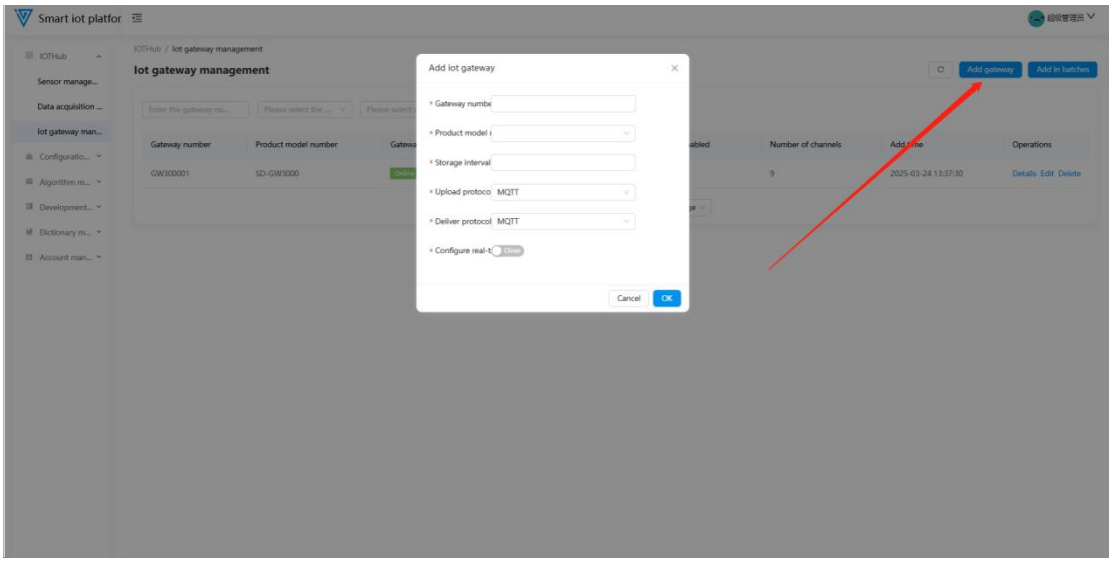
Function Overview

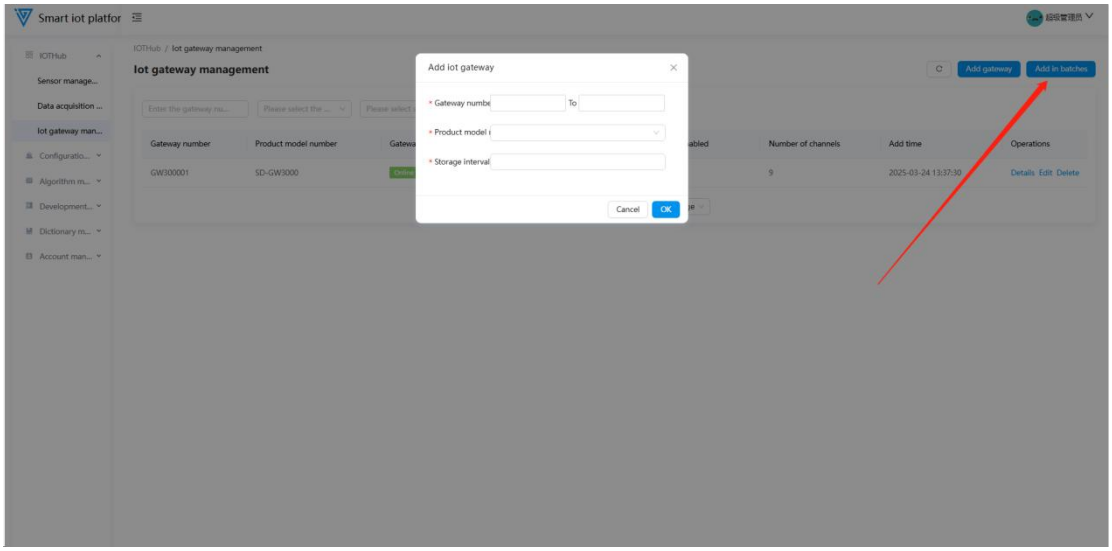
Operations personnel can use this function to add, edit, configure points, and delete IOT gateways.



Adding IOT Gateways

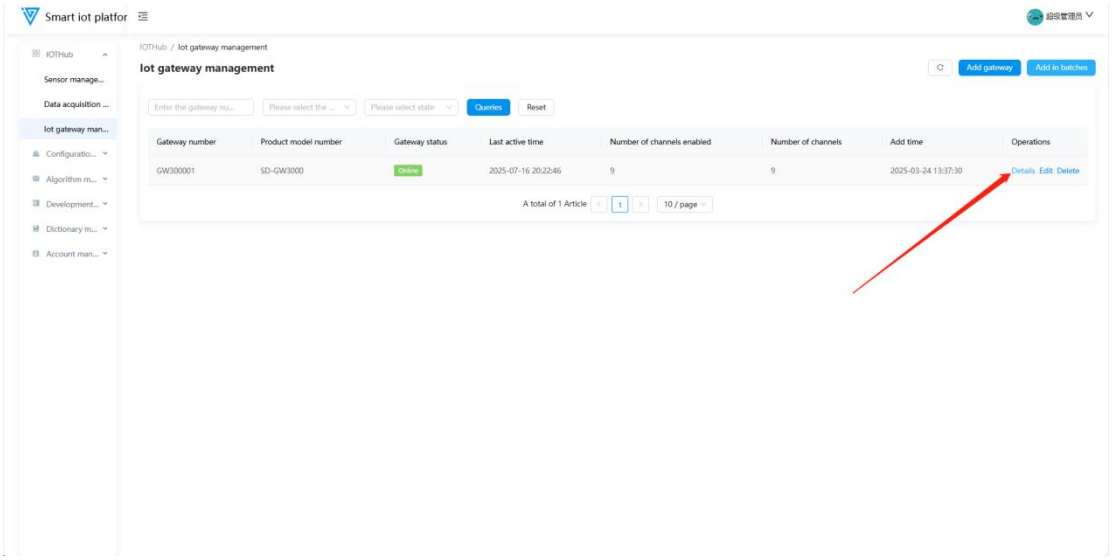
- Current supported product model: **SD-GW3000**.
- Supported protocols: **RMQ**, **MQTT**, **OPCUA**, **API**, **Page Integration**.
- The **Configuration Real-time Forwarding** switch (disabled by default) determines whether process data is forwarded to the configuration platform.

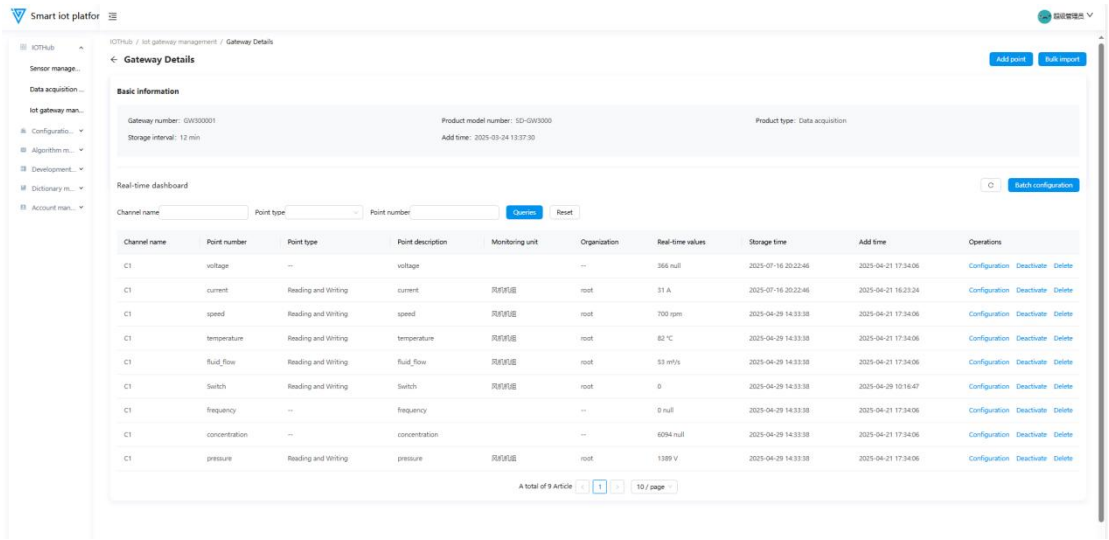


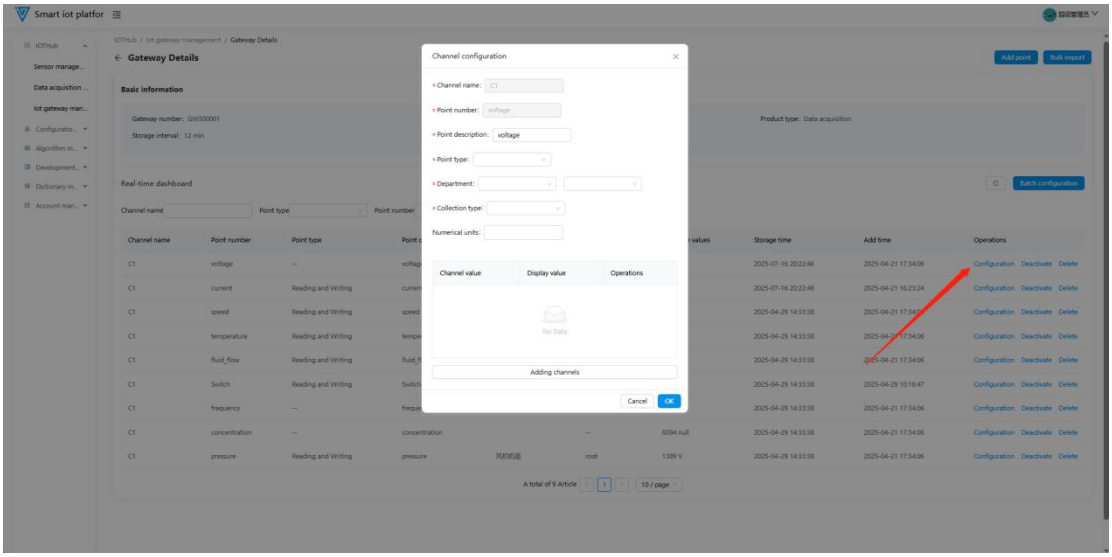


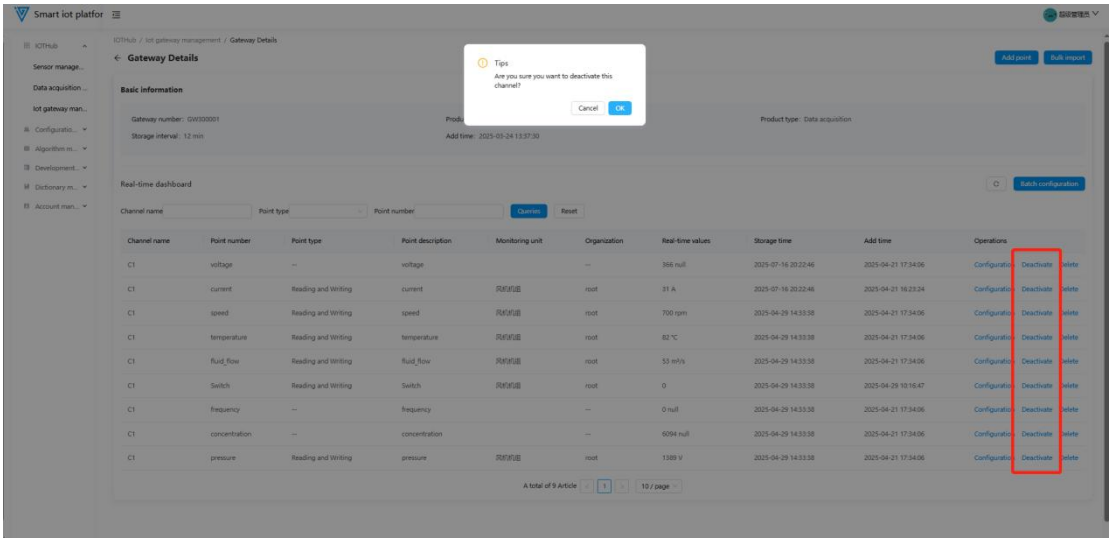
IOT Gateway Details

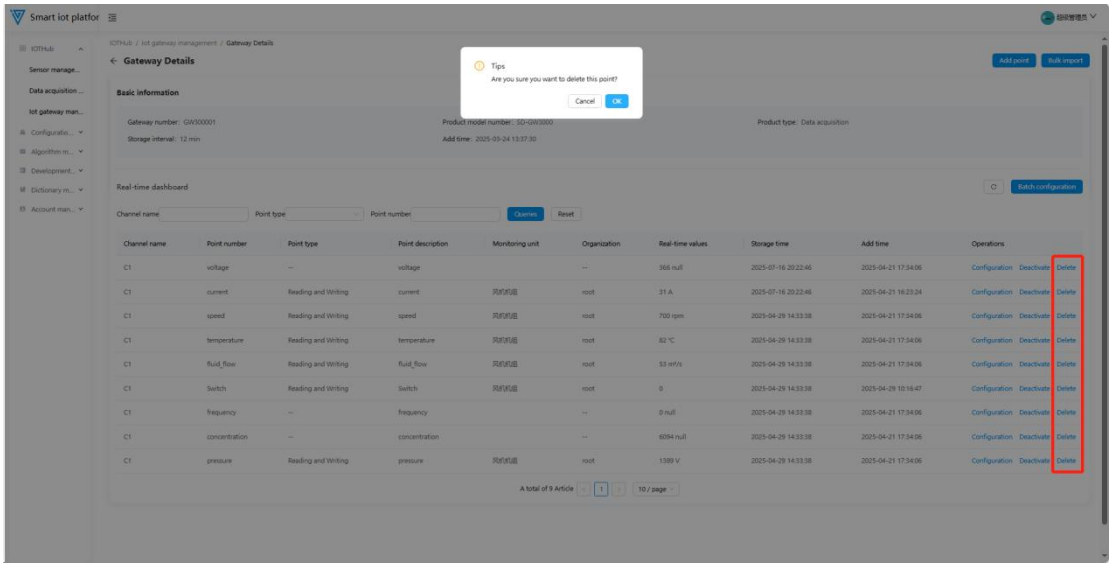
Click **Details** to view basic information and real-time process point dashboards (configure/enable/disable/delete points on this page).




Smart iot platfor
Gateway Details
Add point
Bulk import
Basic information
Real-time dashboard
Batch configuration

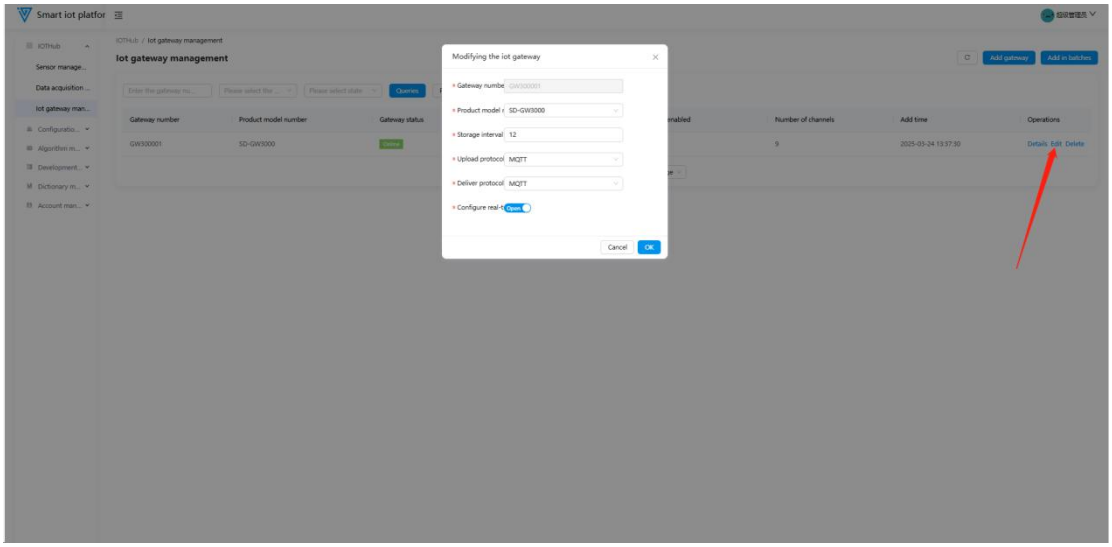

Smart iot platfor
Gateway Details
Channel configuration
Adding channels
Cancel
OK


Smart iot platfor
Gateway Details
Tips
Are you sure you want to deactivate this channel?
Cancel
OK



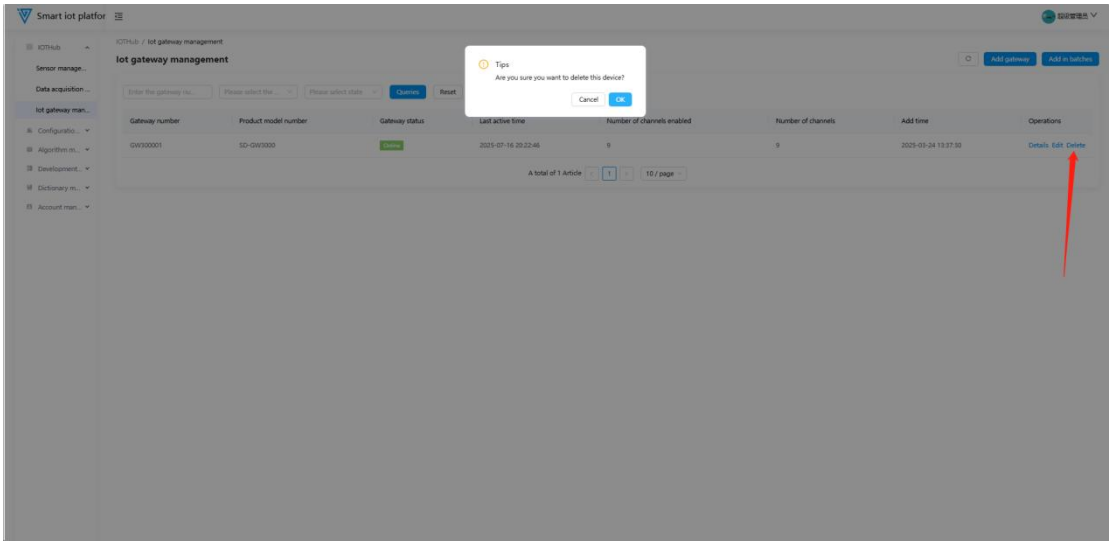
Editing IOT Gateways

Click **Edit** in the operation column to modify gateway information.



Deleting IOT Gateways

Unbind all points before deleting. Click **Delete** in the list (requires secondary confirmation).

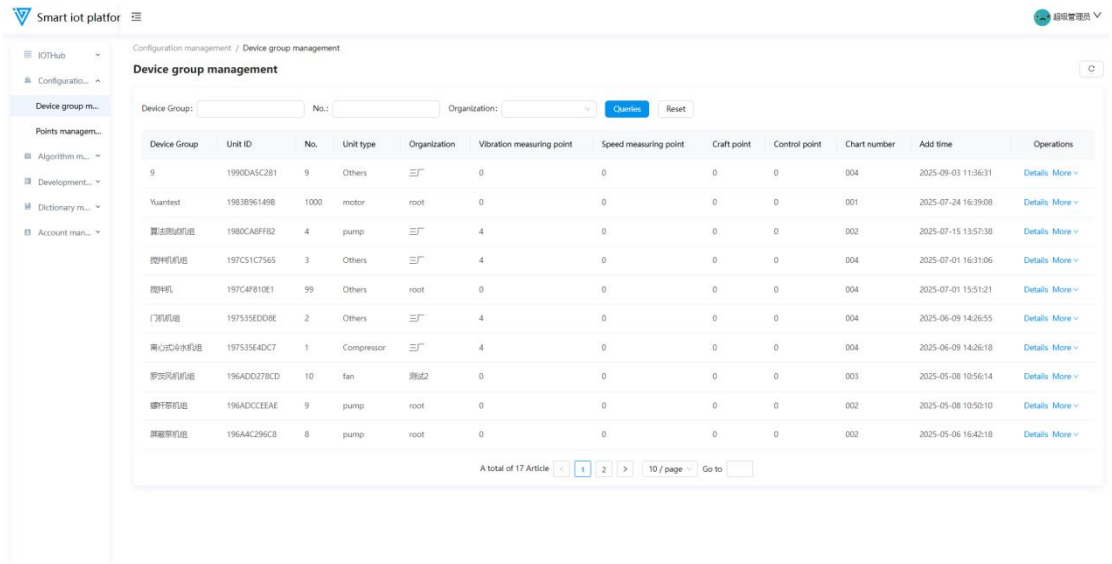


3.4Configuration Management

3.4.1Unit Management

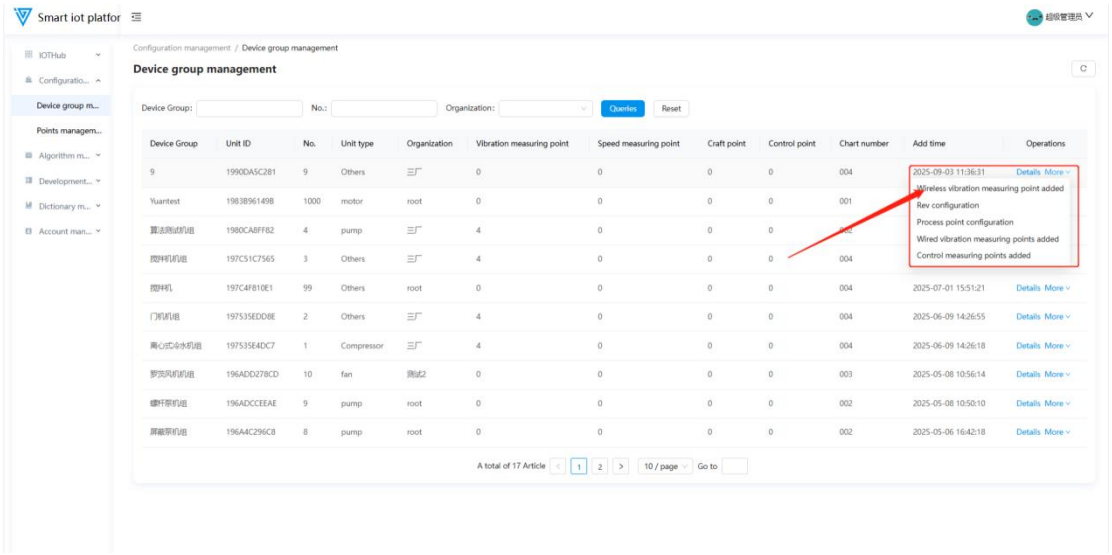
Function Overview

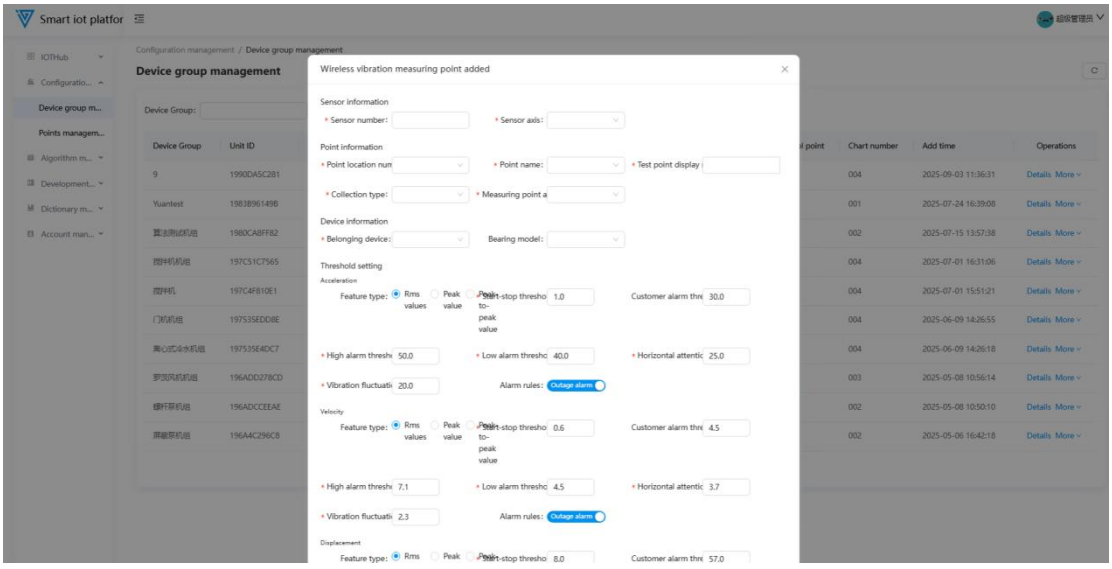
Add/edit/delete units, add measuring points, and view unit details.



Adding Wireless Vibration Measuring Points

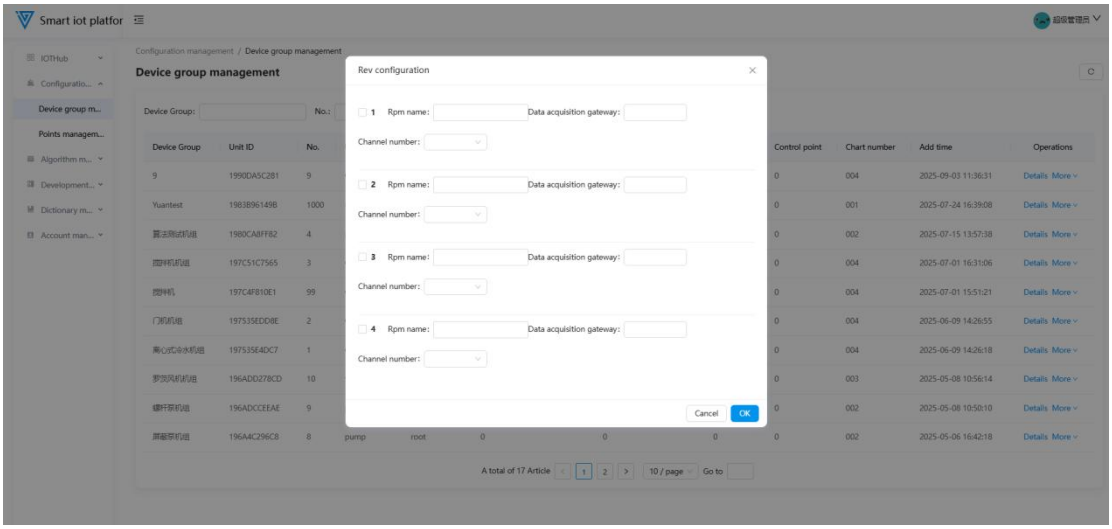
Click **More** → **Add Wireless Vibration Measuring Point** behind the unit, and fill in information in the pop-up window.





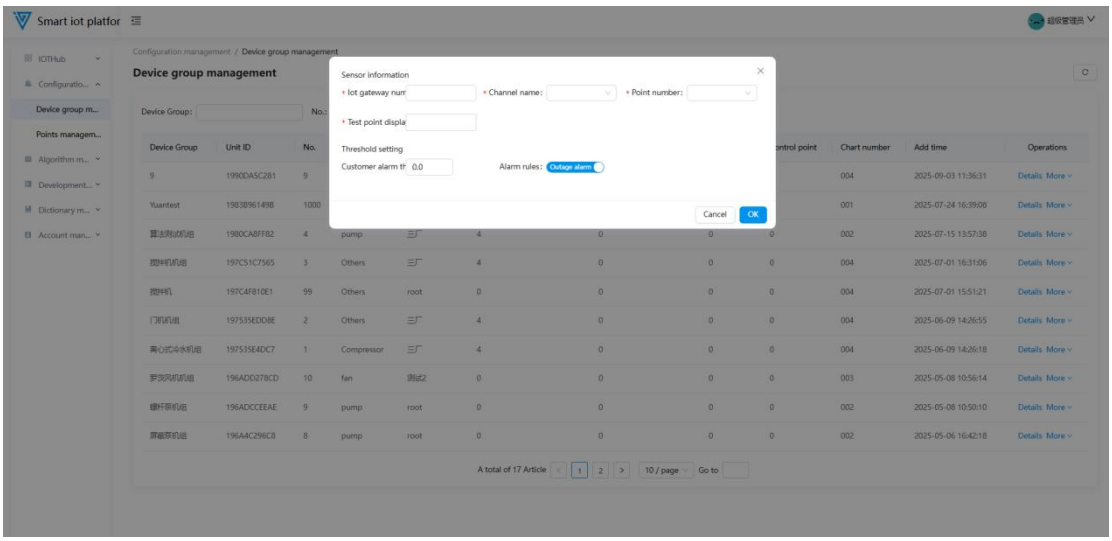
Speed Configuration

Click **More** → **Speed Configuration** behind the unit, and fill in information in the pop-up window.



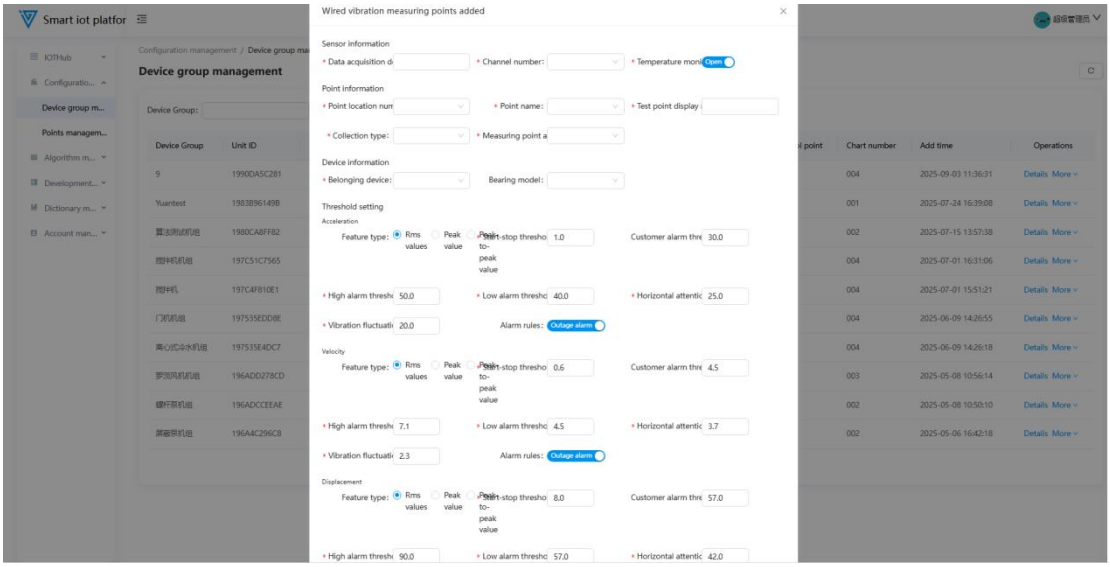
Process Measuring Point Configuration

Click **More** → **Process Measuring Point Configuration** behind the unit, and fill in information in the pop-up window.



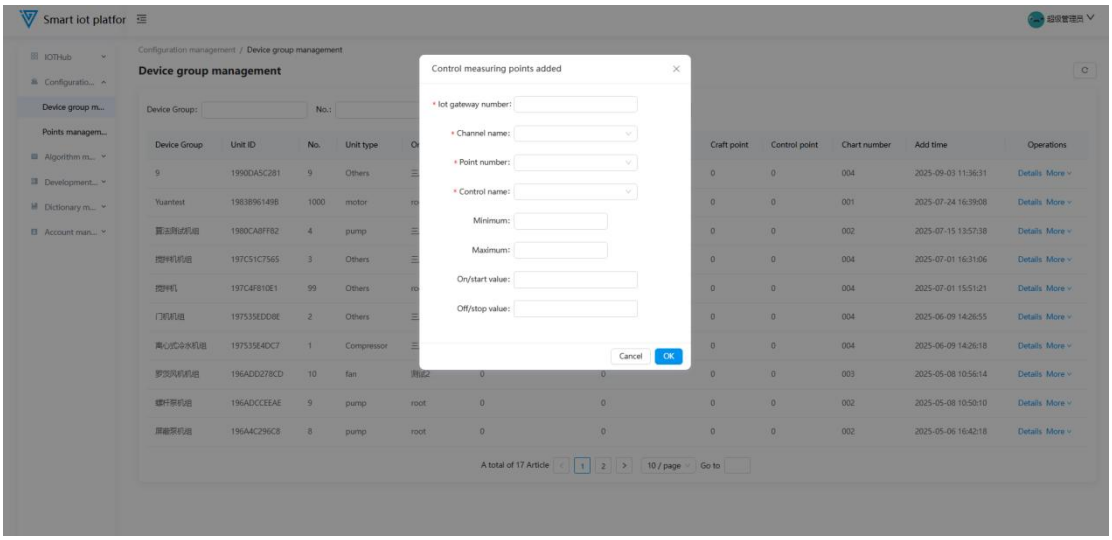
Adding Wired Vibration Monitoring Points

Click the More button behind the unit and select "Add Wired Vibration Monitoring Point". Fill in the information in the pop-up window to add it.



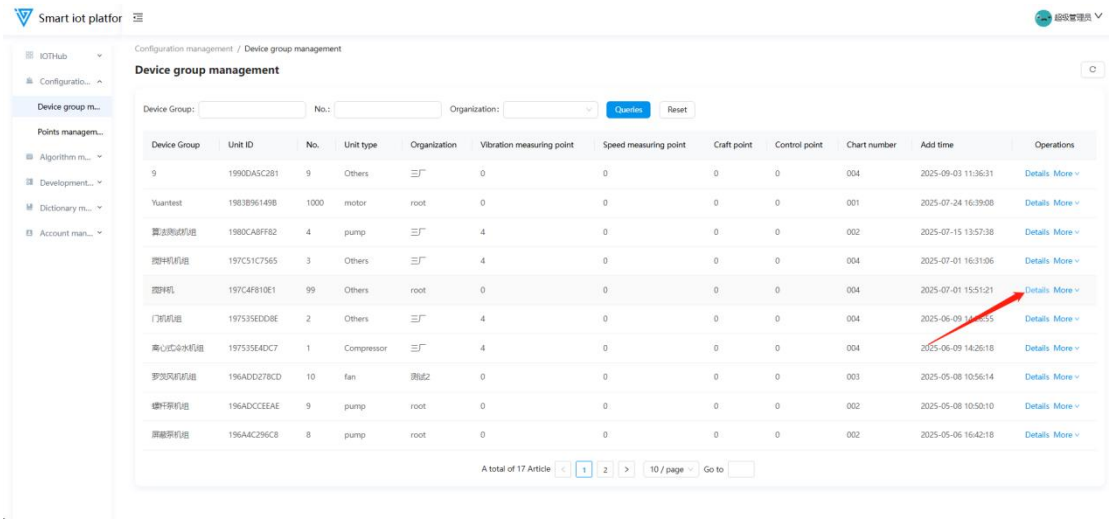
Adding Control Monitoring Points

Click the More button behind the unit and select "Add Control Monitoring Point". Fill in the information in the pop-up window to add it.

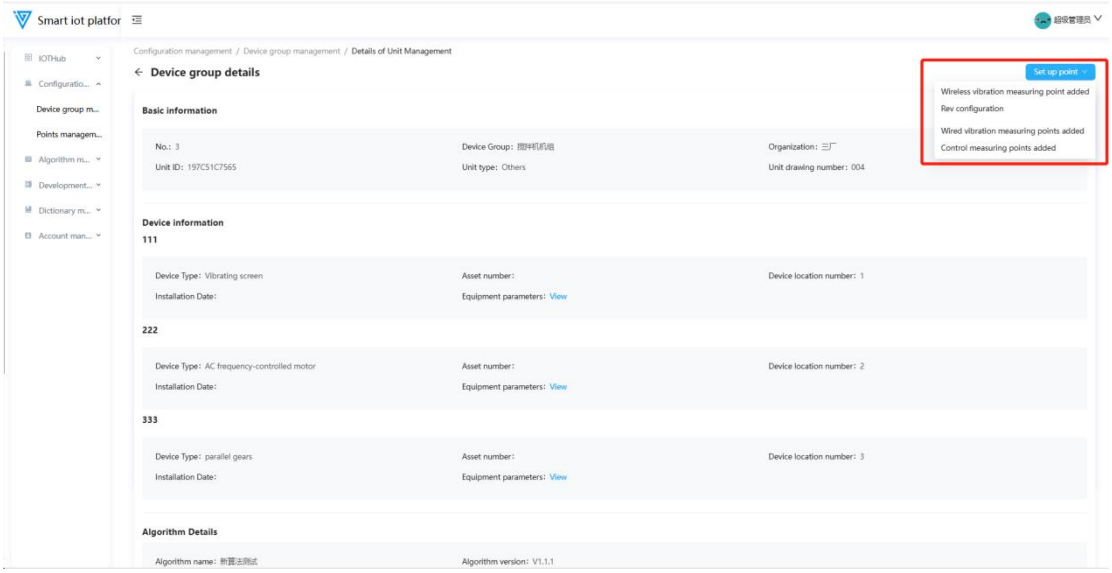


Unit Details

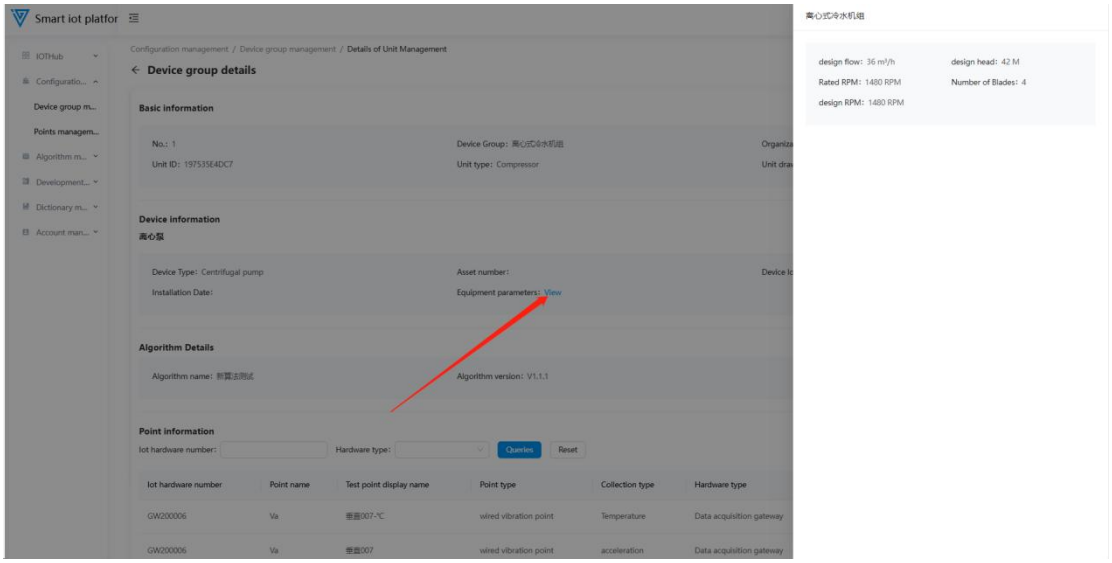
Click **Details** behind the unit to enter the details page (configure measuring points, trigger algorithm learning, view parameters, etc.).



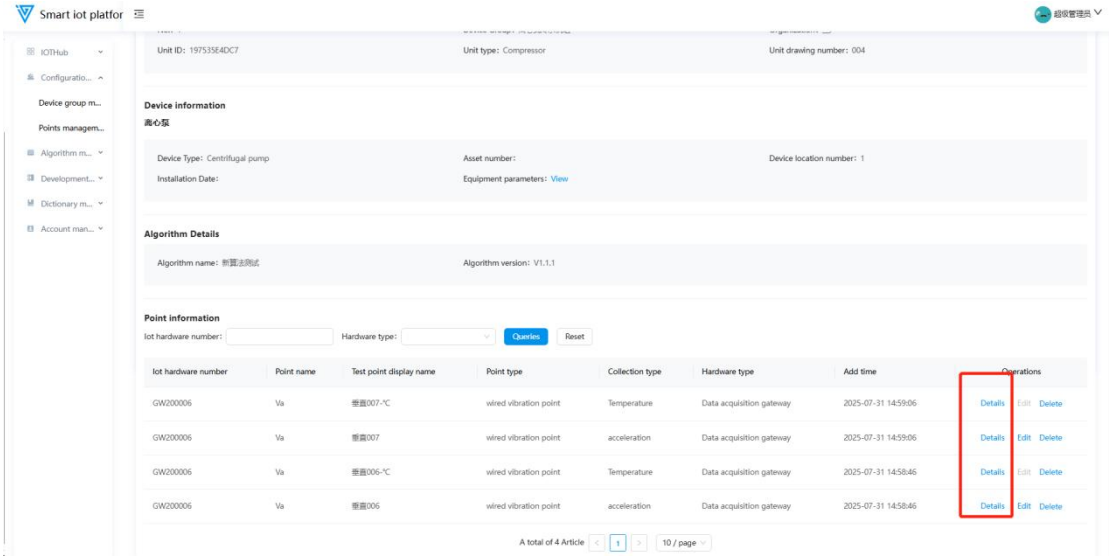
- Click **Configure Measuring Points** in the upper-right to add wireless vibration/wired vibration/process/control points.

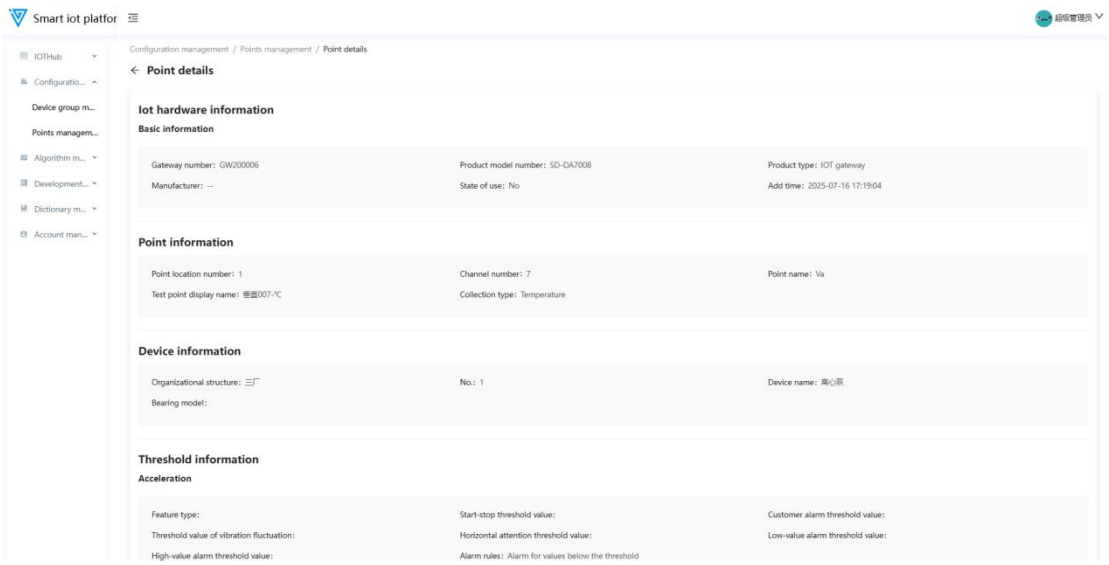


- Click **Learn** to trigger manual algorithm learning (click the blue **times** below to view learning details).

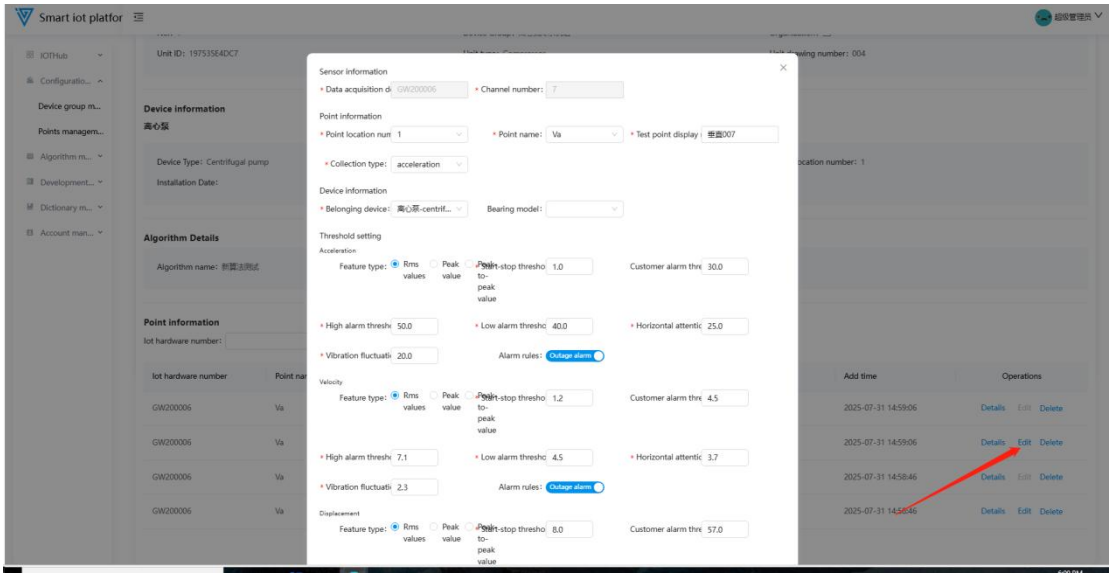


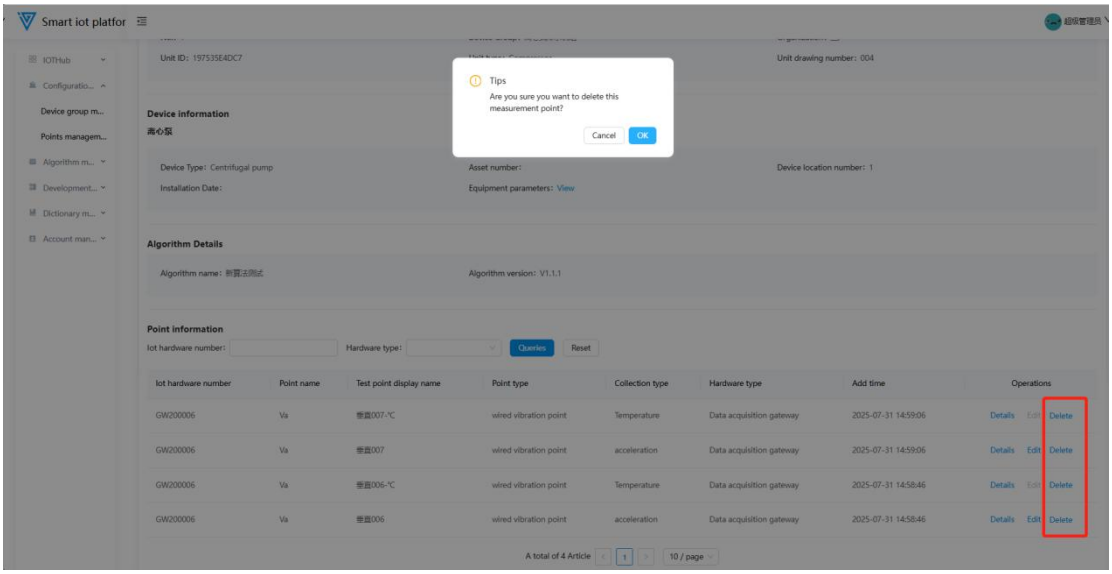
- Click **View** (blue text) to view device parameters.
- View measuring point details below.





- Edit/delete operations:

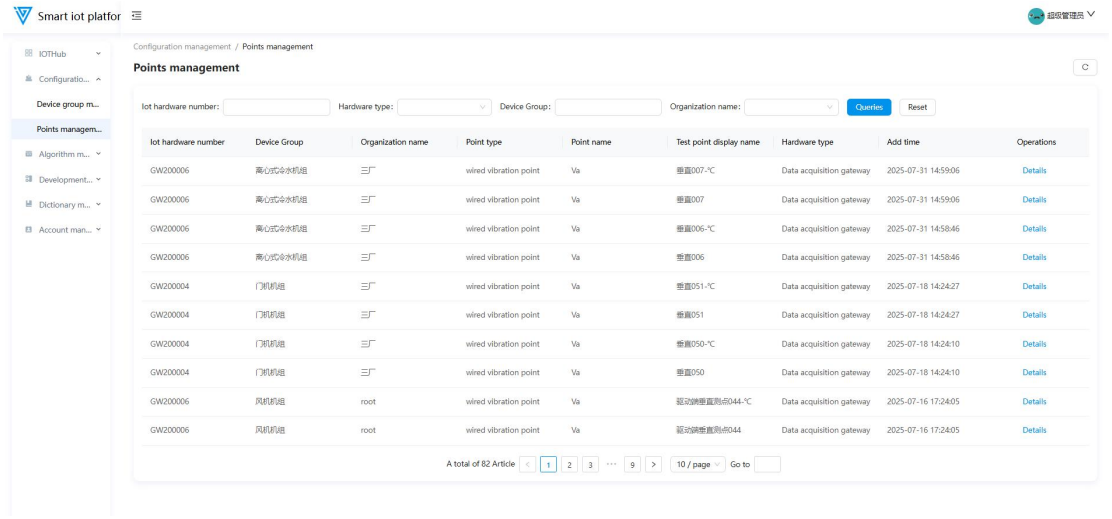




3.4.2Monitoring Point Management

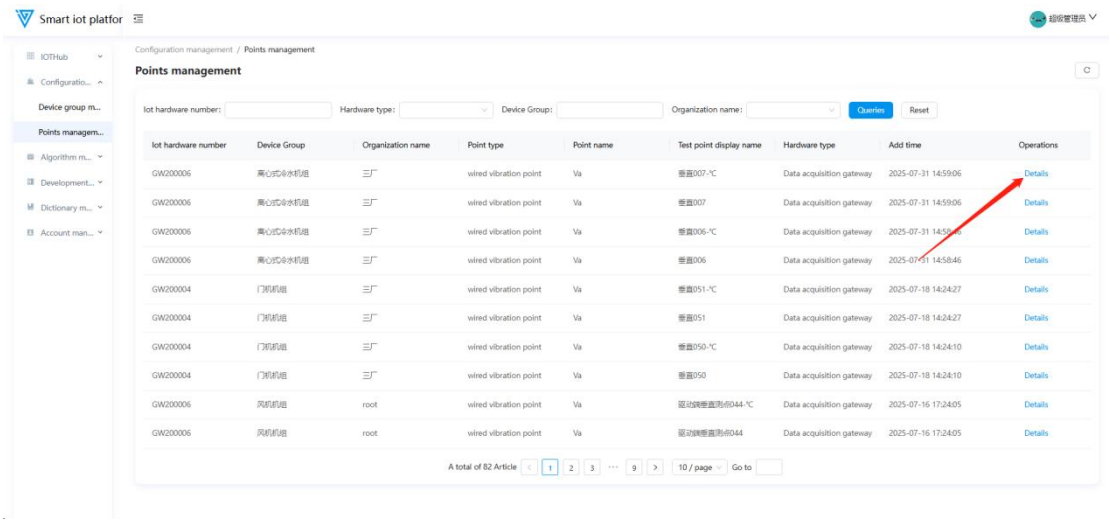
Function Overview

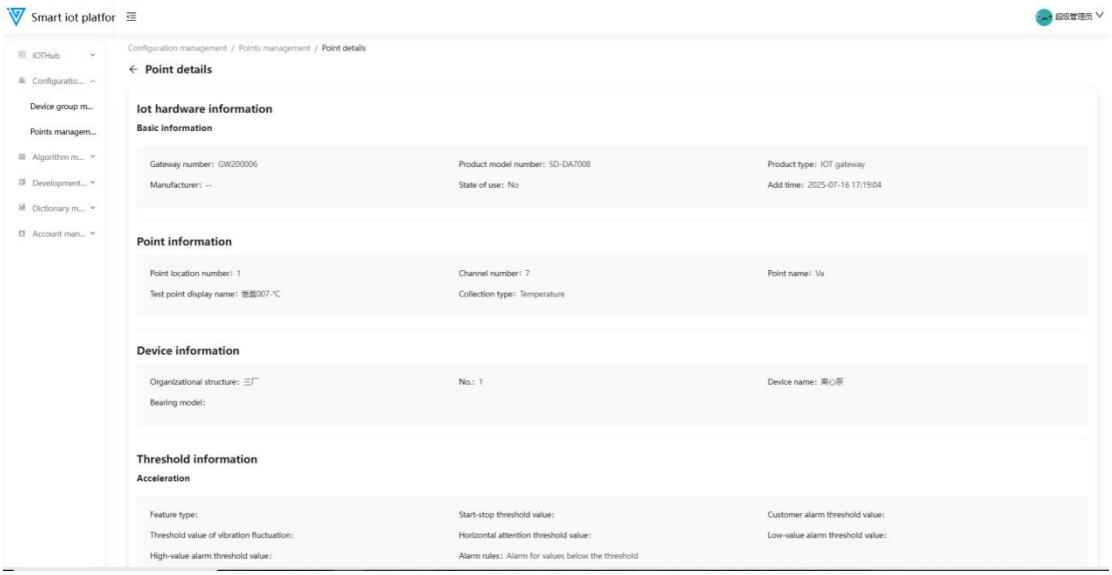
Centrally manages monitoring point information for IoT devices, providing capabilities for data display, quick search, hierarchical navigation, and operational management.



Viewing Details

Click the Details button behind a monitoring point to view its specific details.

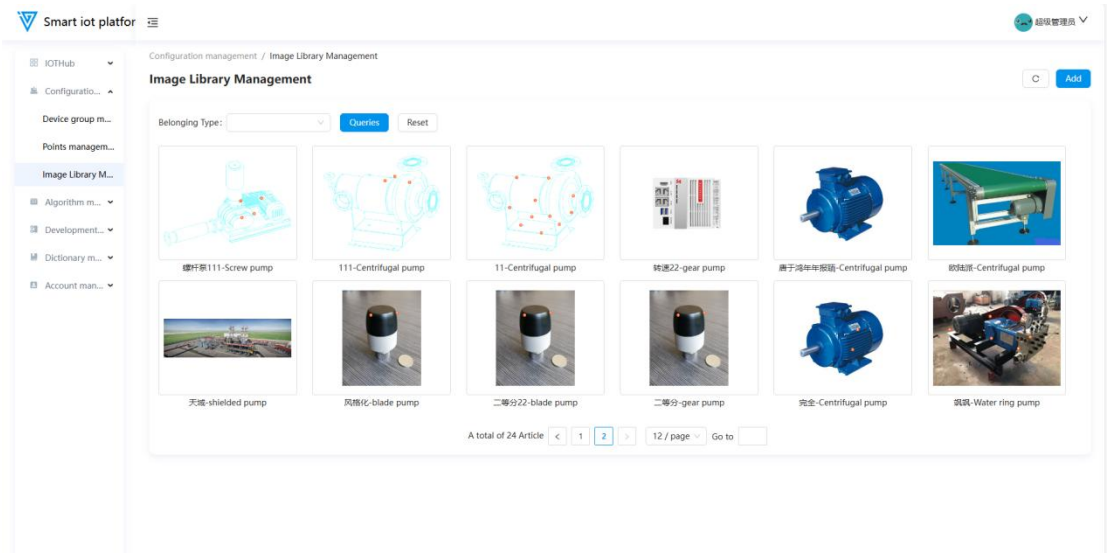




3.4.3Image Library Management

Function overview

The Image Library Management List displays images as cards which are sorted in a reverse chronological order by the creation dates. You can add, edit, search, and delete these cards.



Click the image to open a pop-up window, thereby showing an enlarged image.

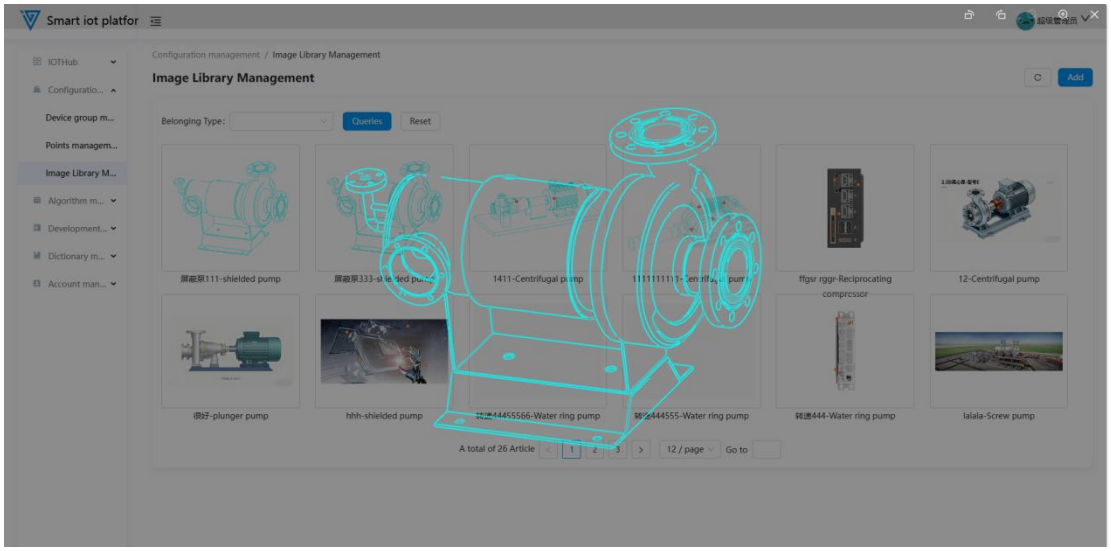
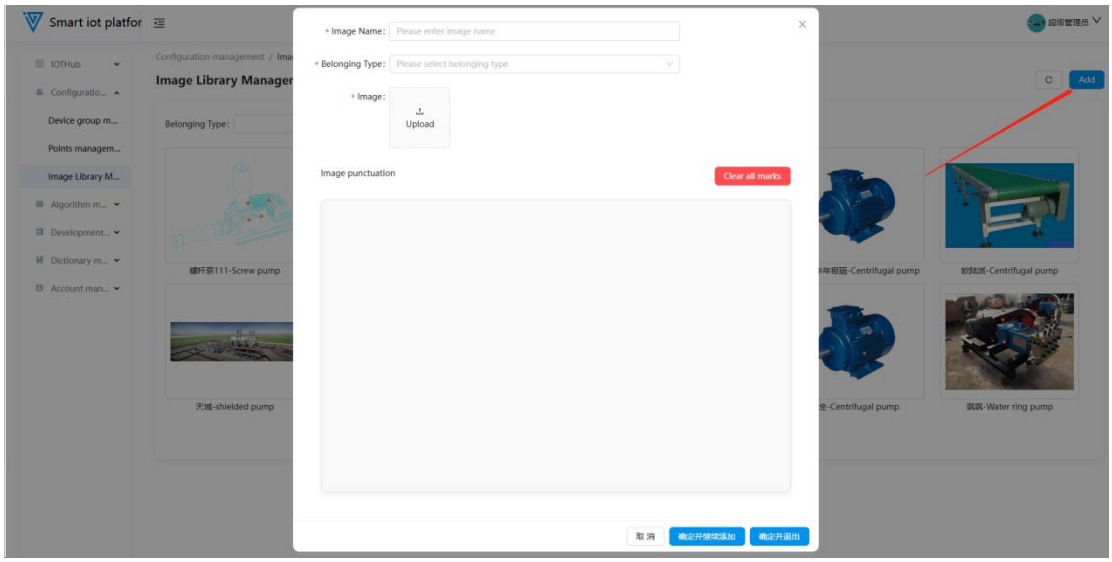
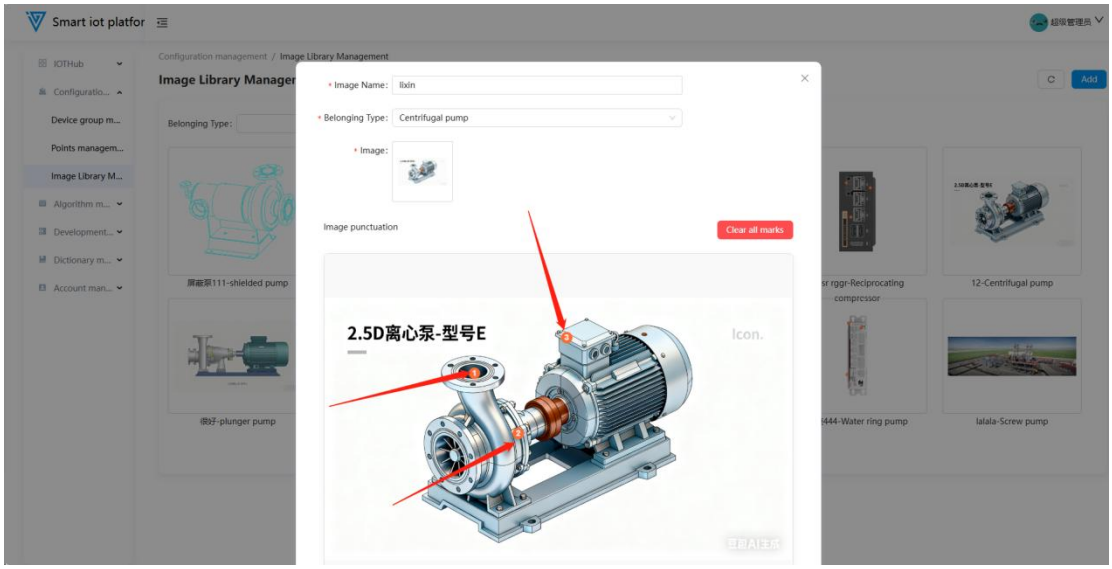


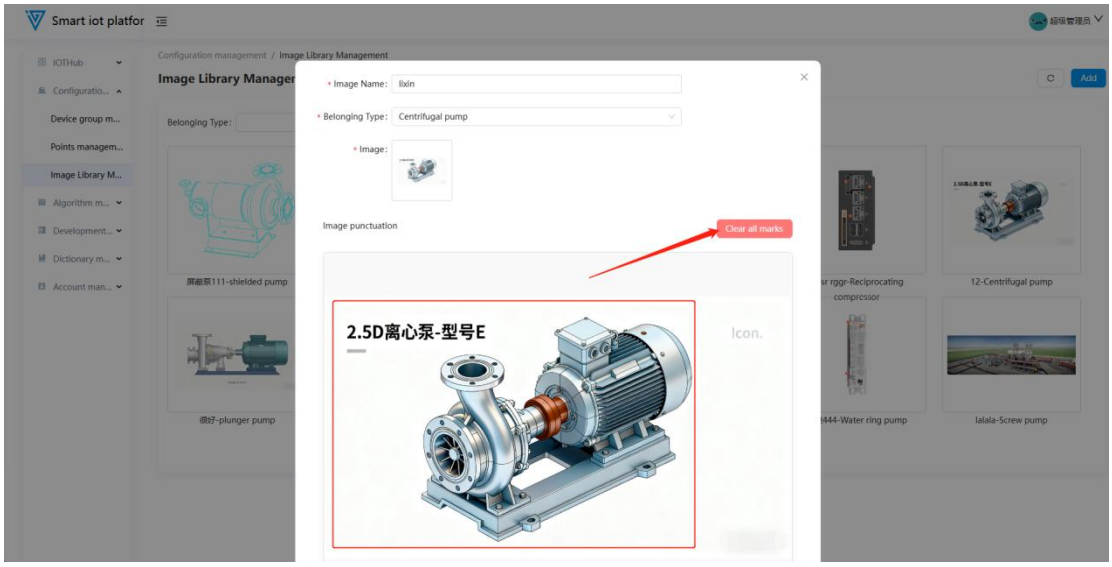
Image addition

Click the “Add” button to open the “Add Image” pop-up window. Fill in the required information within the pop-up window to add an image. “Image Name” and “Belonging Type” are mandatory fields.

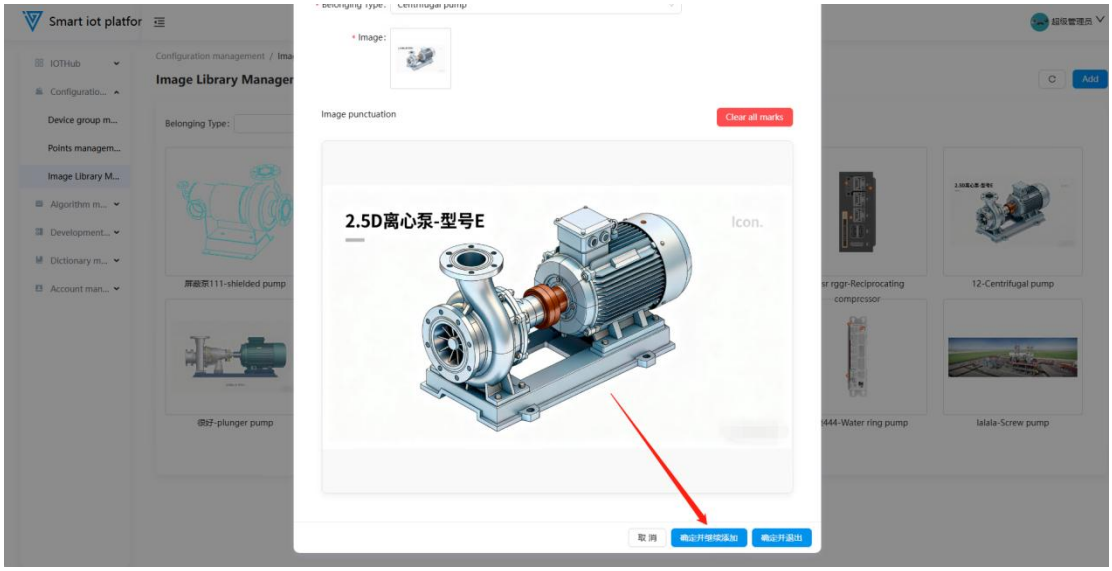


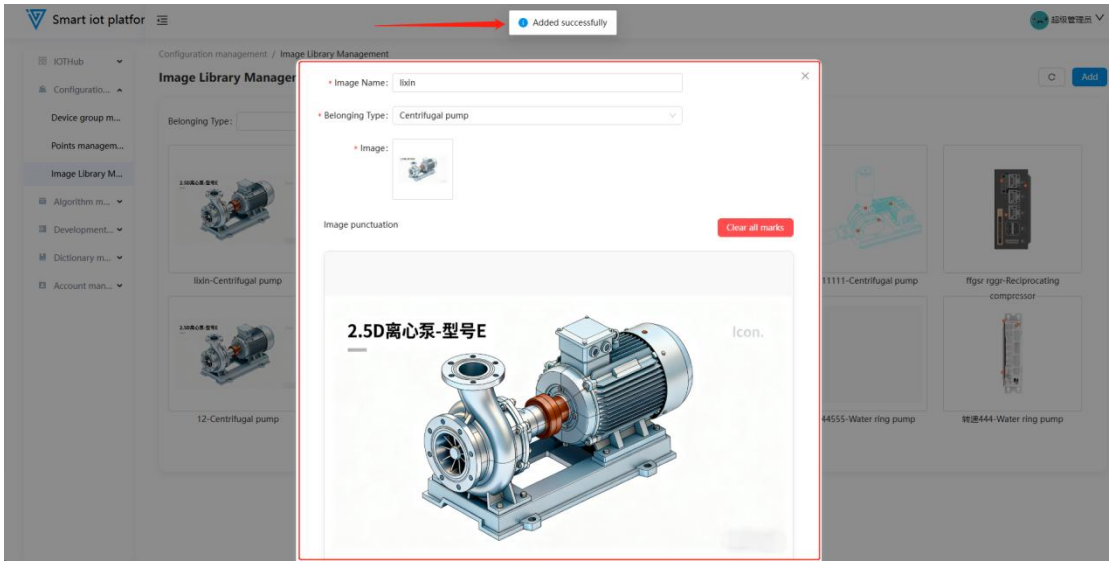
To add image punctuation, simply click the relevant area of the images. The punctuation numbers will increment sequentially. Click the “Clear All Markers” button in the upper right corner to remove all recently added markers from the image.



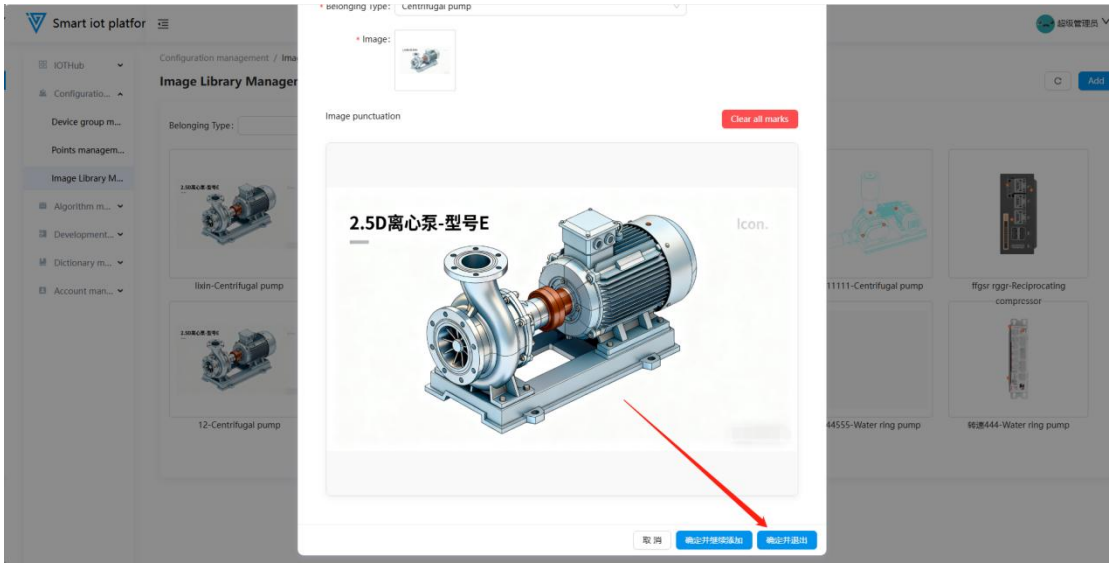


To save the adding content, click the “Confirm and Continue Adding” button to save the current image information. The pop-up window will remain open, and the entered content will not be cleared. You can change the image name and continue adding.





Click the “Confirm and Exit” button to save the current image information. The pop-up window will be closed, and the form contents will be cleared.



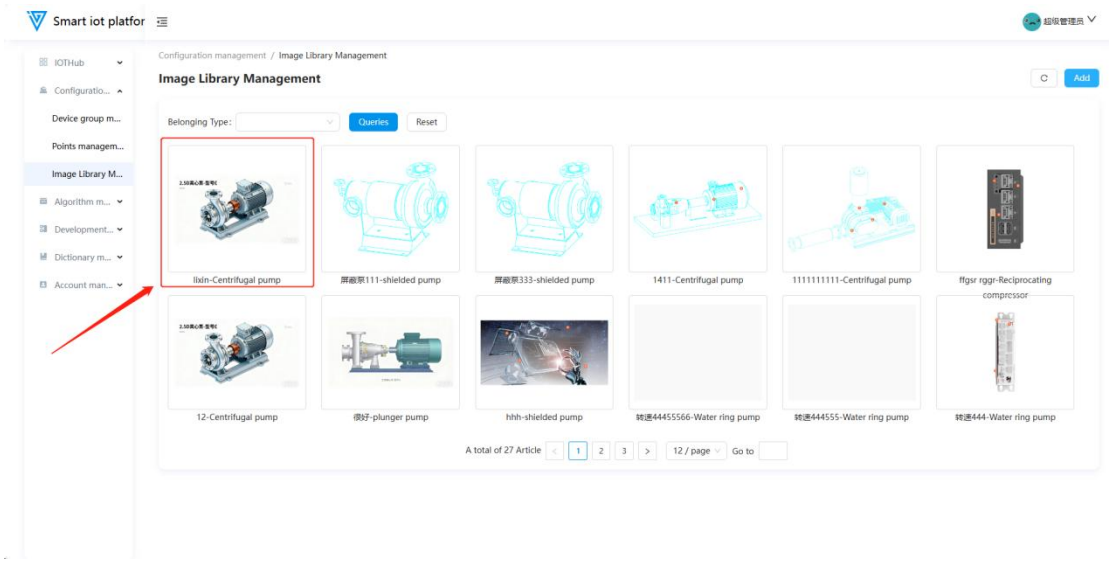
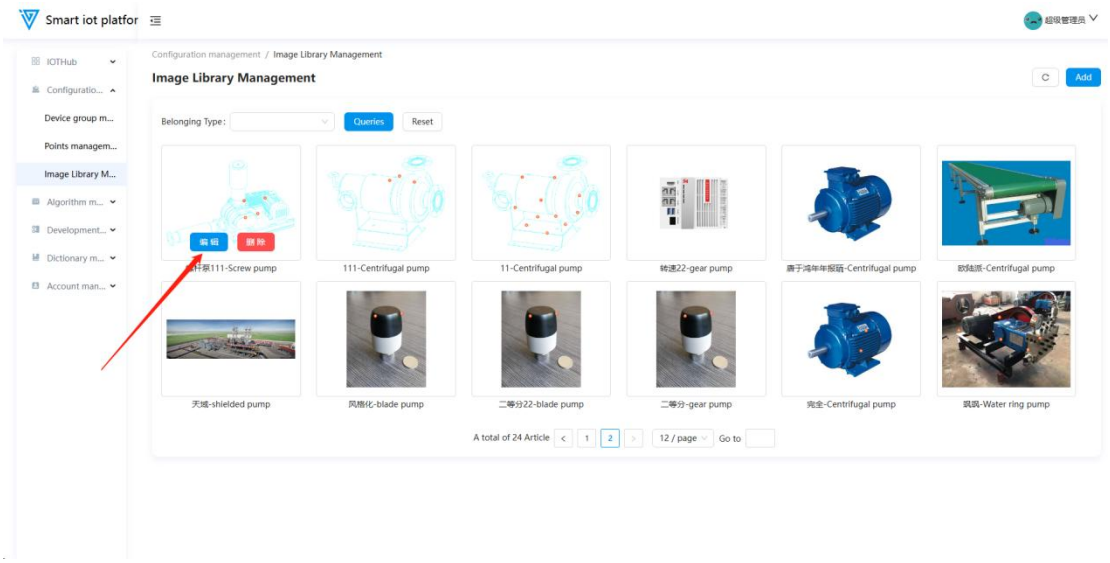
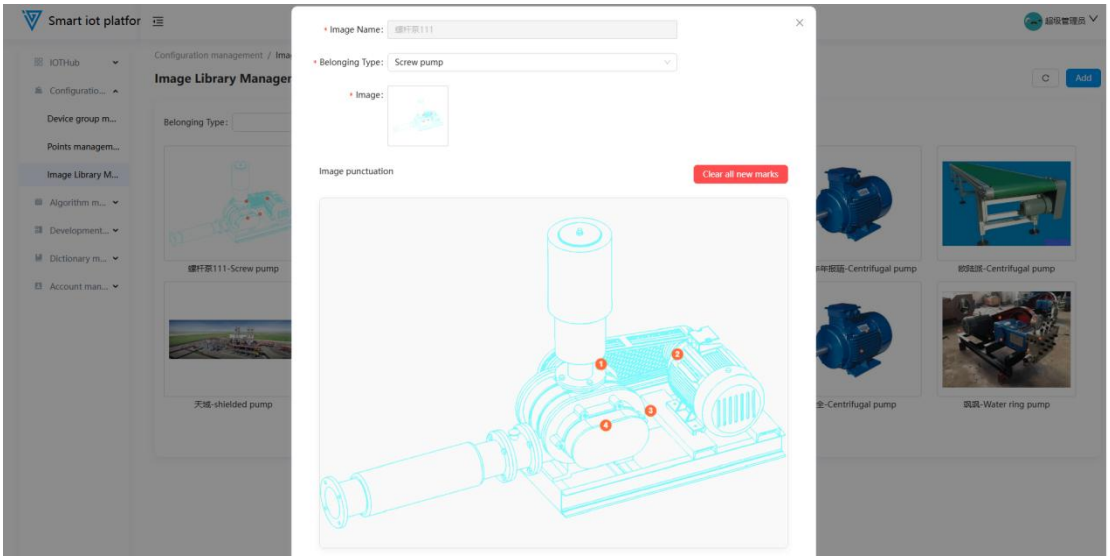


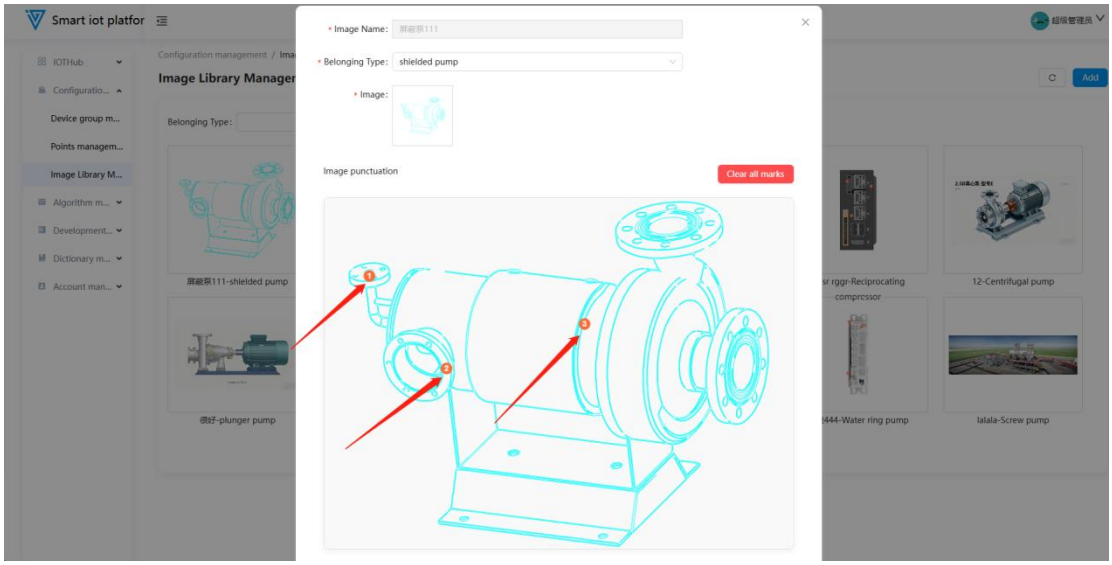
Image editing

Click the “Edit” button below the list card to open the image editing pop-up window, where the corresponding image information is displayed. The image name cannot be edited, but the belonging type and image can be edited.





To edit image punctuation, simply click the relevant image location. The punctuation numbers will increment sequentially. To remove the punctuation, click the “Clear All Markers” button in the upper right corner to remove all recently added markers from the image.



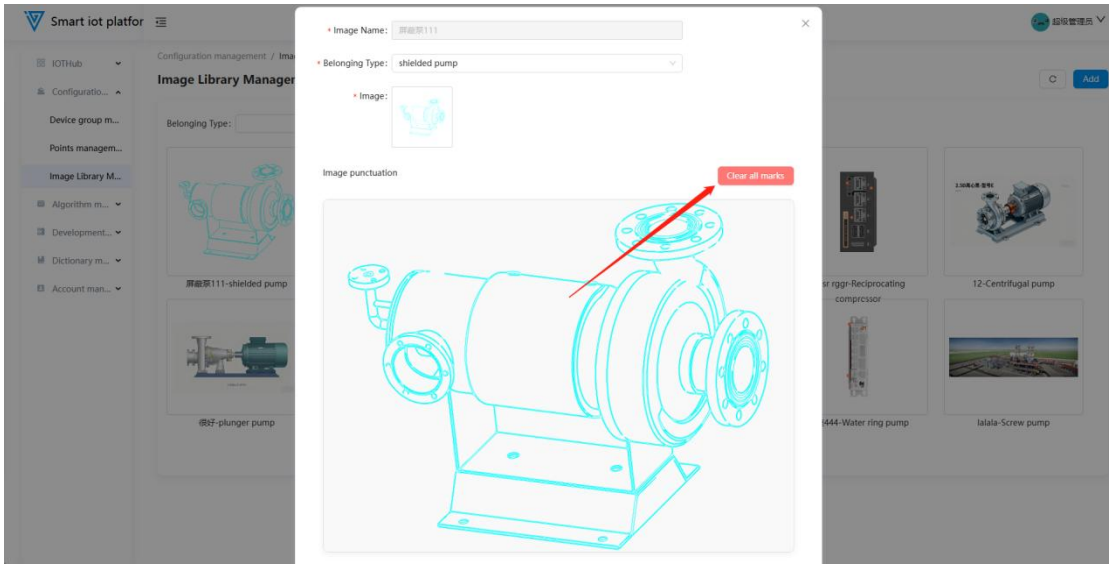
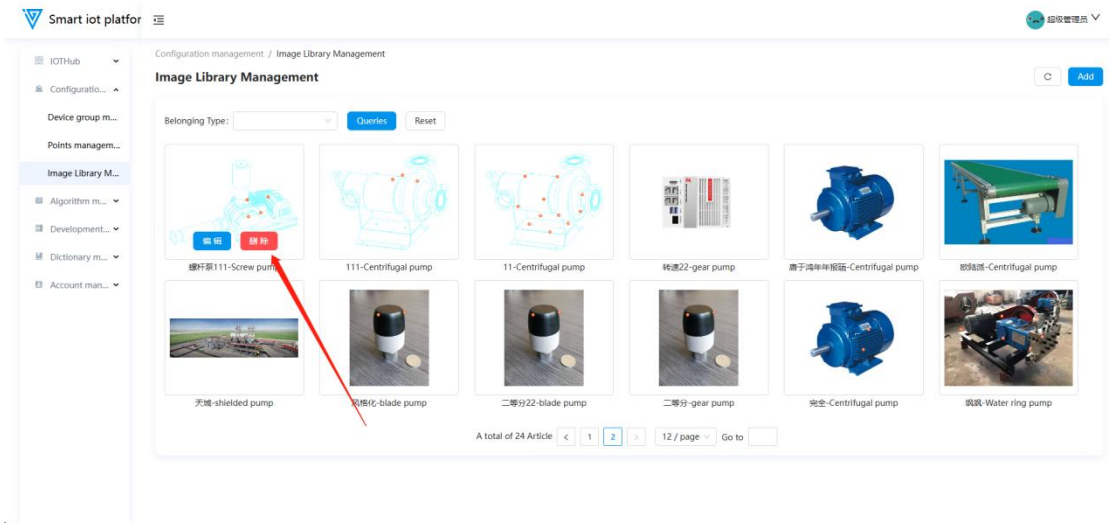


Image deletion

Click the “Delete” button below the list card to open the secondary confirmation pop-up window, “Are you sure you want to delete this image?” Click “Confirm” to delete the current image. The pop-up window will disappear and the list will be refreshed.



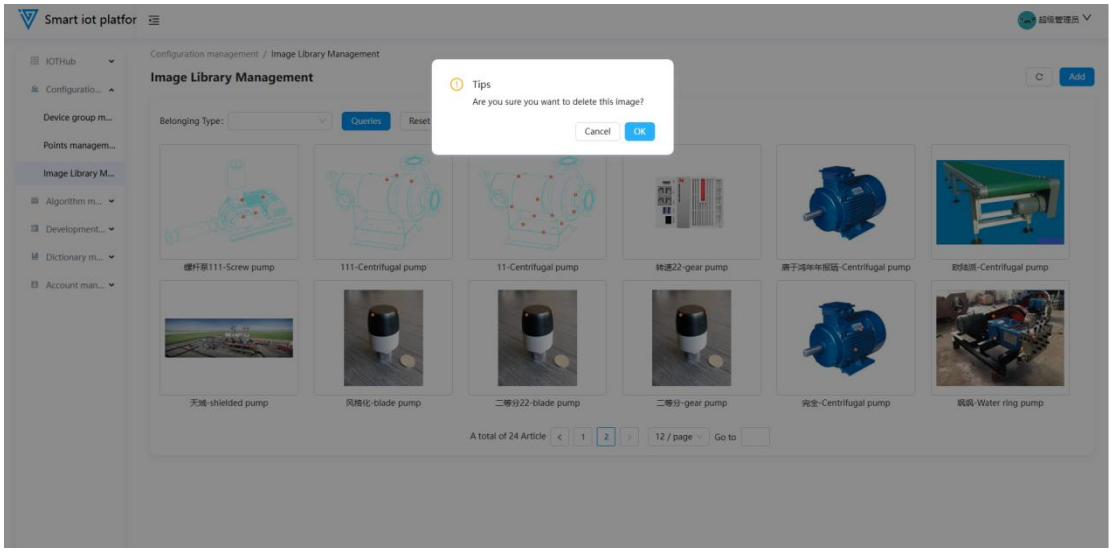
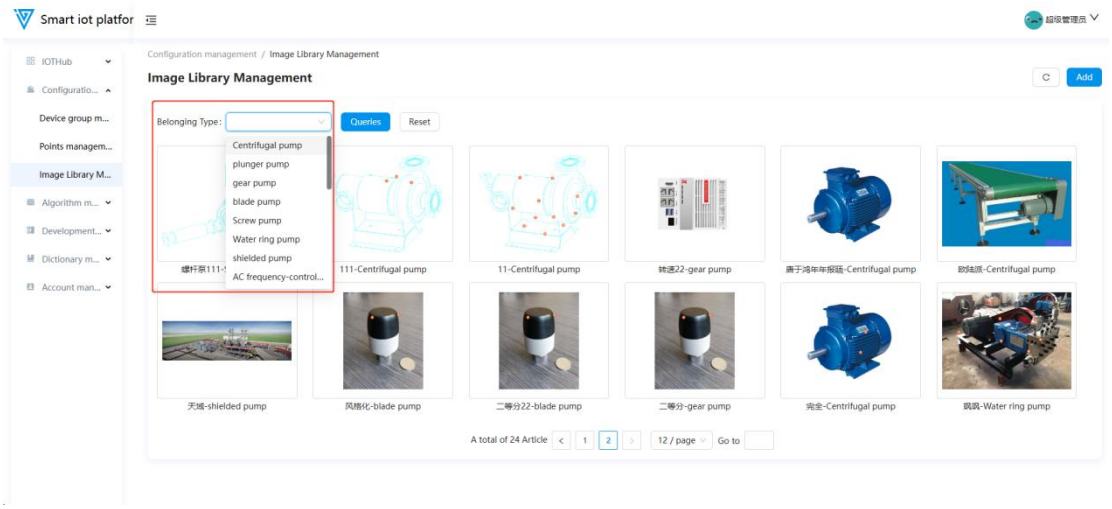
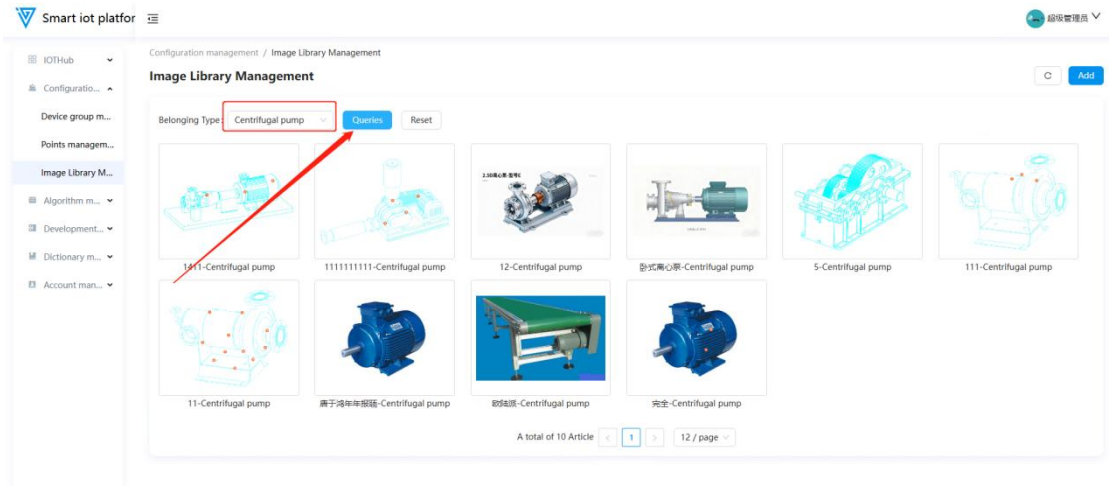


Image query

The query condition is the belonging type. The dropdown menu displays all unit types. Select the desired type, and then click the “Query” button to perform the action. Click “Reset” to return to the initial page.



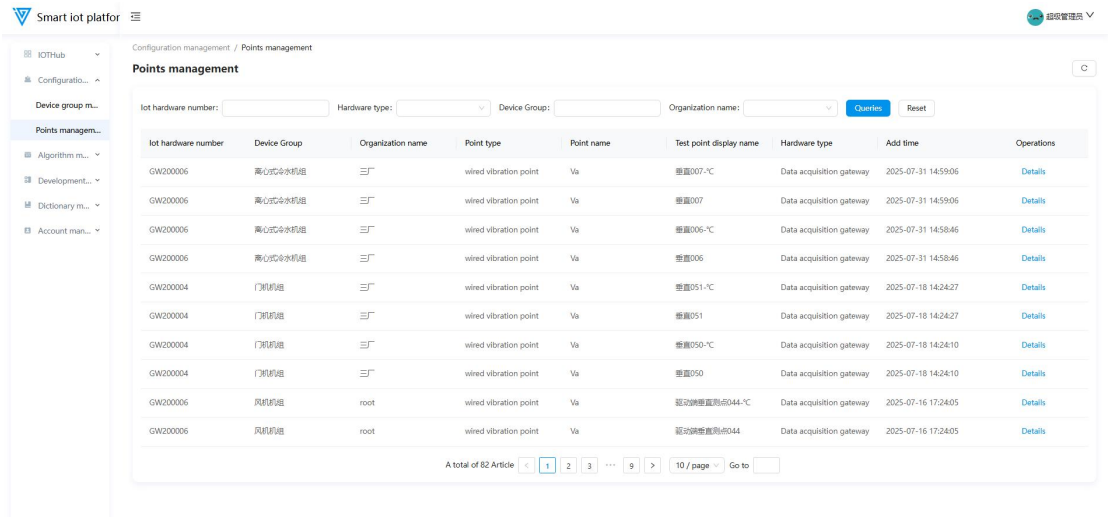


3.5Algorithm Management

3.5.1Algorithm Management

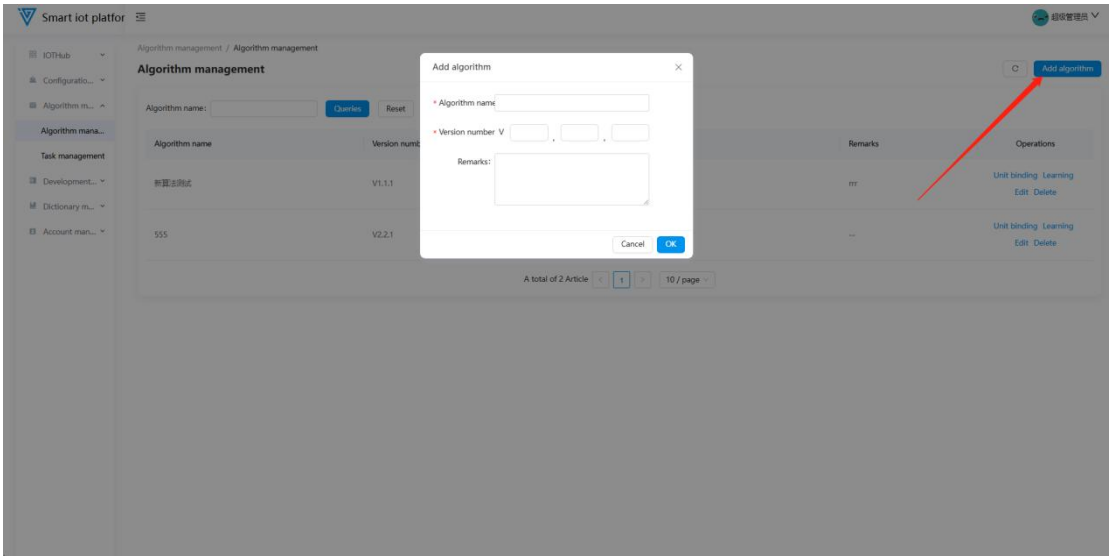
Function Overview

Administrators can query algorithms by name/unit type, add/download/set as default, and record version/uploader metadata for traceability.



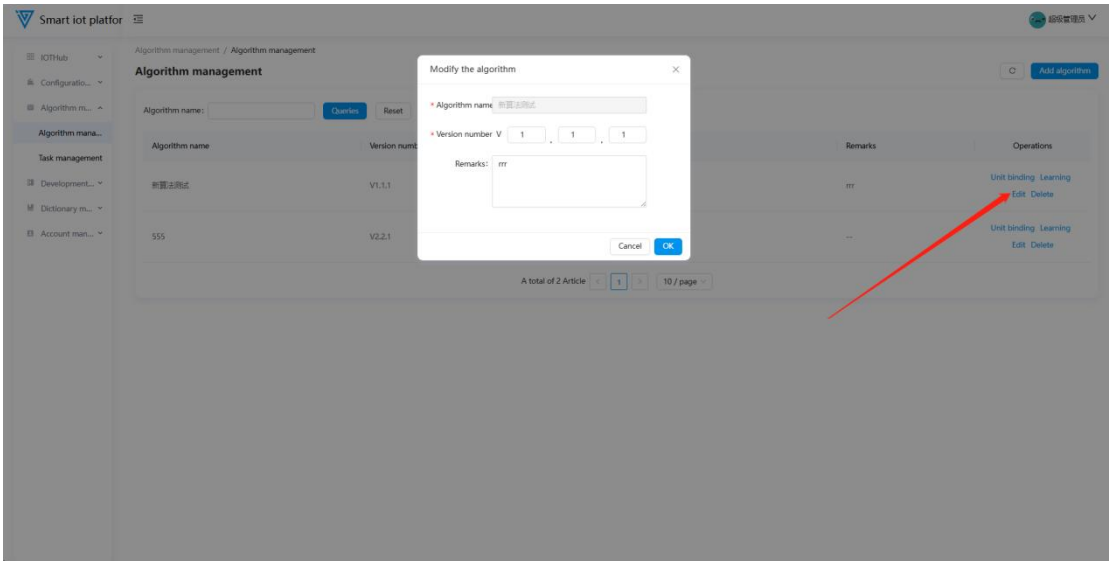
Algorithm Addition

Click the "Add Algorithm" button in the upper right corner of the page to open the algorithm addition popup. Fill in the required information and click the "Confirm" button to successfully add the algorithm.



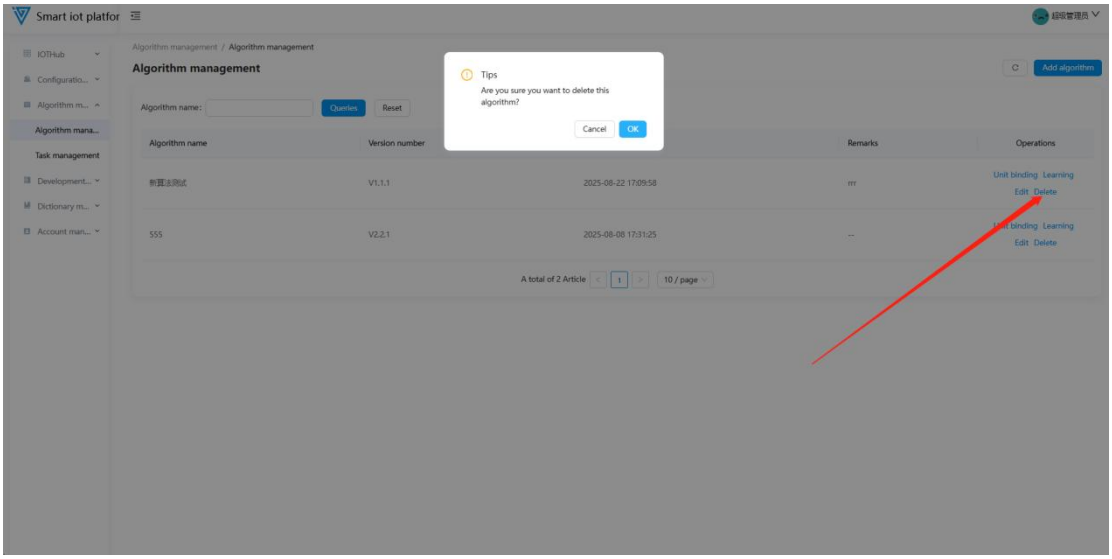
Algorithm Editing

To edit an existing algorithm, click the "Edit" button to open the algorithm modification popup. After making the necessary changes, click the "Confirm" button to update the algorithm successfully.



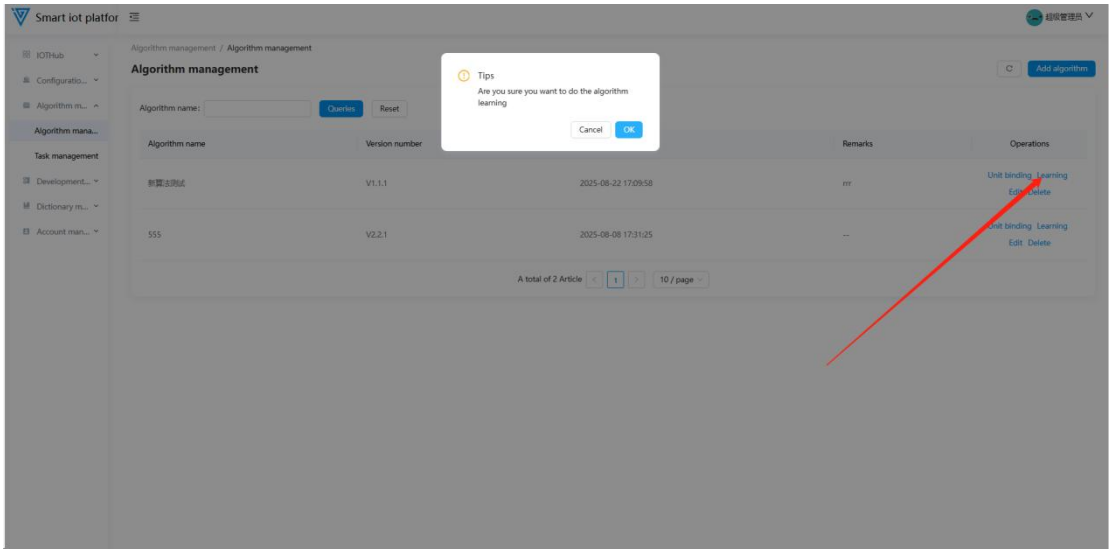
Algorithm Deletion

Algorithms that are not bound to any algorithm stream can be deleted. For algorithms already bound to an algorithm stream, unbinding must be performed before deletion.



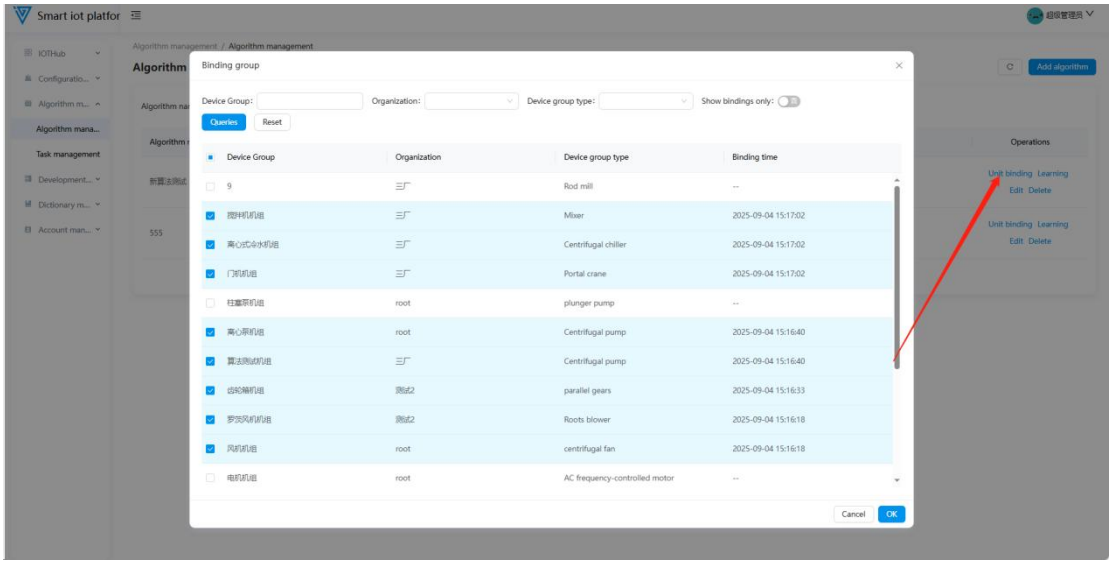
Algorithm Learning

Once an algorithm is used by an algorithm stream, automatic learning tasks will be created when the bound equipment data meets the auto-learning conditions. Users can also manually trigger a learning task by clicking the "Learn" button on the automatic learning algorithm management page.



Equipment Binding

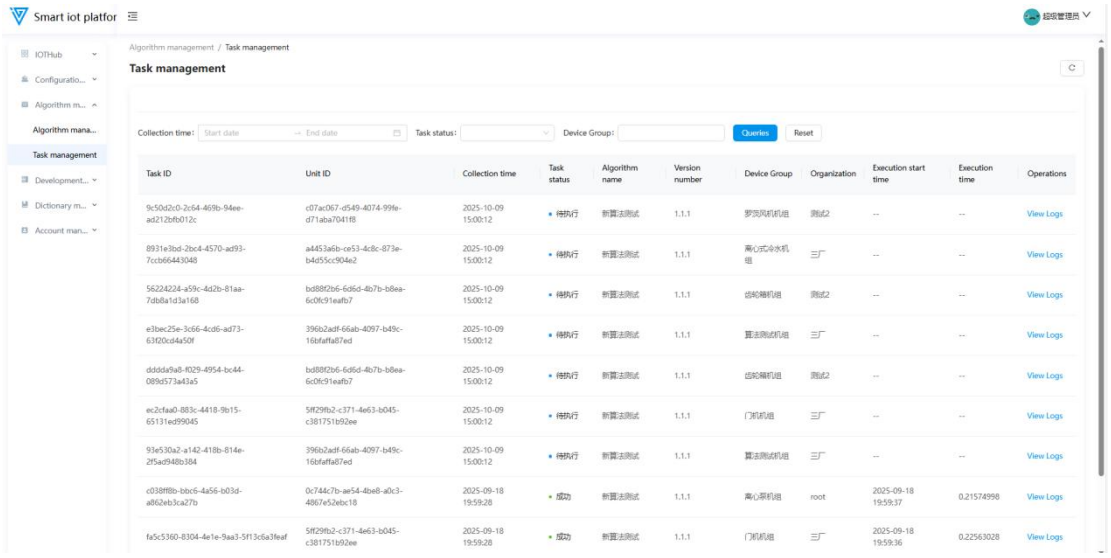
Click the "Equipment Binding" button in the list to enter the algorithm-equipment binding popup. Select the equipment units to be bound to the algorithm stream and click the "Confirm" button to complete the binding operation.



3.5.2Task Management

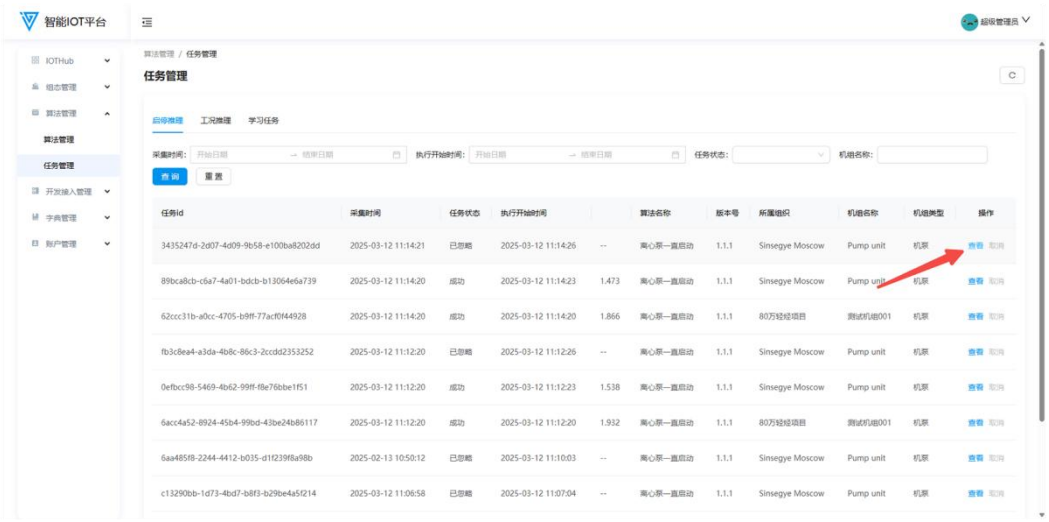
Functional Overview

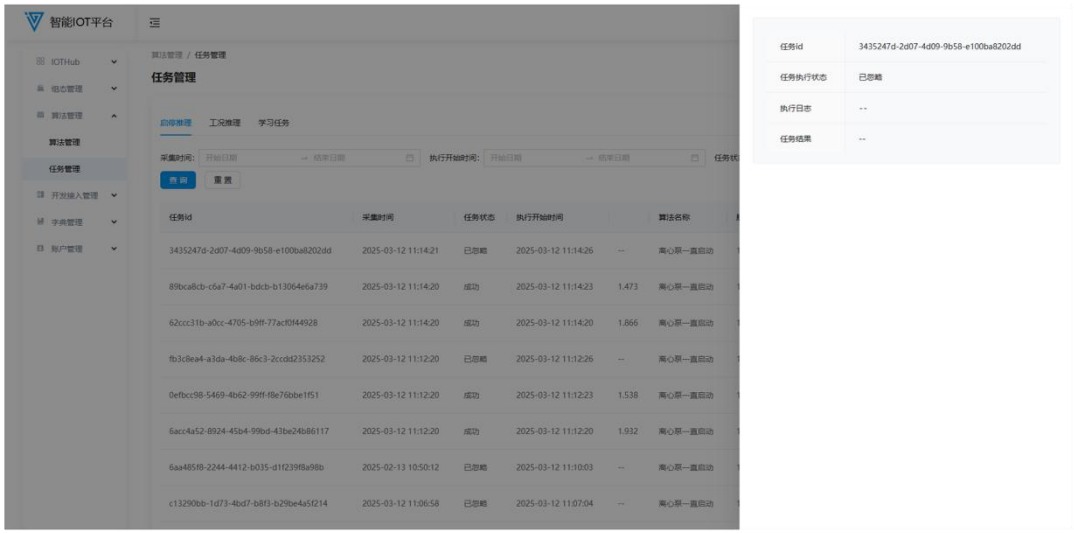
The Task Management module primarily displays information about AI inference and learning tasks. Queries can be performed based on task status, acquisition time, and equipment unit name.



Task details

Click View button at the back of the task to pop up the details window of the task clicked, which displays the basic information, data information and log information of the task.



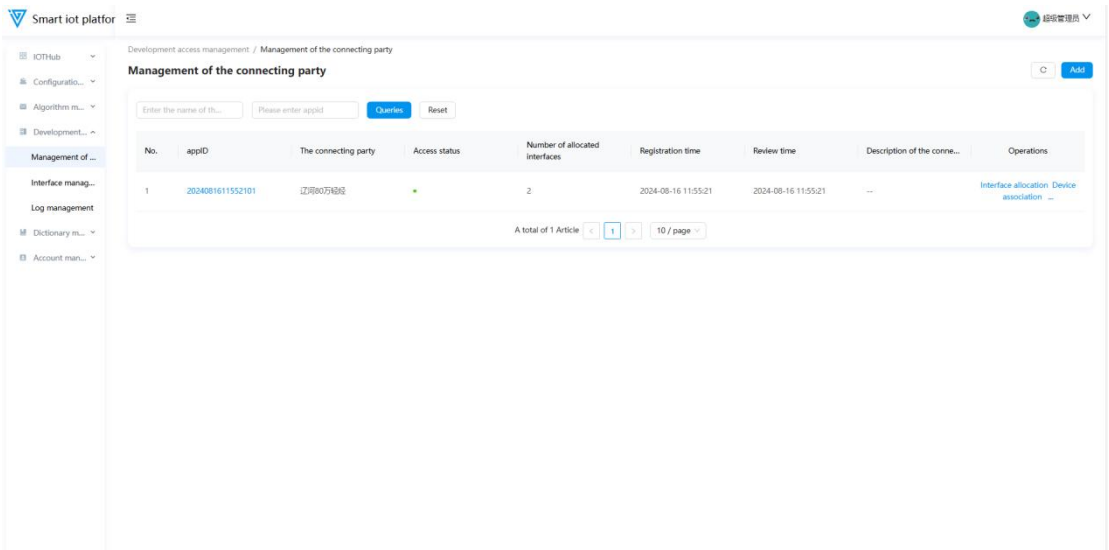


3.6Development Access Management

3.6.1 Management of liaison party

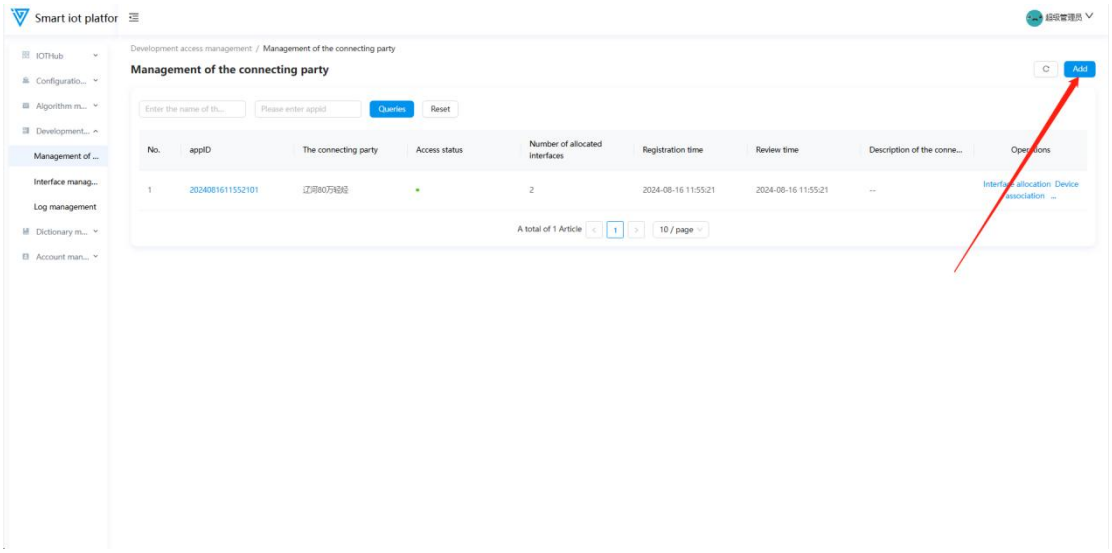
Functional Overview

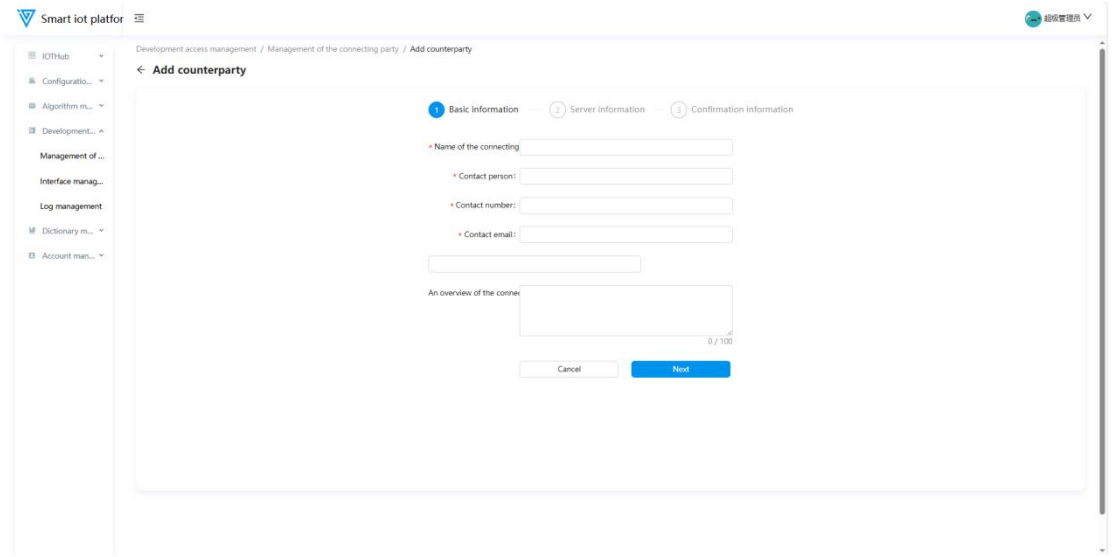
The Integration Partner Management module primarily supports operations such as adding partners, editing partner information, interface allocation, device association, enabling/disabling partners, and deleting partners.



Adding an Integration Partner

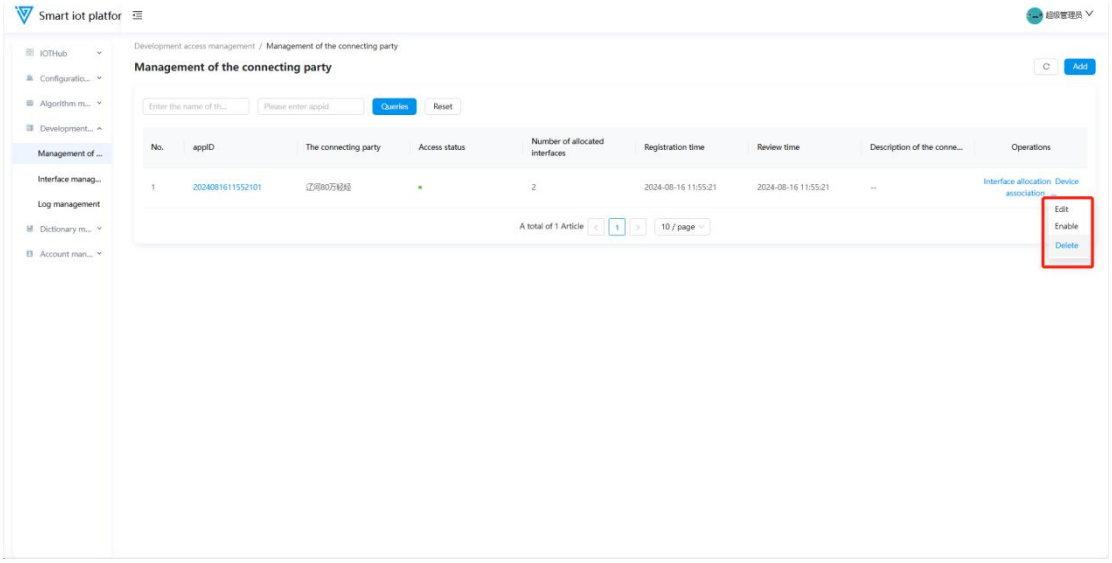
Navigate to the Integration Partner Management page, click the "Add" button in the upper right corner, and enter the partner addition interface. Fill in the basic information and server details of the partner, then click the "Submit" button to complete the addition.

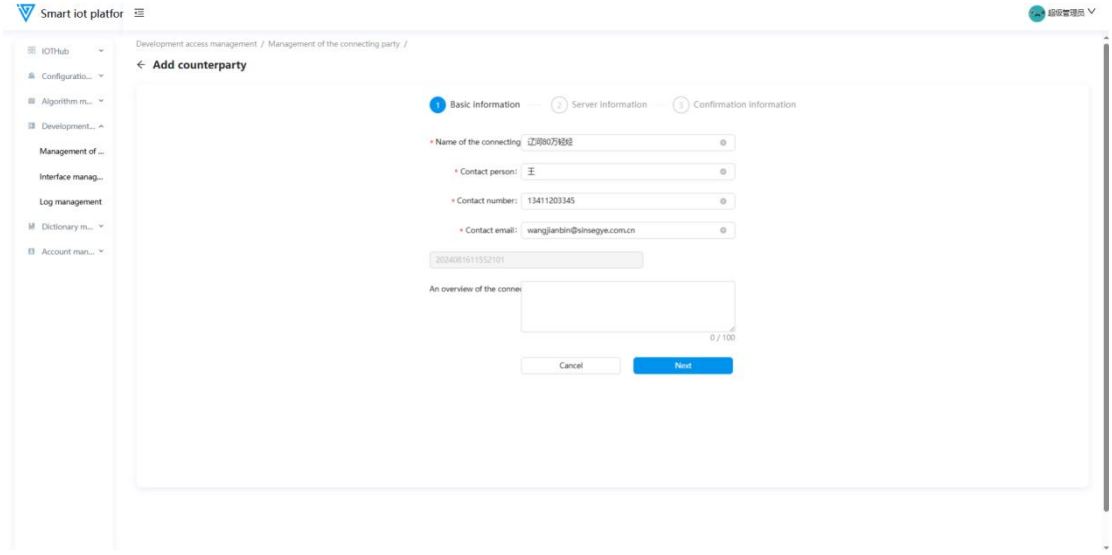




Editing an Integration Partner

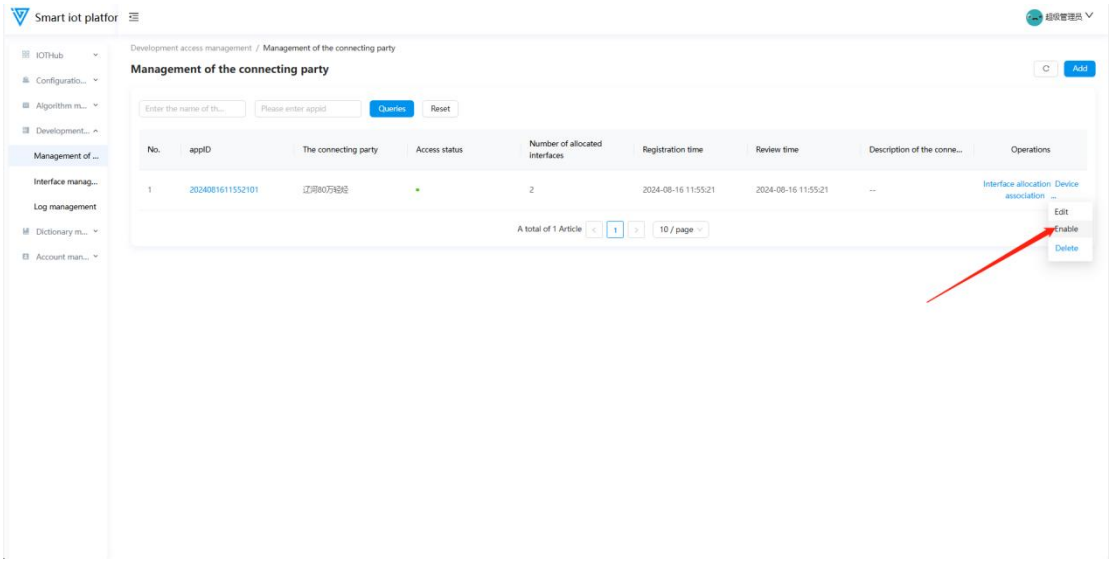
Existing integration partners can be edited. Hover the mouse over the "..." menu, click the "Edit" button to enter the editing interface, and modify the partner details as needed.



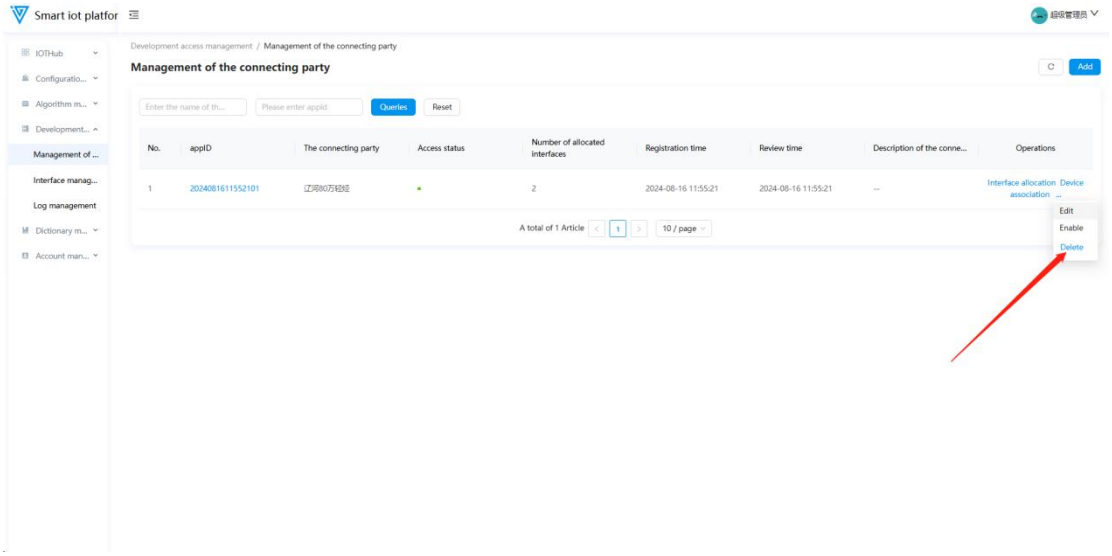


Enabling/Disabling an Integration Partner

Newly added integration partners are enabled by default. Click the "Disable" button to change the partner’s status to disabled. Disabled partners can be re-enabled.



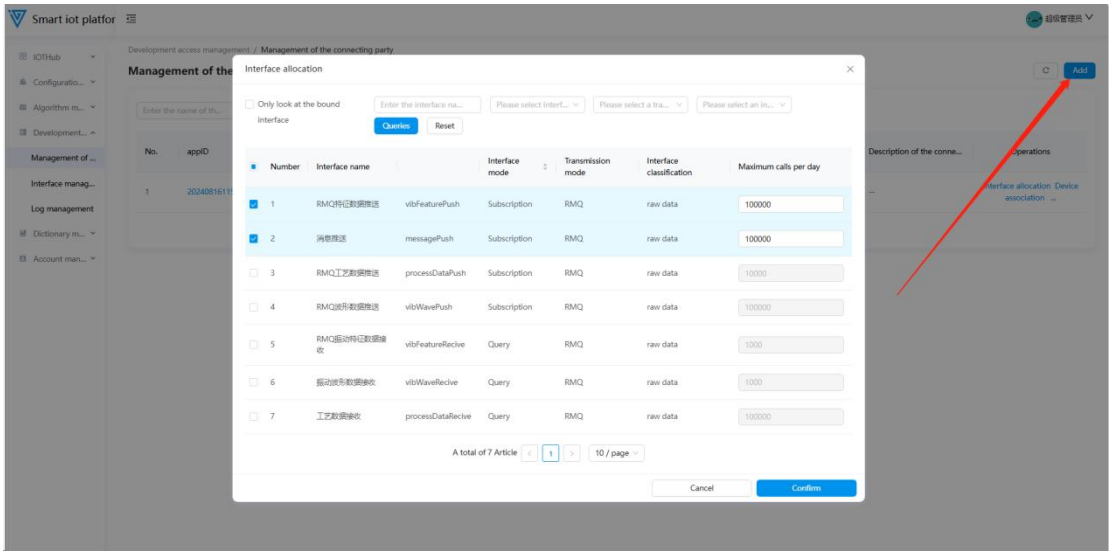
Only disabled partners can be deleted.



Interface Allocation

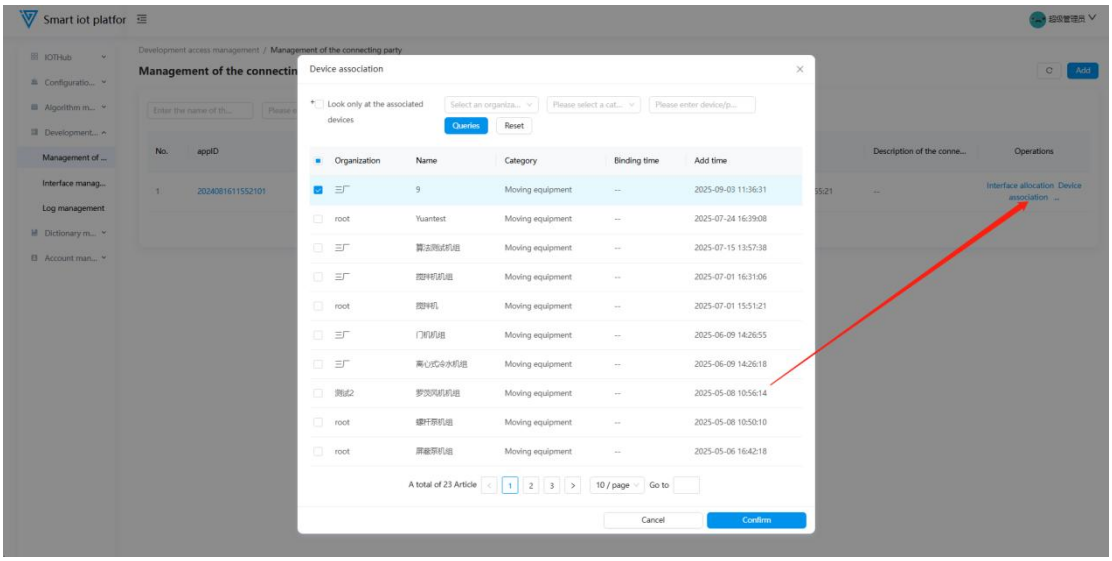
Data transmission and reception for integration partners are handled through interfaces. During partner management, interface allocation is performed by clicking the "Interface Allocation" button on the interface, which opens a pop-up window. In this window, assign the corresponding interfaces and set the maximum daily call count.

Once the daily call limit is exceeded, data reception and data pushing will be suspended for the remainder of the day.



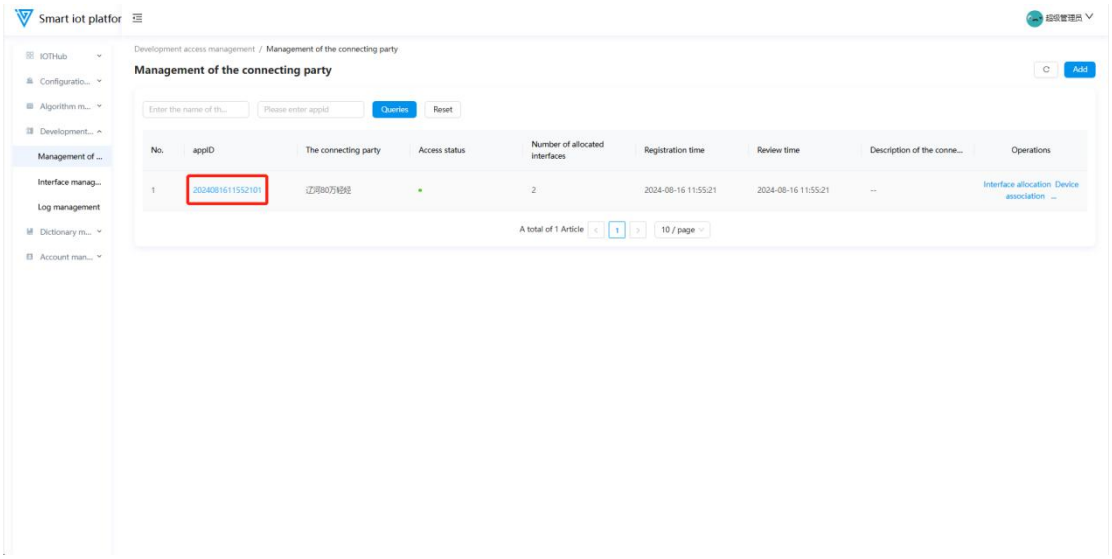
Device Association

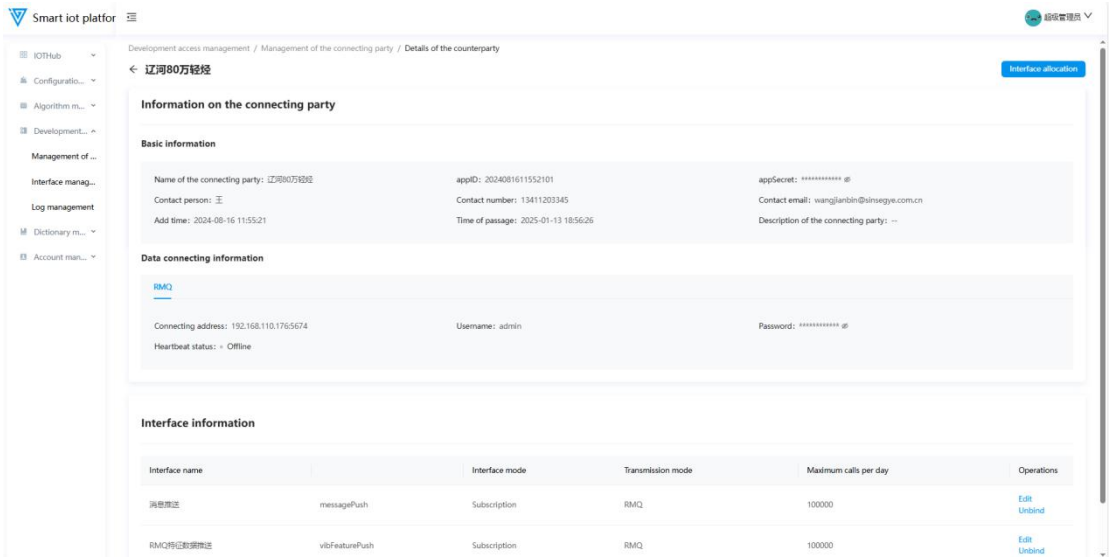
After associating devices with an integration partner, data generated by the devices can be pushed to users via the partner. Alternatively, device information received from users can be displayed on the intelligent diagnosis platform. To associate devices, click the "Device Association" button on the page, check the devices to be associated in the popup window, and click "Confirm."



Integration Partner Details

Each added integration partner is assigned an appID. Clicking on the partner’s appID will navigate to the partner details page, displaying basic information, data integration details, and interface binding information.

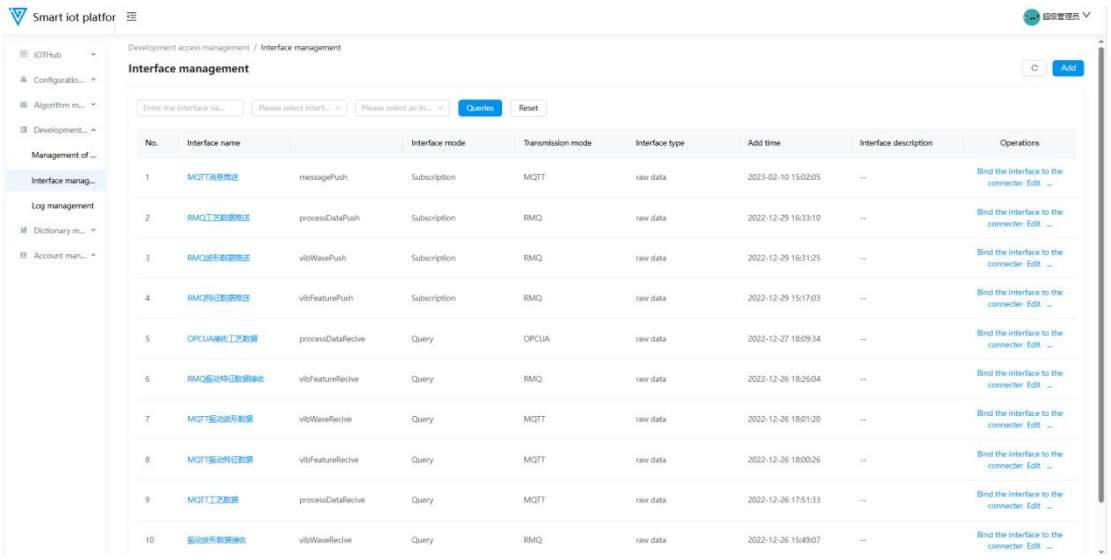




3.6.2 Interface Management

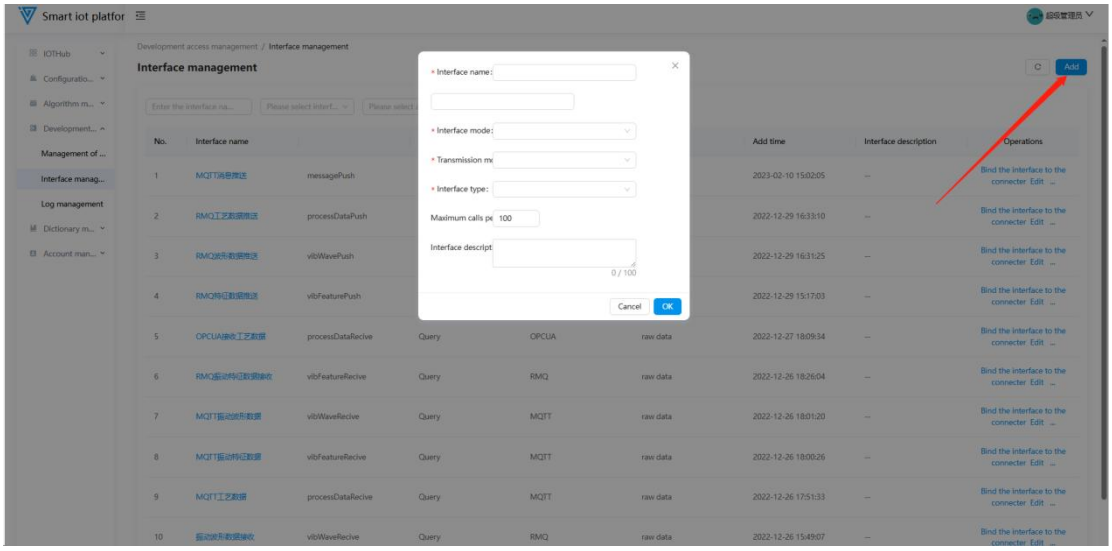
Functional Overview

The Interface Management module primarily supports operations such as adding interfaces, editing interfaces, binding integration partners, enabling/disabling interfaces, and deleting interfaces.



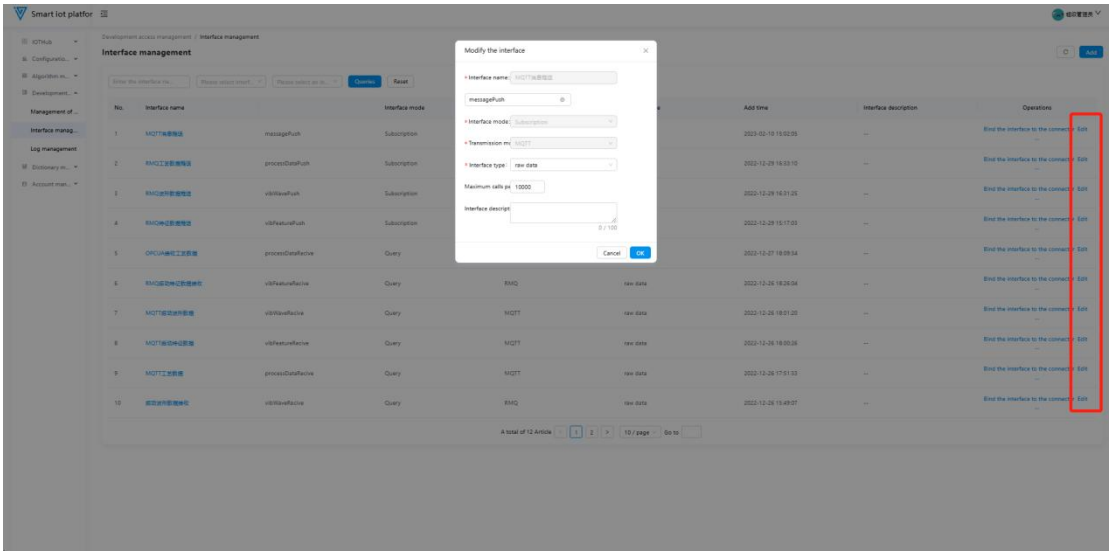
Adding an Interface

Click the "Add" button in the upper right corner of the page to open the interface addition pop-up window. After filling in the corresponding interface information, click the "Confirm" button to successfully add the interface.



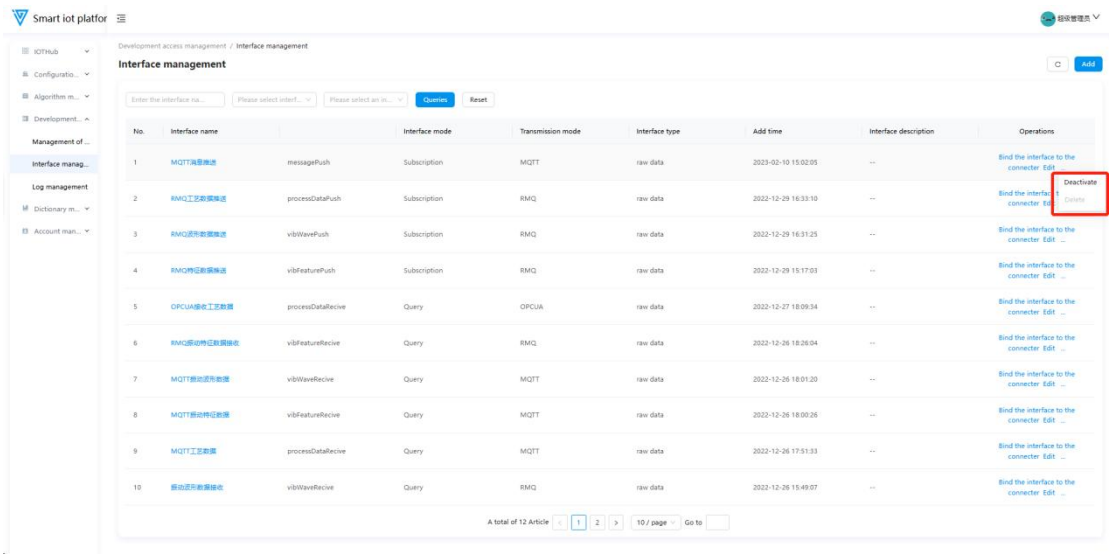
Editing an Interface

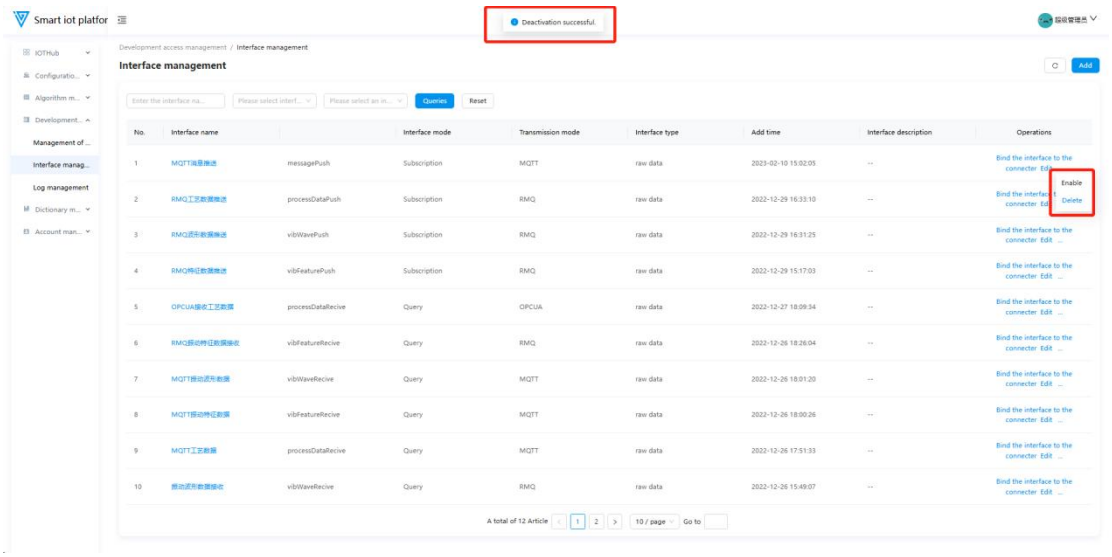
To update or modify an existing interface, click the "Edit" button on the page to open the editing pop-up window. After making the necessary changes, click the "Confirm" button to complete the interface editing operation.



Enabling/Disabling and Deleting an Interface

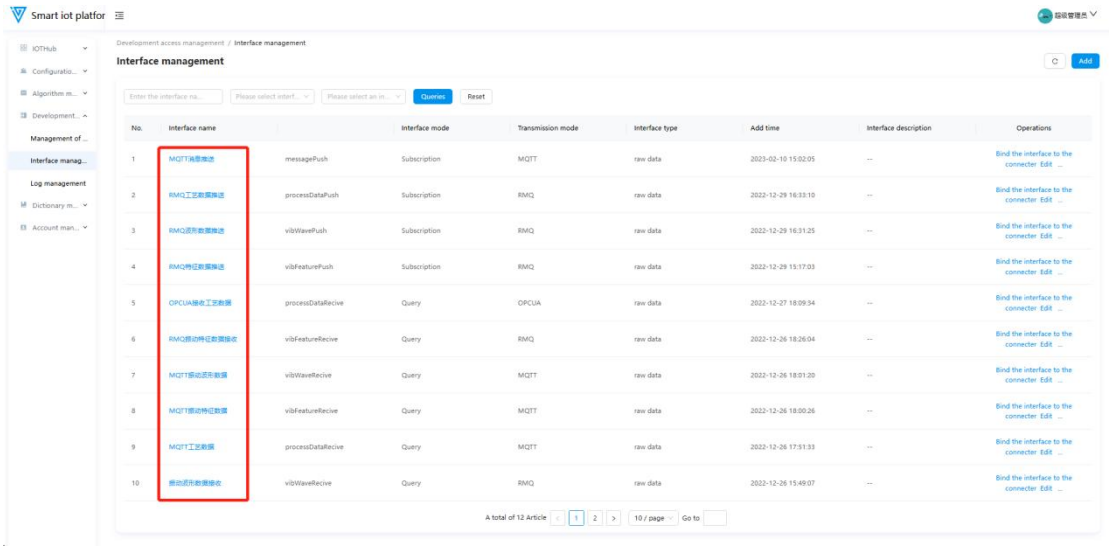
Newly added interfaces are enabled by default. Click the "Disable" button to toggle the status. Only interfaces in the disabled state can be deleted.

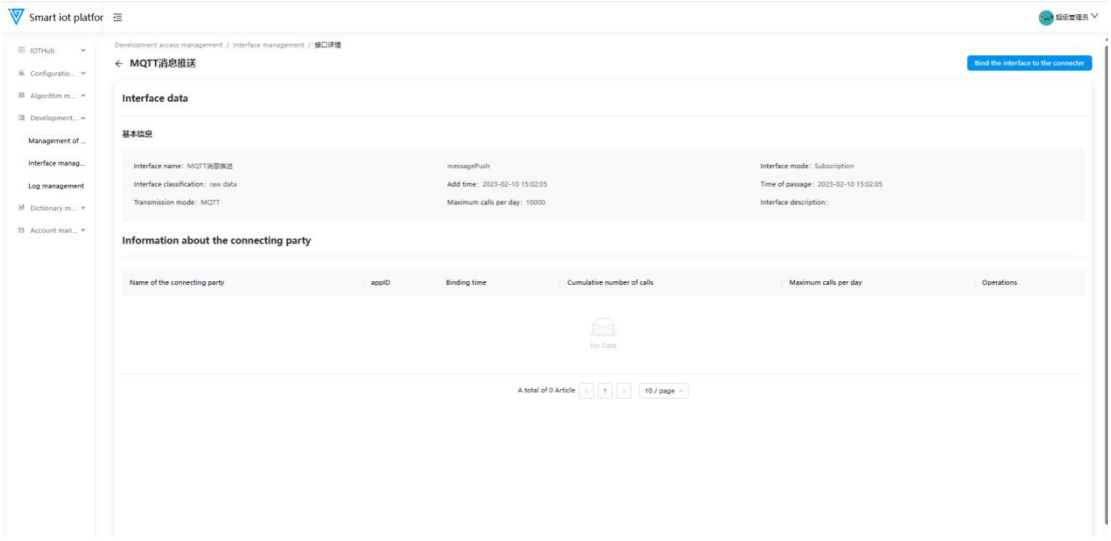




Interface Details

Click on the interface name to navigate to the interface details page, which displays the interface information and integration partner information.

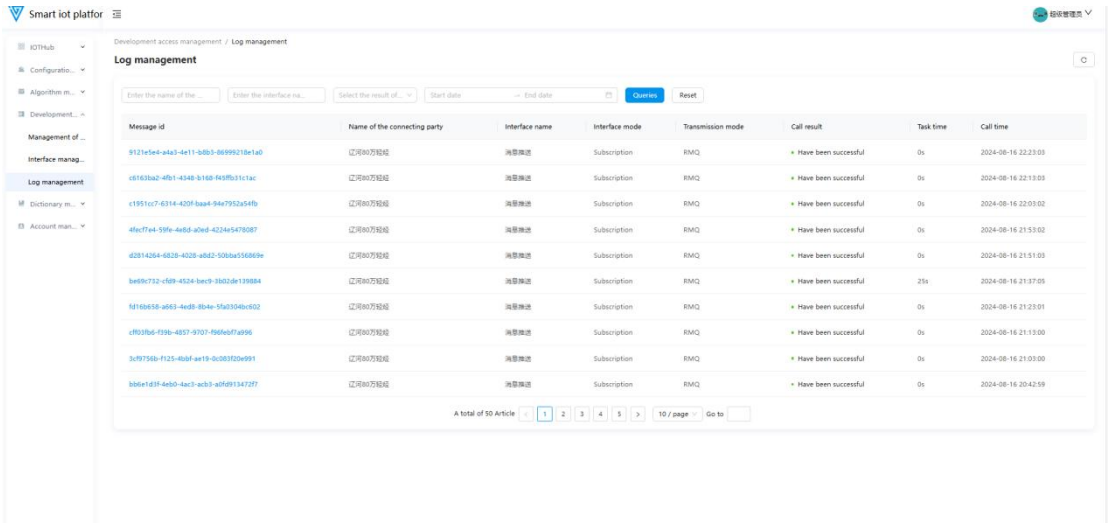




3.6.3 Log Management

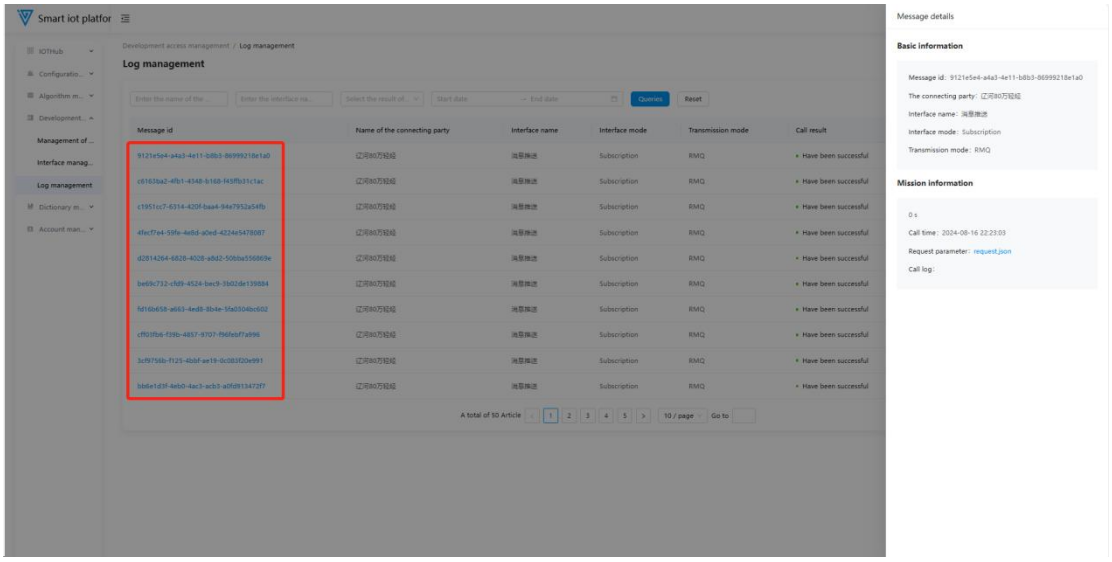
Functional Overview

The Log Management module primarily displays message reception and data push logs of integration partners. Log queries can be performed based on integration partner name, interface name, call result, and call time.



Viewing Details

Click on the message ID of a log entry to view the detailed information of the message.

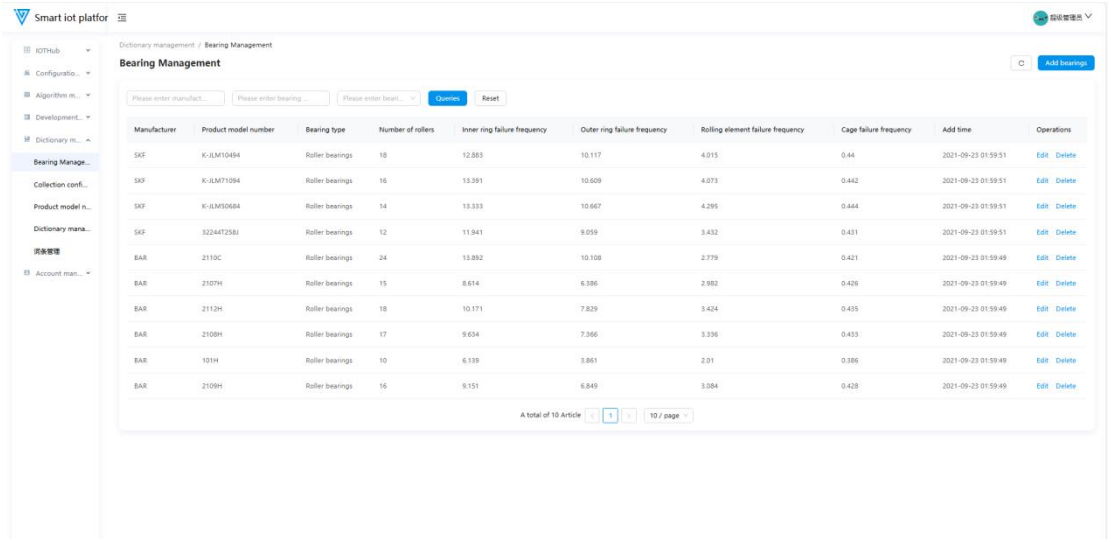


3.7Dictionary Management

3.7.1Bearing Management

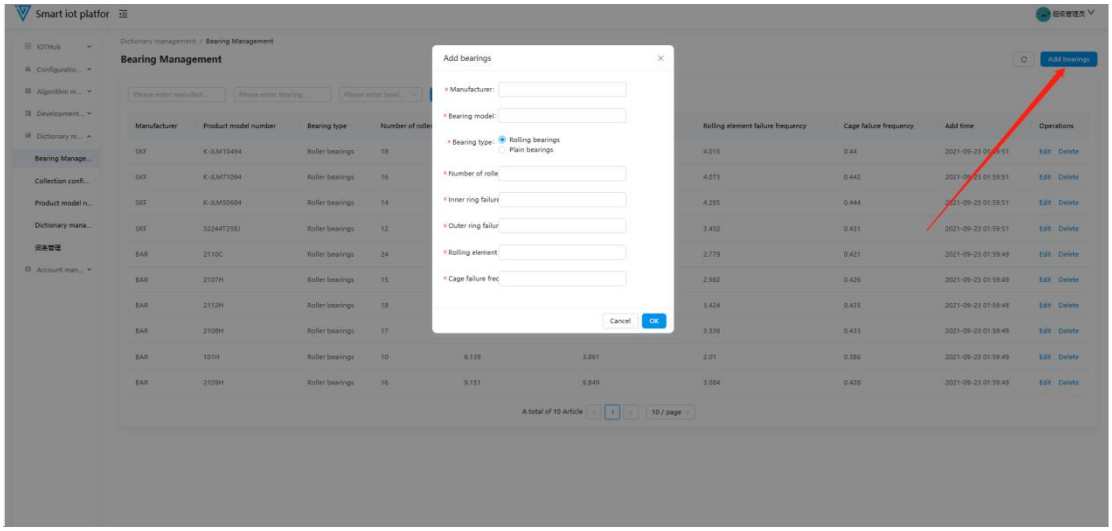
Functional Overview

The Bearing Management module primarily supports operations such as adding, editing, and deleting bearings.



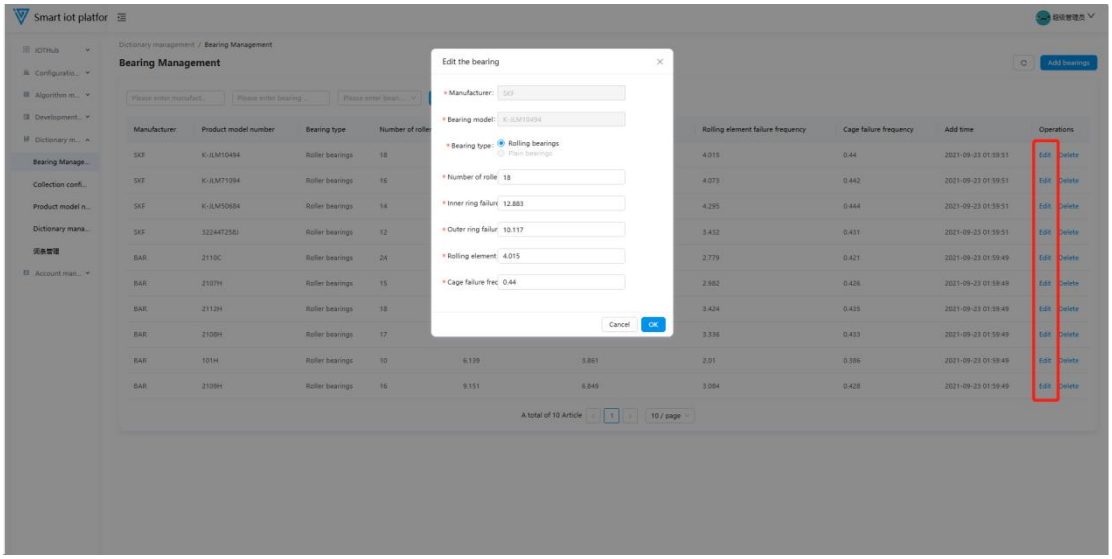
Adding a Bearing

Click the "Add Bearing" button in the upper right corner of the page to open the bearing addition pop-up window. After filling in the relevant bearing information, click the "Confirm" button to successfully add the bearing.



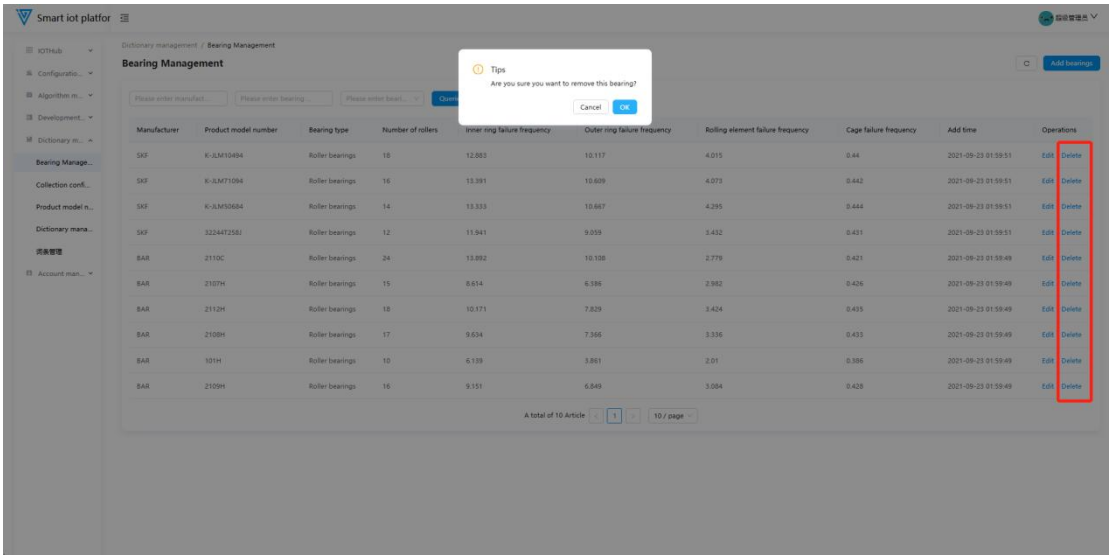
Editing a Bearing

Added bearings are displayed in the bearing list page of the Bearing Management module. Click the "Edit" button for a bearing to enter the editing pop-up window for the selected bearing. After updating the bearing information, click the "Confirm" button to complete the editing operation.



Deleting a Bearing

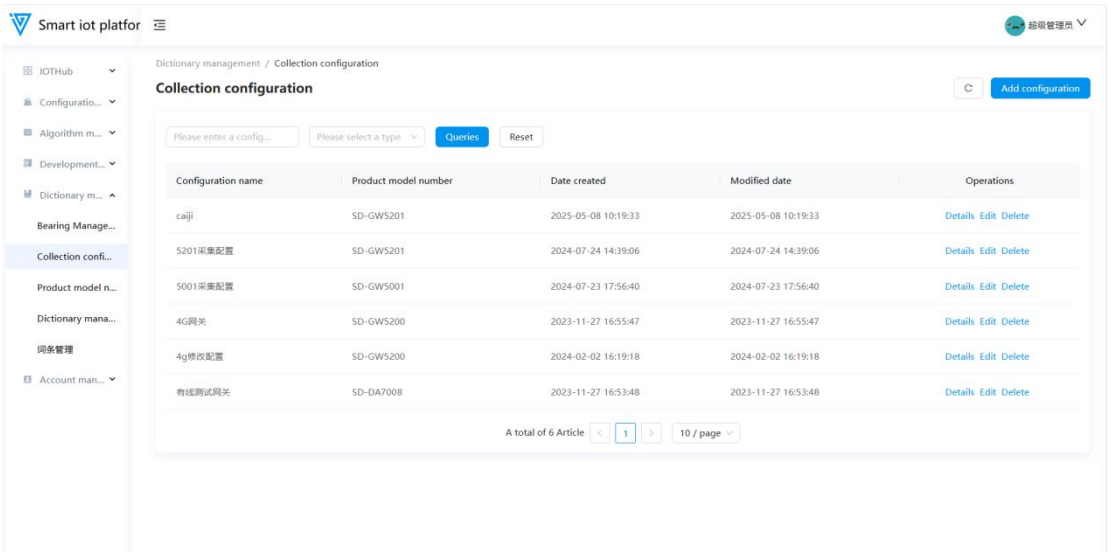
Click the "Delete" button on the bearing list page. After the confirmation pop-up appears, click the "Confirm" button to delete the bearing. Note: Bearings that are already in use cannot be deleted.



3.7.2Acquisition Configuration

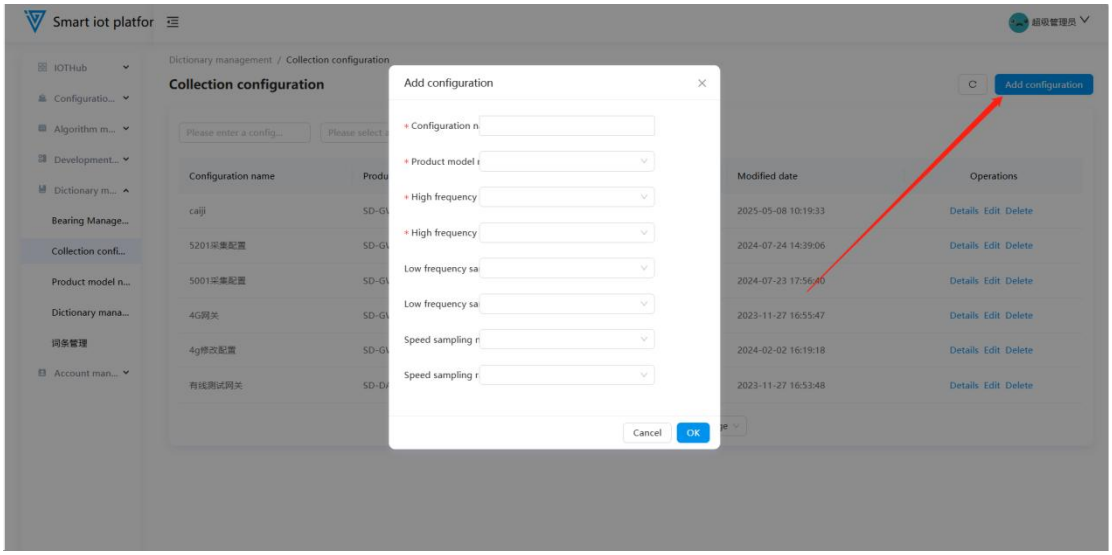
Functional Overview

The Acquisition Configuration module primarily supports operations such as adding, editing, and deleting acquisition configurations.



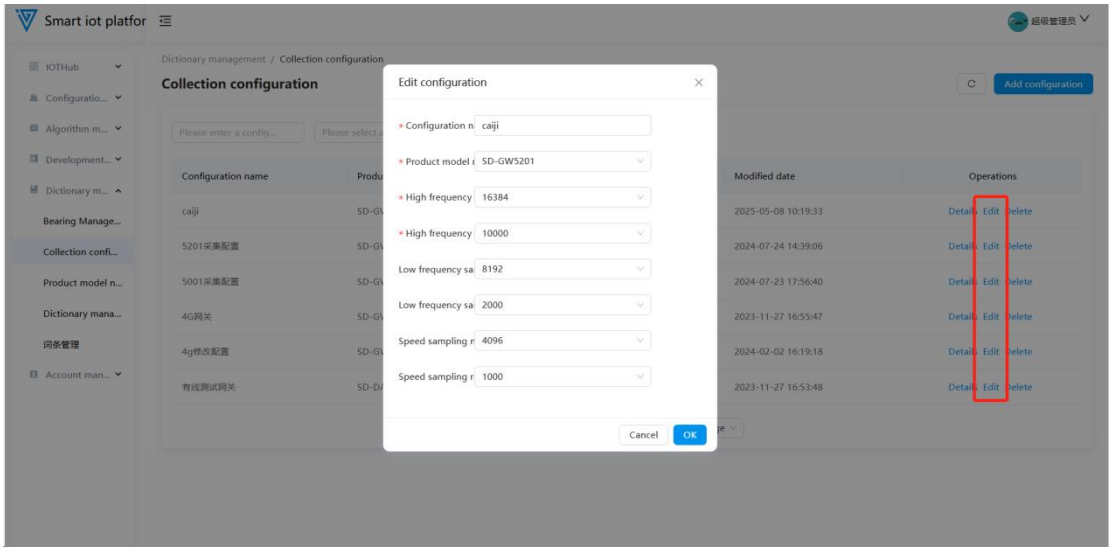
Adding an Acquisition Configuration

Click the "Add Configuration" button in the upper right corner of the page to enter the acquisition configuration addition pop-up window. After filling in the relevant information, click the "Confirm" button to complete the configuration addition.



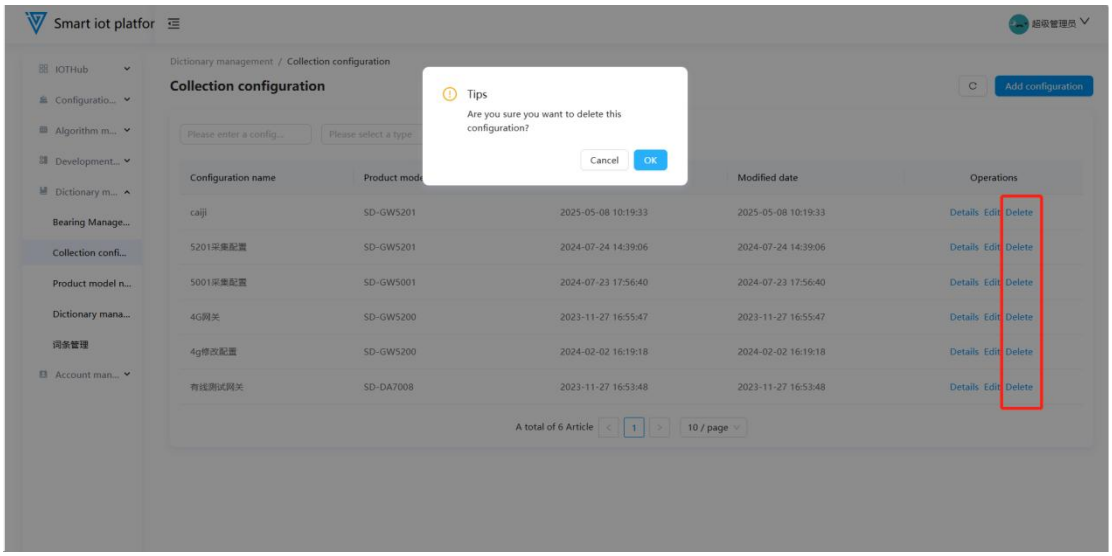
Editing an Acquisition Configuration

To update an existing acquisition configuration, click the "Edit" button on the page to enter the editing pop-up window. After making modifications, click the "Confirm" button to complete the editing operation.



Deleting an Acquisition Configuration

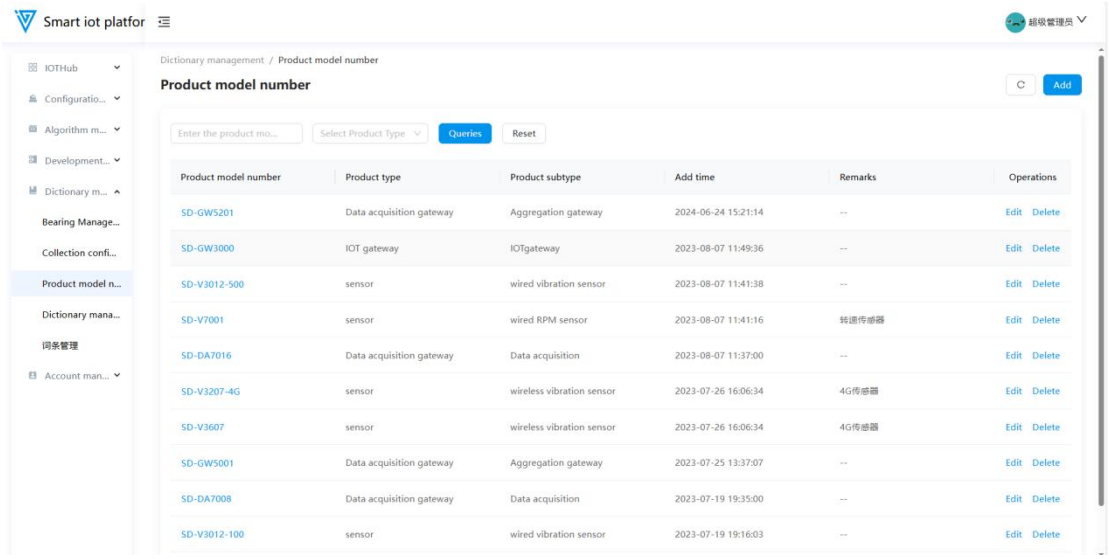
Acquisition configurations that are already in use cannot be deleted. Click the "Delete" button on the page, and after the confirmation pop-up appears, click "Confirm" to delete an unused acquisition configuration.



3.7.3Product Models

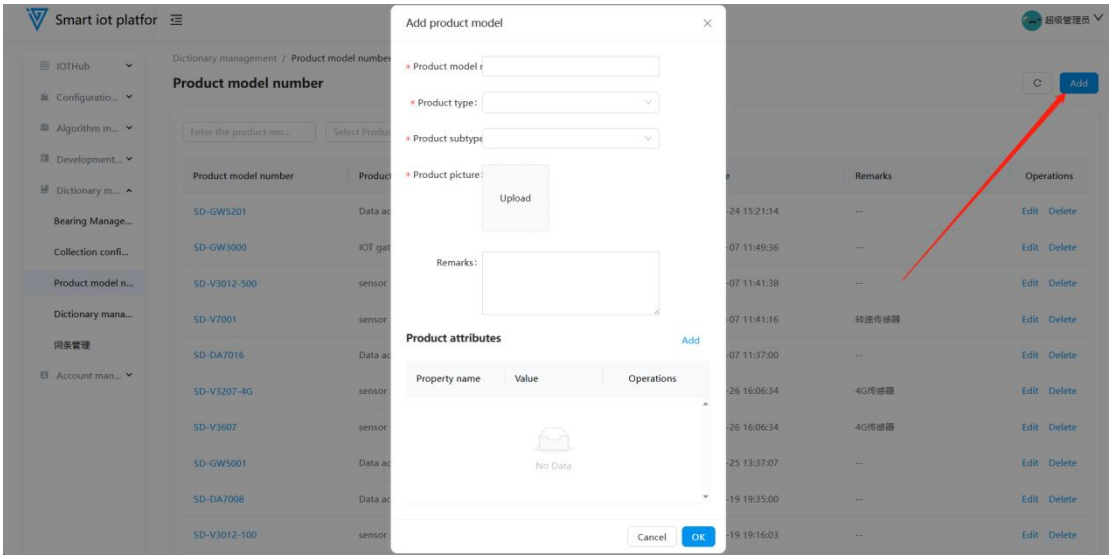
Functional Overview

The Product Models module allows users to add, edit, and delete product models. Product models are primarily used for sensor addition, data acquisition gateway addition, and acquisition configuration addition.



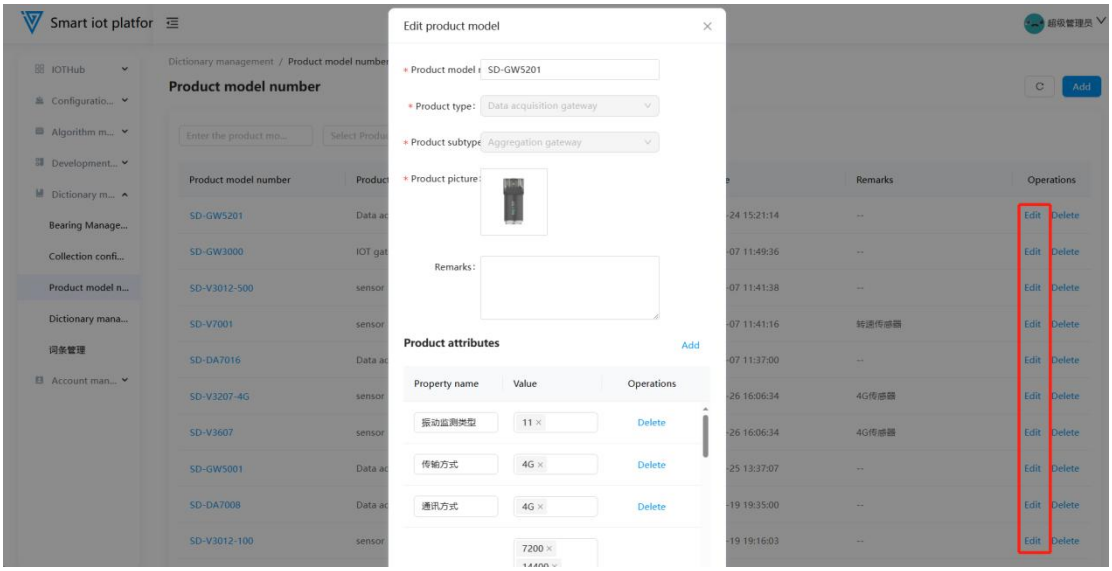
Adding a Product Model

Navigate to the Product Models list page, click the "Add" button in the upper right corner to open the product model addition pop-up window. Fill in the product model, product type, product subtype, and product image. In the product attributes section, enter the number of channels, transmission method, and communication method. Click the "Confirm" button to successfully add the product model. The remarks field allows users to add custom notes. To add other attribute information to the product model, users can independently select product attribute information added in the dictionary.



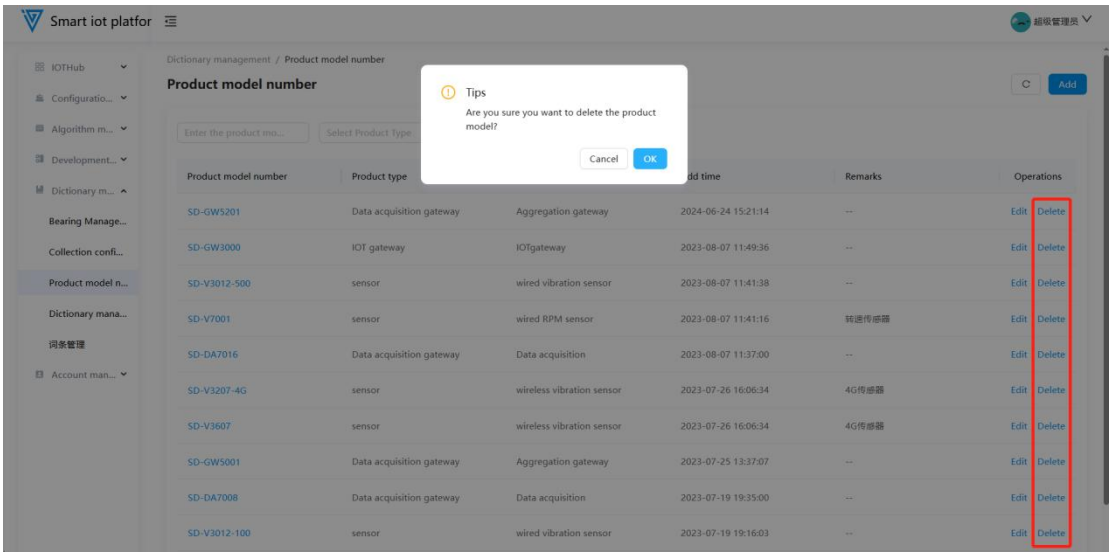
Editing a Product Model

Added product models are displayed on the product models list page in reverse chronological order of addition. Click the "Edit" button for the selected product model to enter the editing pop-up window. The product model, product type, and product subtype cannot be edited; other information can be updated.



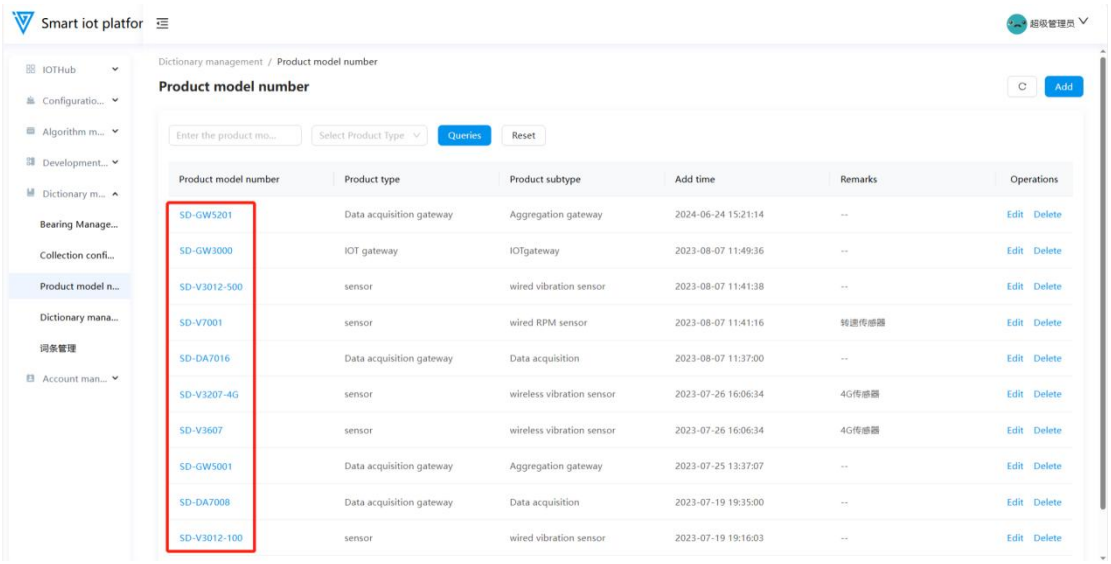
Deleting a Product Model

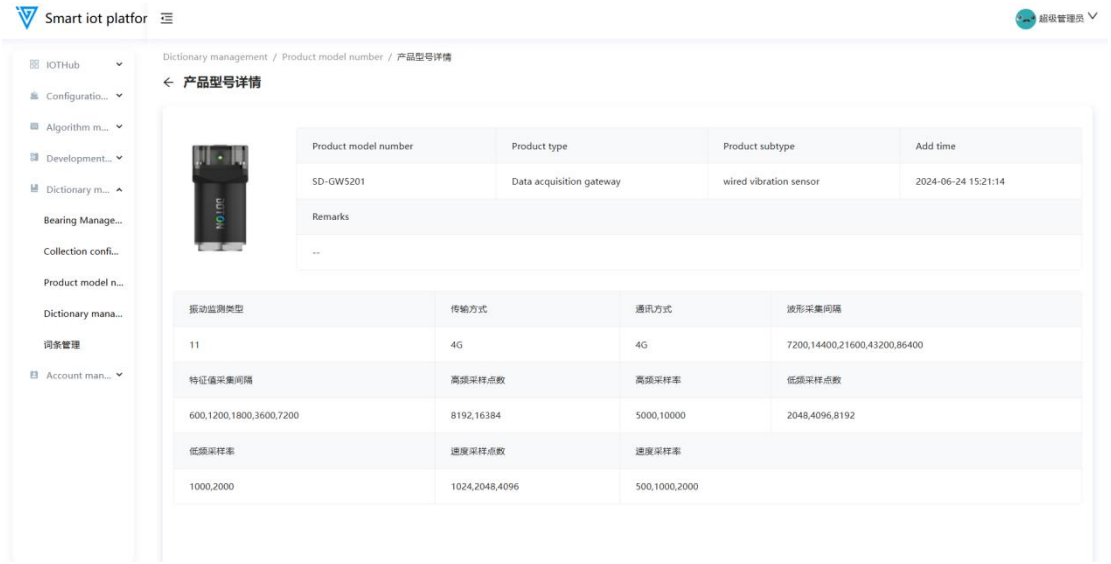
Product models that are already in use cannot be deleted. Only unused product models can be deleted.



Product Model Details

Click on the product model name in the list page to navigate to the product model details page, which displays basic information, attribute information, and acquisition configuration information of the product model.

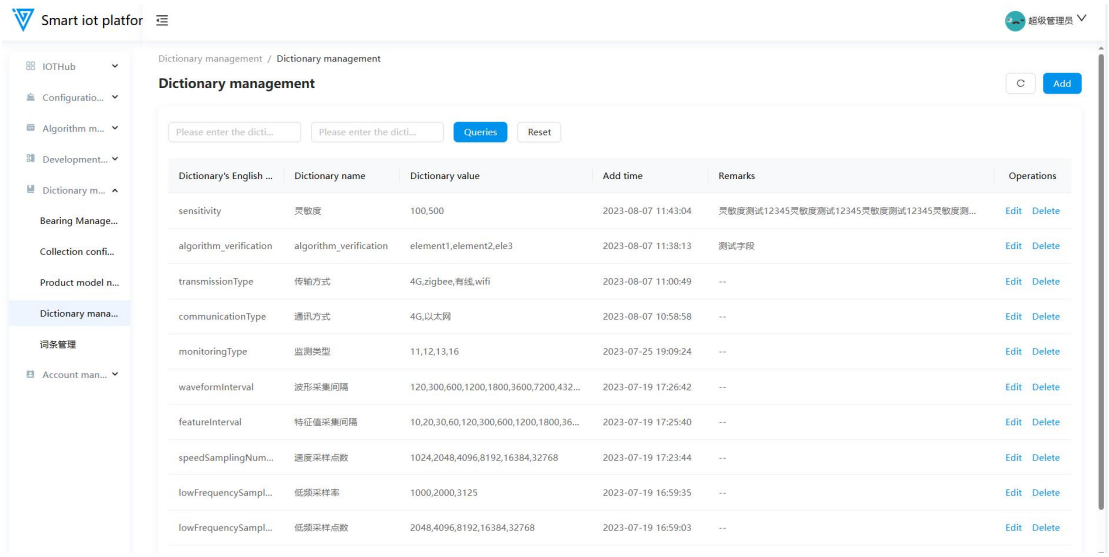




3.7.4Dictionary Management

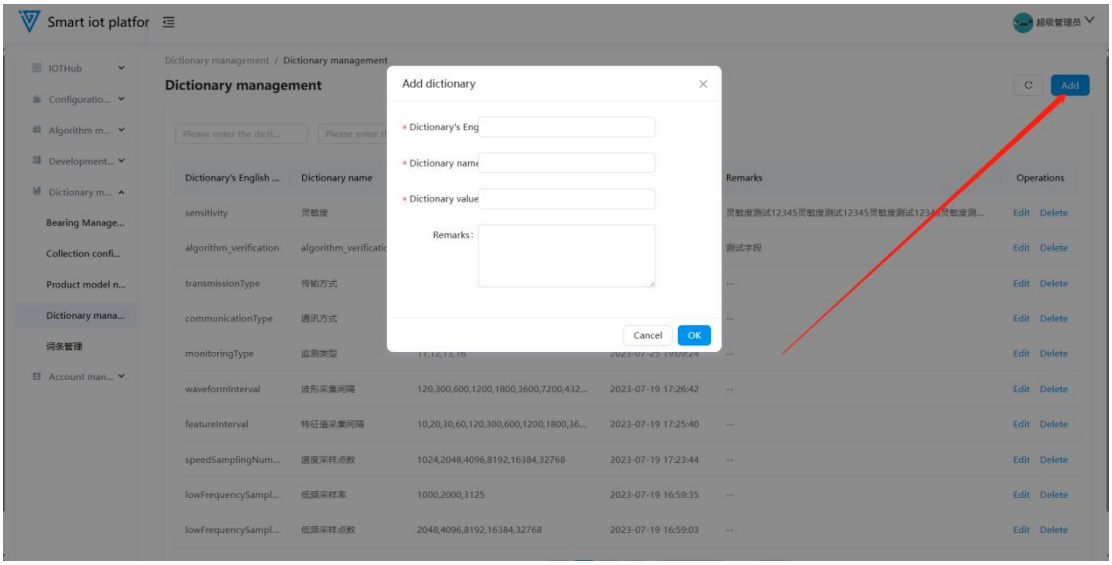
Functional Overview

The Dictionary Management module primarily allows users to independently edit and add product model attribute information and other attribute information. It mainly supports editing and deleting dictionary entries.



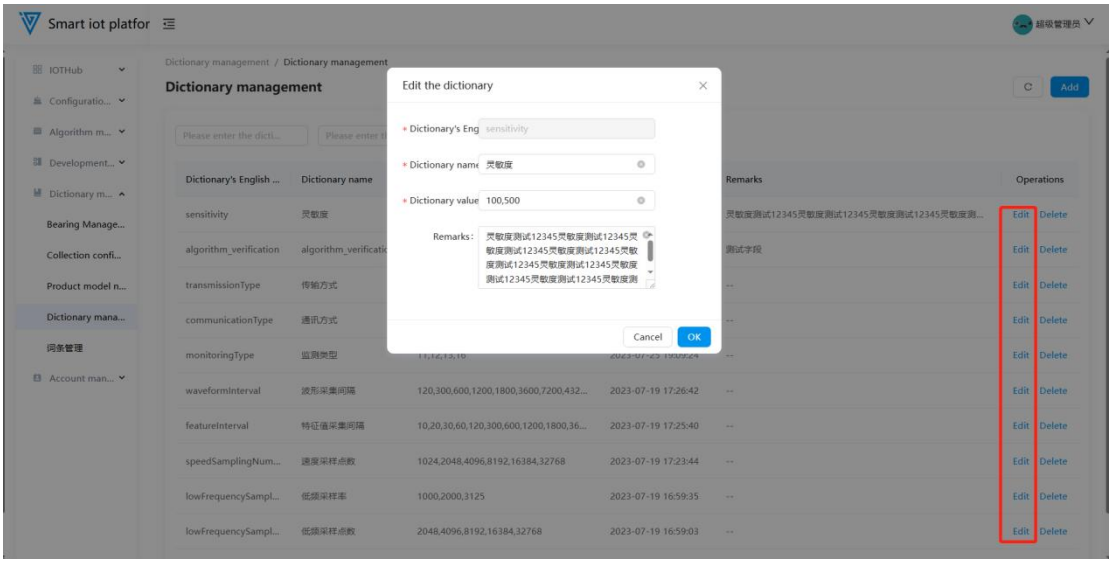
Adding Dictionary Entries

Dictionary addition refers to system-built dictionary information and cannot be performed on the page.



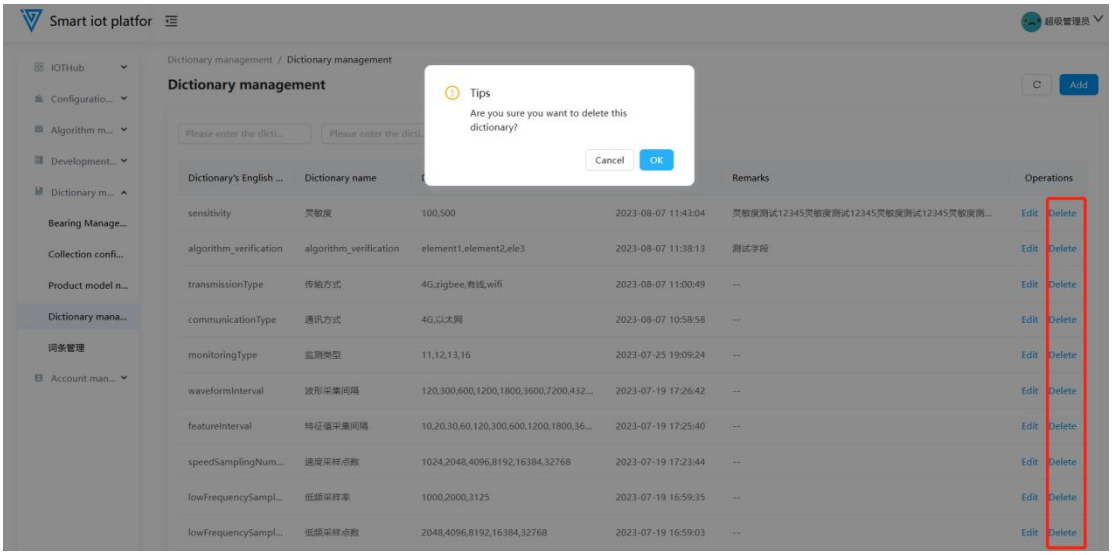
Editing Dictionary Entries

Added dictionary entries are displayed on the dictionary management list page in reverse chronological order of addition. Click the "Edit" button for the selected dictionary entry to enter the editing pop-up window. The English name of the dictionary entry cannot be edited; other information can be updated.



Deleting Dictionary Entries

Click the "Delete" button for the selected dictionary entry to delete it.

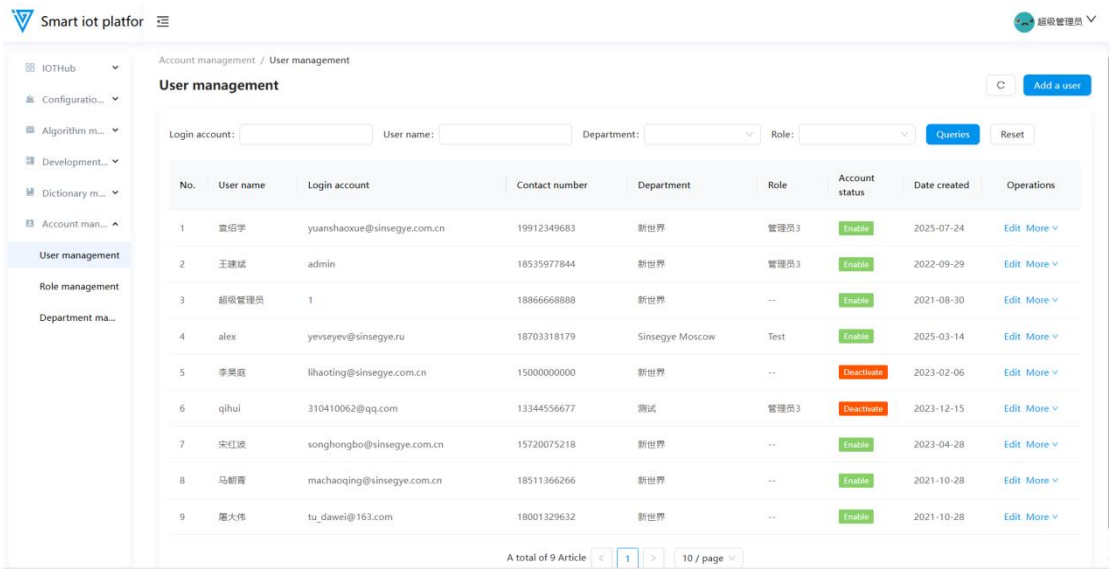


3.8Account Management

3.8.1User Management

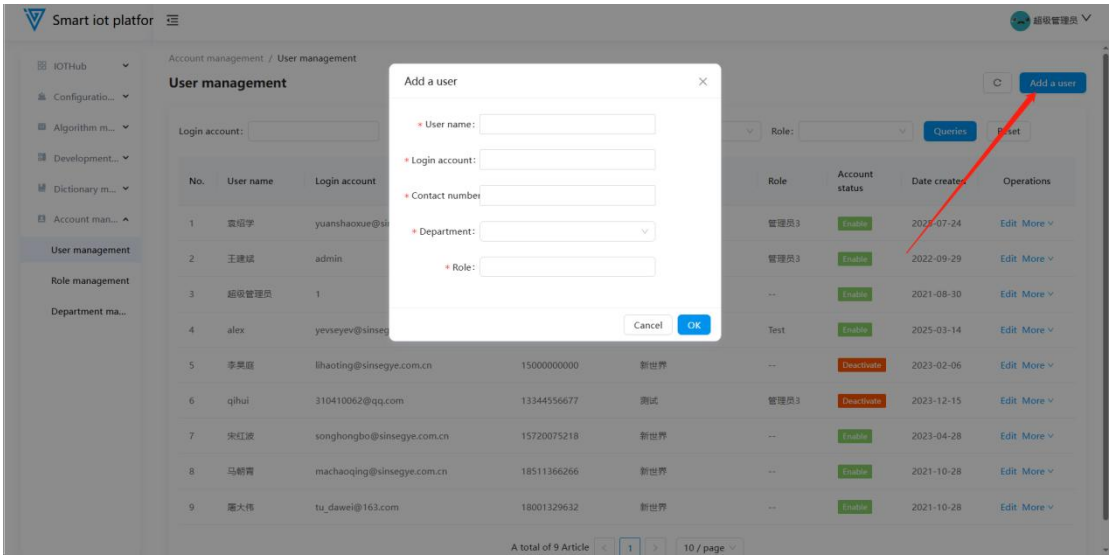
Functional Overview

The User Management module supports operations such as adding users, editing user information, resetting passwords, enabling/disabling accounts, and deleting users.



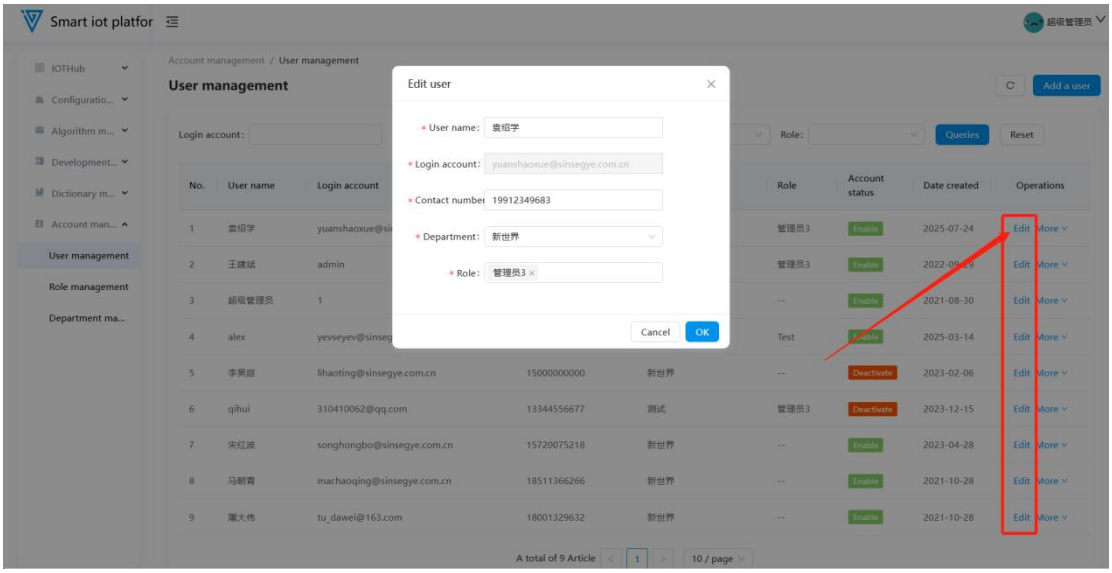
Adding a User

Click the "Add User" button in the upper right corner of the page to open the user addition pop-up window. Fill in the required information and click the "Confirm" button to complete the user addition process.



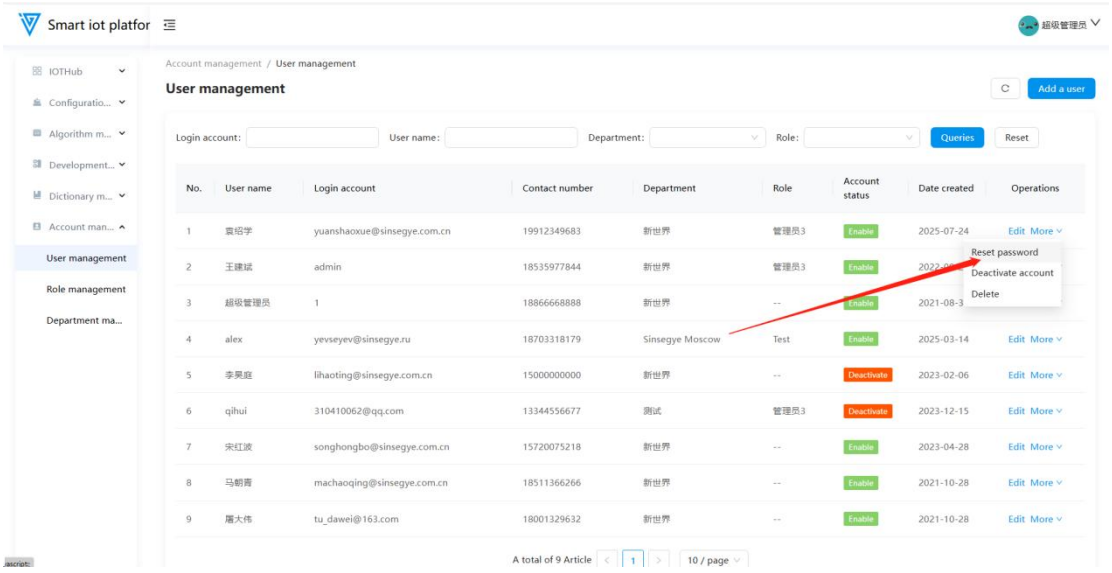
Editing a User

To update a user's name, contact number, department, or role, click the "Edit" button on the page to enter the editing pop-up window. After updating the relevant information, click the "Confirm" button to save the changes.



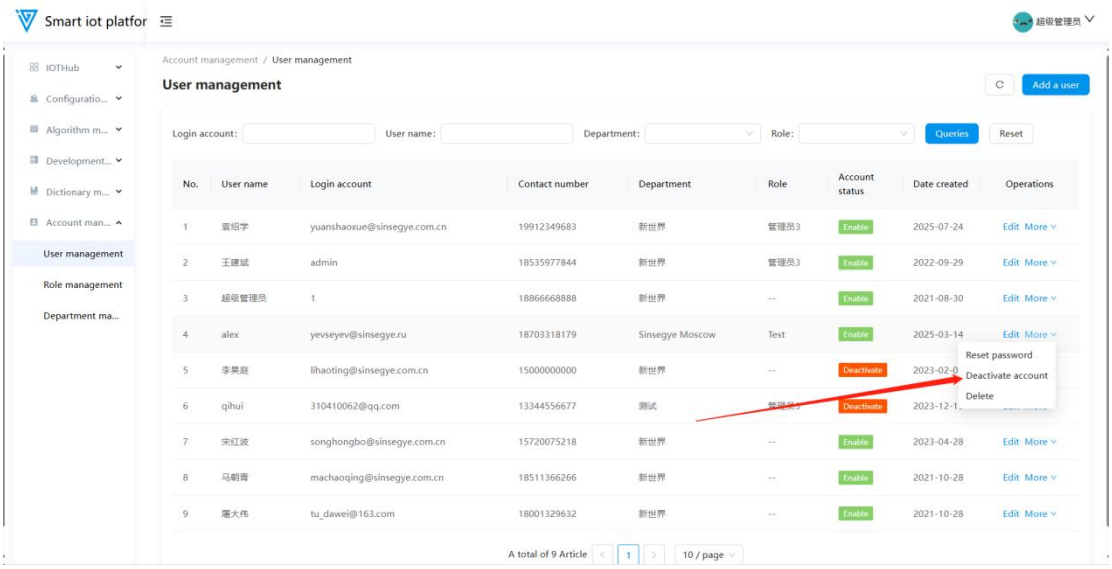
Resetting a Password

If a user forgets their password, the administrator can reset it. Hover over the "More" button on the page and click "Reset Password."



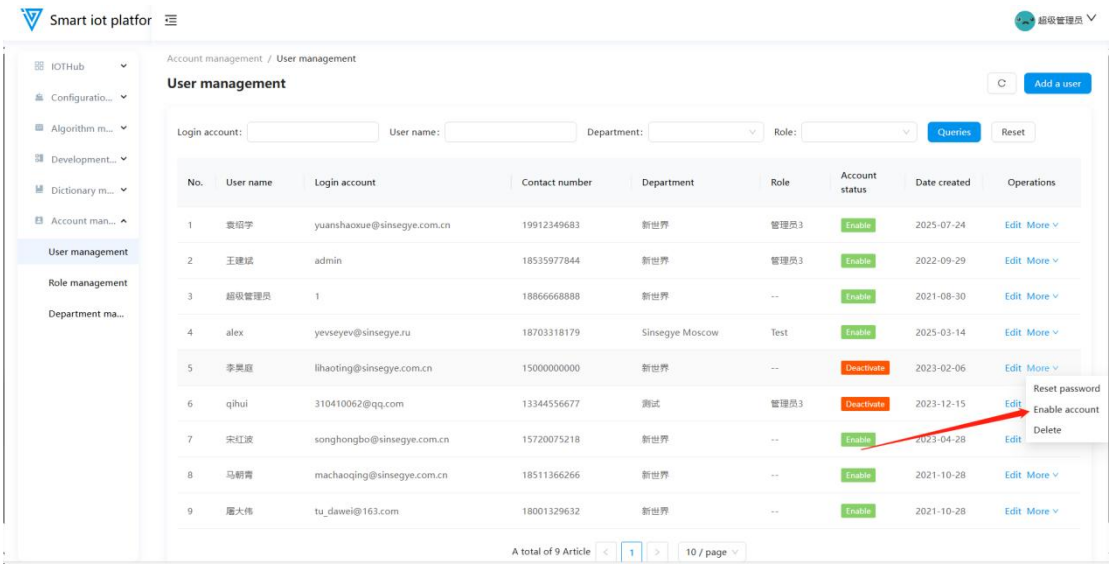
Disabling an Account

Accounts that are enabled can be disabled. Once disabled, the account will no longer have access to the platform.



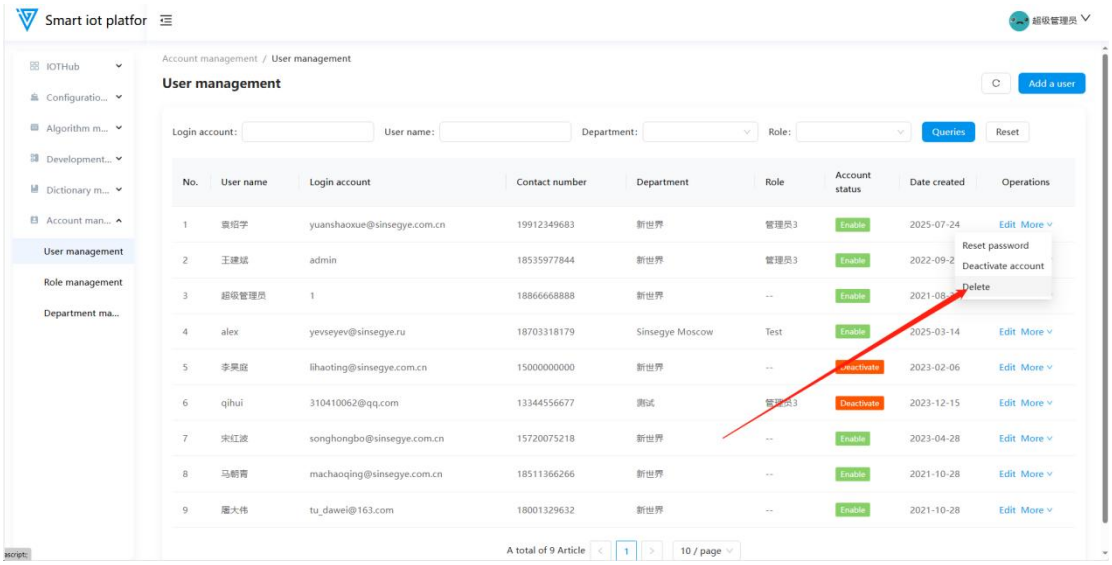
Enabling an Account

Disabled accounts can be re-enabled. Once enabled, the account's access rights are restored.



Deleting an Account

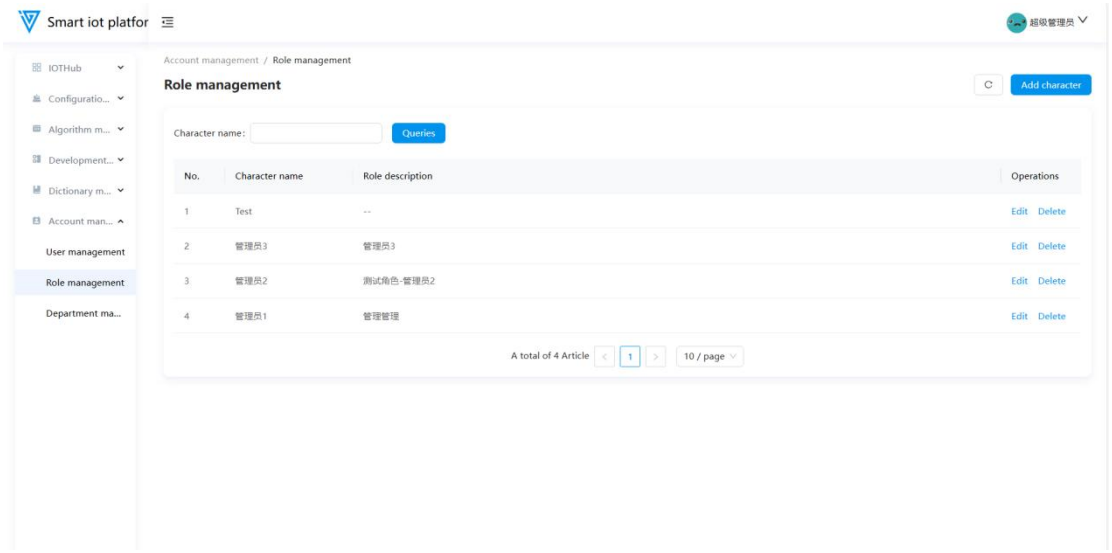
To delete a user, hover over the "More" button and click "Delete." After the confirmation pop-up appears, click "Confirm" to complete the deletion.



3.8.2Role Management

Functional Overview

The Role Management module supports adding, editing, and deleting roles. Roles determine the scope of permissions for users assigned to them.

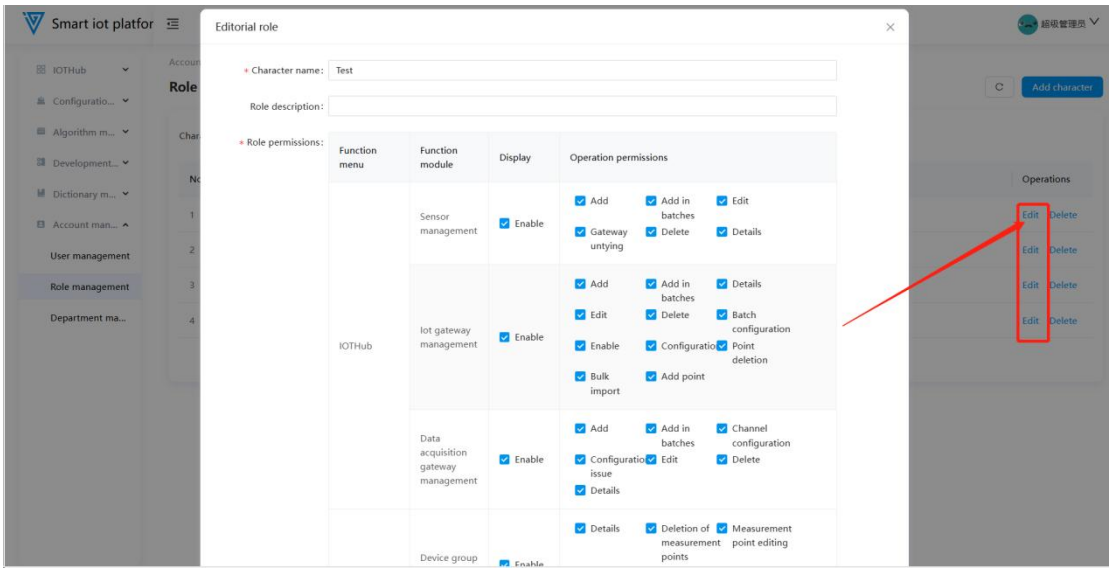


Adding a Role

Click the "Add Role" button in the upper right corner of the page to open the role addition pop-up window. Enter the role name, select the corresponding permissions, and click "Confirm" to complete the role addition.

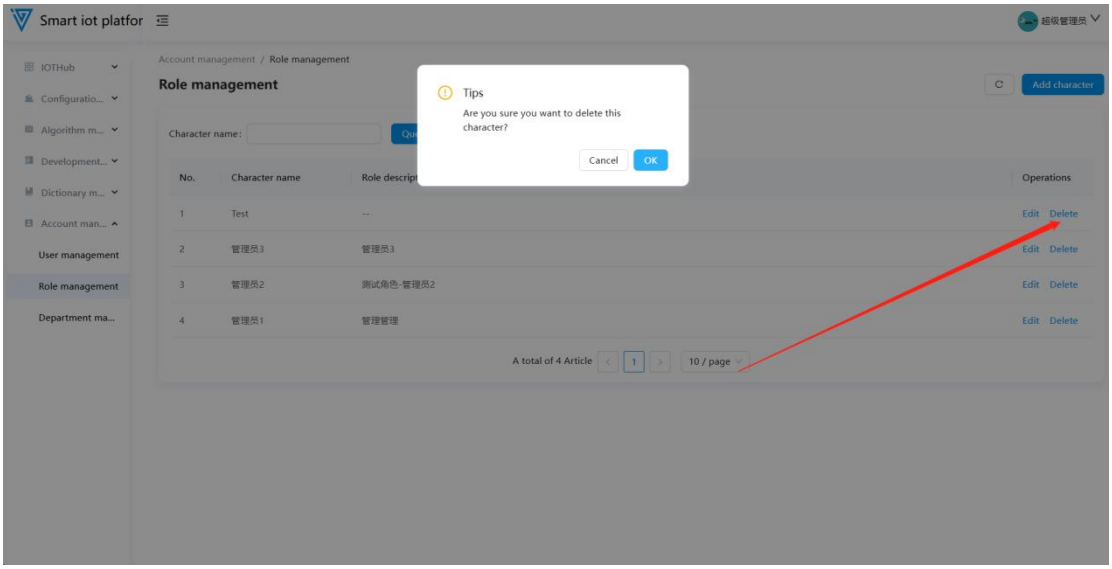
Editing a Role

To modify role permissions, click the "Edit" button on the page to enter the role editing pop-up window. After updating the permissions, click "Confirm" to save the changes.



Deleting a Role

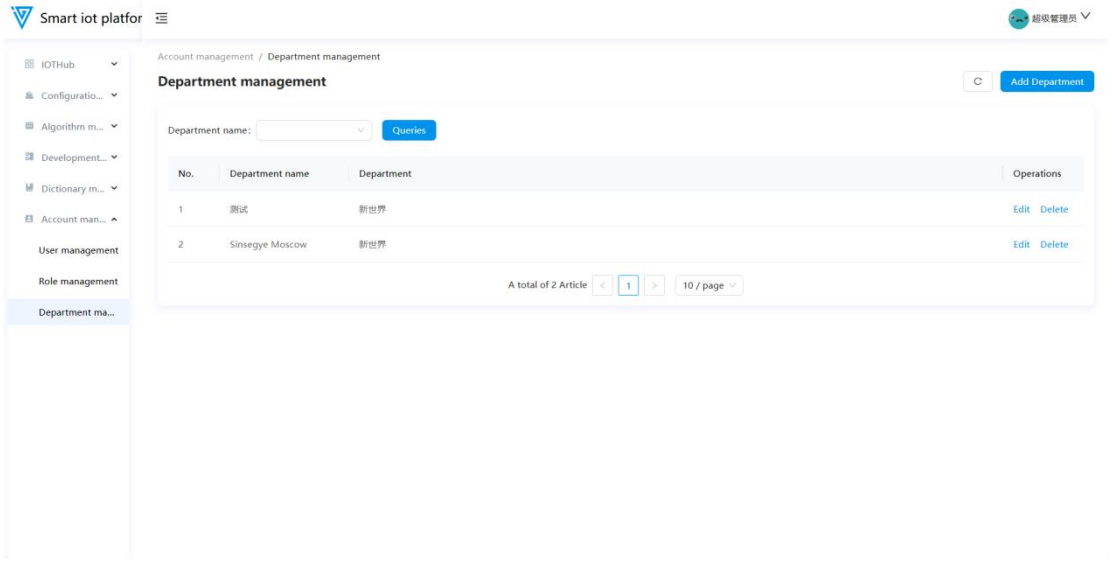
To delete an unnecessary role, click the "Delete" button on the page. After the confirmation pop-up appears, click "Confirm" to complete the deletion. Note: Roles that are already in use cannot be deleted.



3.8.3Department Management

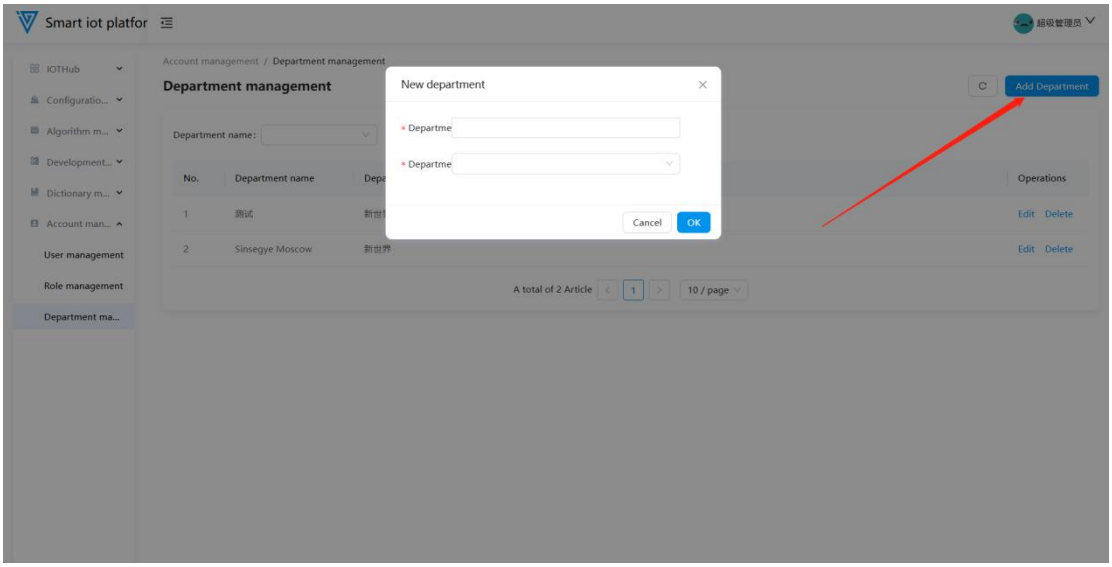
Functional Overview

The Department Management module supports adding, editing, and deleting departments.



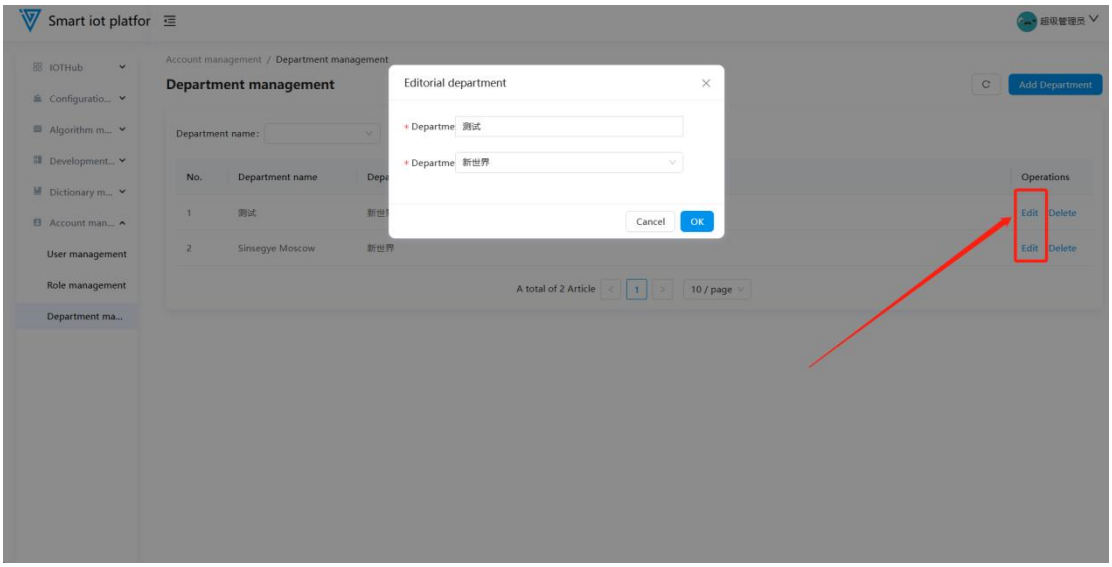
Adding a Department

Click the "Add Department" button in the upper right corner of the page to open the department addition pop-up window. Enter the department name and select the parent department (if applicable), then click "Confirm" to complete the addition.



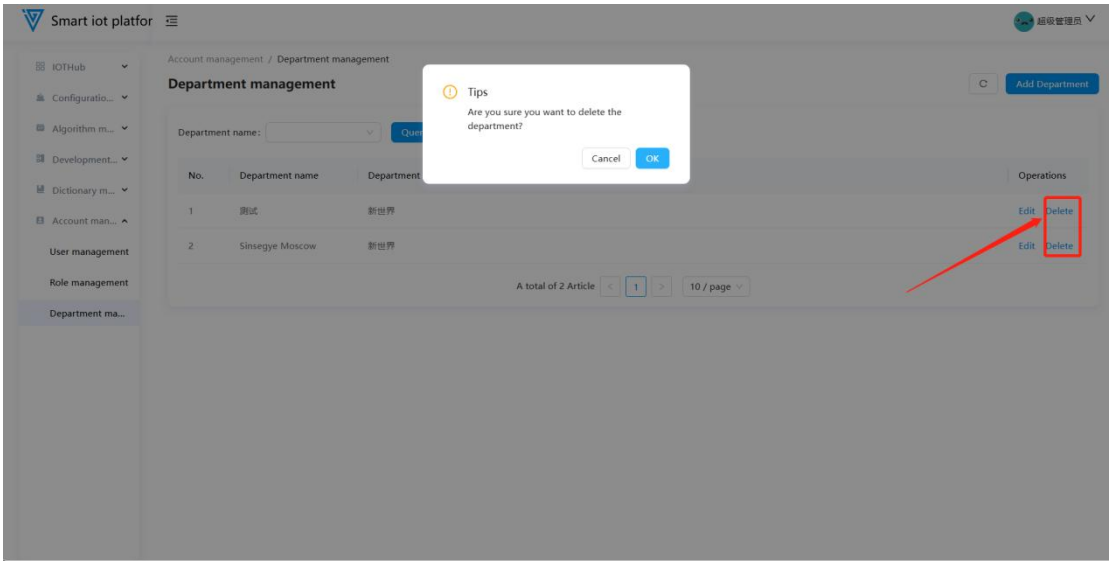
Editing a Department

Click the "Edit" button in the operation column to enter the department editing pop-up window. After updating the department information, click "Confirm" to save the changes.



Deleting a Department

Click the "Delete" button on the page. After the confirmation pop-up appears, click "Confirm" to delete the department. Note: Departments with associated users cannot be deleted.


Smart iot platfor
超级管理员
IOTHub
Configuratio...
Algorithm m...
Development...
Dictionary m...
Account man...
User management
Role management
Department ma...
Account management / Department management
Department management
Add Department
Department name:
Tips
Are you sure you want to delete the department?
Cancel
OK
No.
Department name
Department
Operations
1
测试
新世界
Edit
Delete
2
Sinsegye Moscow
新世界
Edit
Delete
A total of 2 Article
1
10 / page

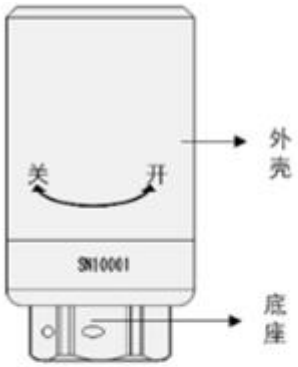
Ⅲ.IOT Matrix device

Instaguard - Device Intelligent Monitoring and Diagnostic System is an industrial digital and intelligent monitoring management tool that integrates monitoring, diagnostics, and management. It achieves comprehensive data integration through multi-dimensional data access to IoT Hub, utilizes AI intelligent prediction and precise fault localization through pre-trained large models and the Metafacture of the industrial knowledge graph, and ultimately provides data fusion and presentation to customer systems and the Instaguard front-end display system through various data protocols via Fastkit.

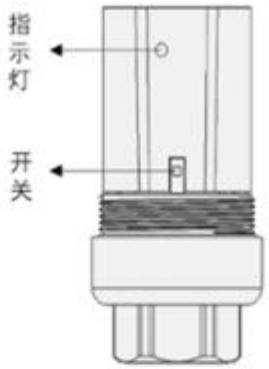
Instaguard's IOT matrix is the hardware cornerstone for intelligent monitoring of industrial equipment, integrating various types of industrial-grade IoT devices to achieve multi-dimensional real-time data collection. These devices connect to the IOTHub through standardized protocols, providing underlying data support for AI analysis by Metafacture and application presentation by FastKit, helping customers fully understand equipment status, promptly detect anomalies, and strengthen the hardware foundation for industrial digital monitoring.

1.Installation of Machine Condition Monitoring and Diagnostic Instrument(SD-V3207)

1.1Indicator Instructions



逆时针旋转外壳打开，
顺时针旋转外壳锁紧



外壳打开可见指示灯与开关

上推开关为开机

下推开关为关机

State	Explain
Booon slow flash 5 times (once 1s) -> Chang bright (2s) -> flash 7 times (once 500ms) -> flicker once-> out	Diagnostic instrument was connected to the gateway successfully (V 3207-zg)(Sensor first connected to this gateway)
Booon slow flash 5 times (1s once) -> Chang bright (2s) -> flicker once-> out	Diagnostic instrument was connected to the gateway successfully (V 3207-zg)(Sensors were previously connected to this gateway)
Booon slow flash 5 times (1s once) -> Chang bright (2s) -> flash 7 times (500ms once) -> out	The Diagnostics machine has failed to connect to the gateway（ZigBee)

Booon slow flash 5 times (1s once) -> Chang bright (20s, sensor network process) -> flicker once-> out	The diagnostic instrument was successfully connected to the cloud platform(PDA)
Booon slow flash 5 times (1s once) -> Chang bright (20s, sensor injection process) -> out	The diagnostic failed to connect to the cloud platform(PDA)

1.2Installation Location

The intelligent wireless diagnostic instrument is generally arranged on the main bearing or main bearing seat of the pump equipment, and the machine cover, cover plate and other parts are not suitable for measuring points.

The corresponding installation position of each type is shown in the figure.

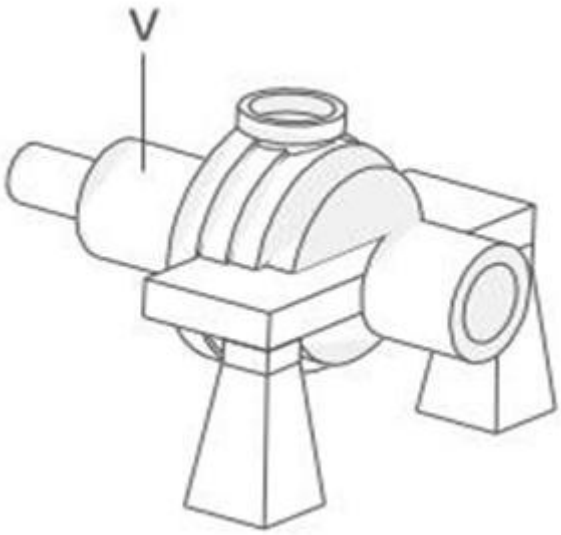
Suspension arm centrifugal pum

Quantity: 1~2

It must be installed in the vertical direction (V direction shown in the figure)

Near the drive end bearing position

If in case, install to both ends of the bearing case

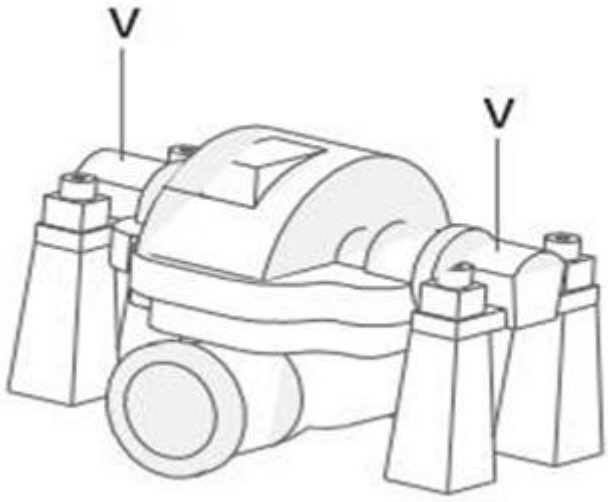


Support pump at both ends

Quantity: 2

Installation location is vertical (V direction shown in the figure)

One bearing position at each end



Vertical pipe pump

Quantity: 1

Pump type with bearing body structure is mounted to the shaft

Bearing position (Y direction shown in Figure 1)

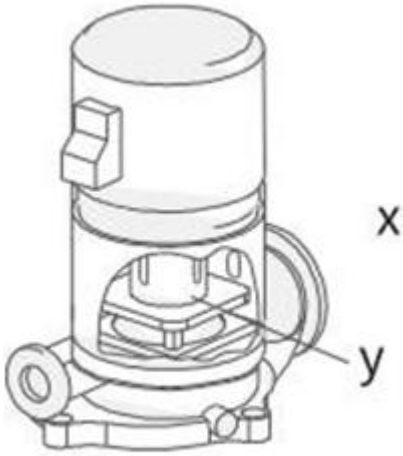


图1

图2

Low voltage motor

Quantity: 2

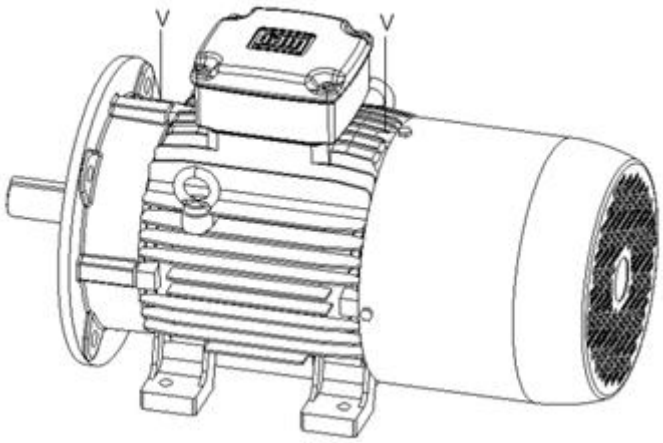
Installation location is vertical (V direction shown in the figure)

One bearing position at each end

Note: Dual terminals adopt the "main + secondary" working mode.

Optional 1 time is installed on the drive end

Installation method: stud installation



High voltage motor

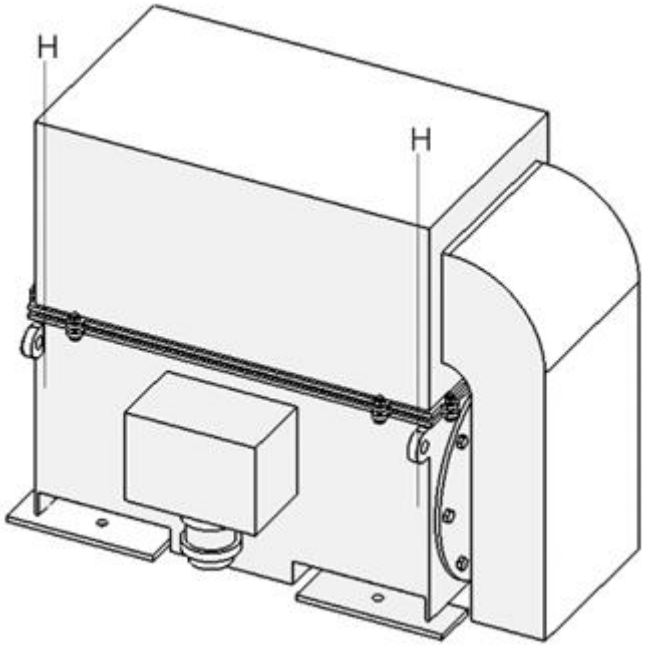
Quantity: 2

Installation location is horizontal (H direction shown in the figure)

One bearing position at each end

Note: Dual terminals adopt the "main + secondary" working mode.

It is recommended to be installed in "main + auxiliary" working mode.



High voltage motor

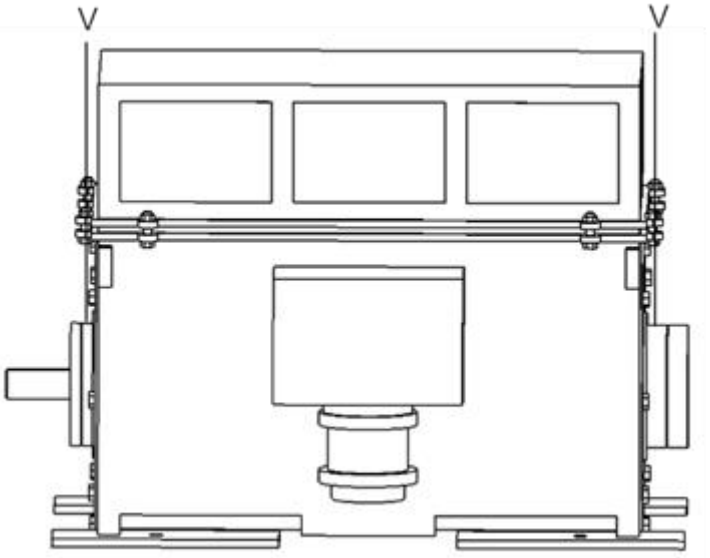
Quantity: 2

Installation location is vertical (V direction shown in the figure)

One bearing position at each end

Note: Dual terminals adopt the "main + secondary" working mode.

It is recommended to be installed in "main + auxiliary" working mode.

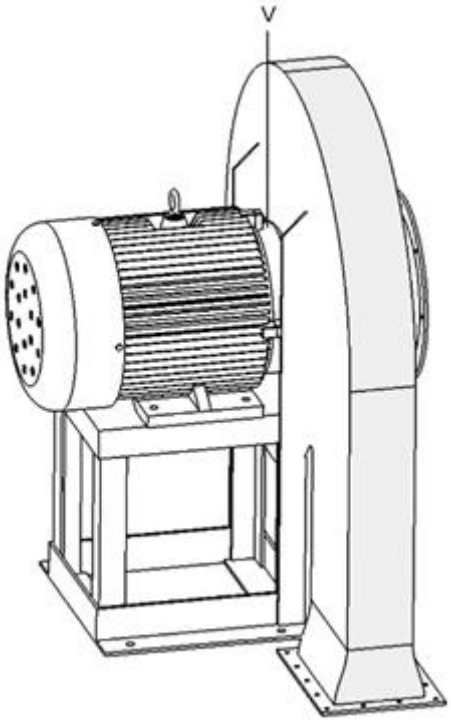


High pressure centrifugal fan

Quantity: 1

Installation location is vertical (V direction shown in the figure)

Near the drive end bearing position



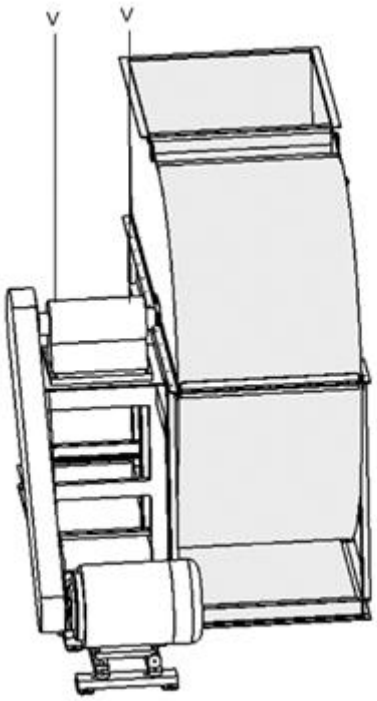
Induced draft fan

Quantity: 2

Installation location is vertical (V direction shown in the figure)

One bearing position at each end of the bearing seat

Note: Dual terminals adopt the "main + secondary" working mode.



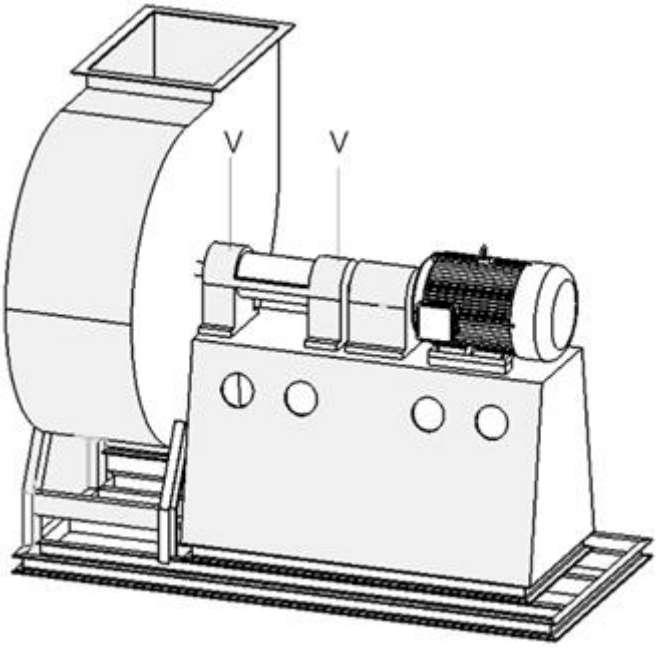
centrifugal blower

Quantity: 2

Installation location is vertical (V direction shown in the figure)

One bearing position at each end of the bearing seat

Note: Dual terminals adopt the "main + secondary" working mode.



Magnetic suction installation

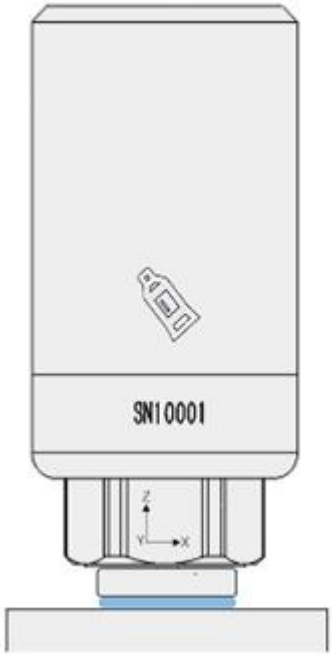
Installation interface requirements: magnetic suction plane ø 23mm

Installation accessories: ø20X8mm magnetic seat * 1

Adhesive installation

Installation interface requirements: adhesive plane ø 23mm

Installation accessories: special metal glue * 1



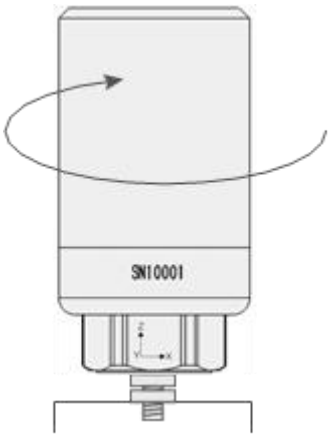
Note:

- In order to ensure the best installation stability and temperature monitoring accuracy, it is recommended to use stud installation.
- Strong magnets will demagnefy for a long time and high temperature. When the surface temperature of the equipment is higher than 55°C, it is recommended to use stud or adhesive installation.

1.3 Installation Steps

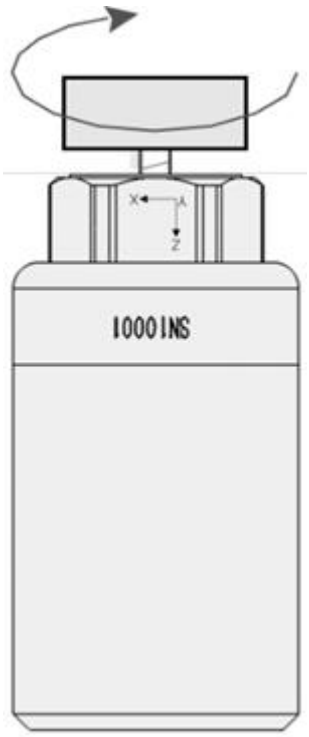
Bolt installation

Screw the product clockwise into the stud, to ensure that the sensor Z axis

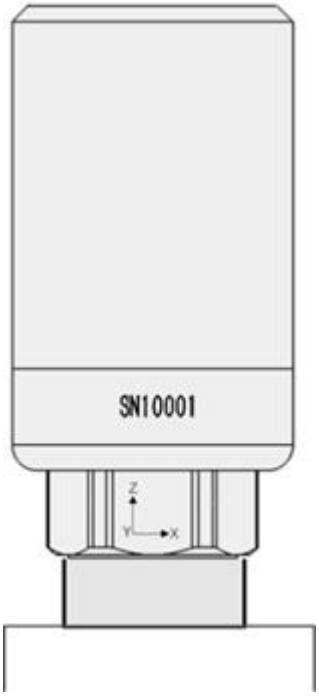


Magnetic suction installation

1.Tighten the magnetic seat clockwise to the product

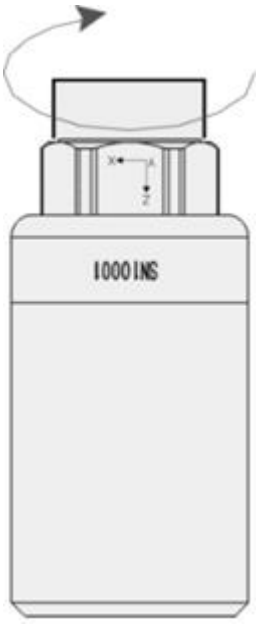


2.Adsorb the product to the equipment installation point to ensure that the sensor's Z-axis is perpendicular to the equipment axis and the X-axis is parallel to the equipment axis.

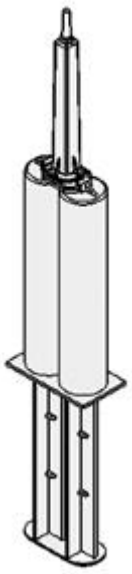


Adhesive installation

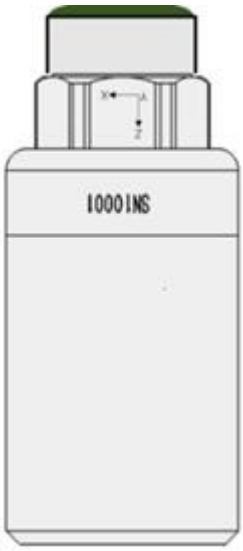
1.Tighten the magnetic seat clockwise to the product



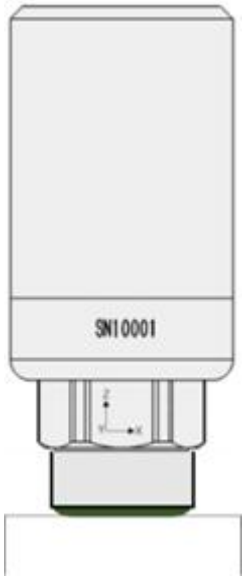
2.Assemble the special metal rubber gun and press the booster



3.Apply the glue evenly to the bottom surface of the magnetic base



4.Attach the sensor to the installation point of the equipment to ensure that the sensor Z axis direction is perpendicular to the equipment axis, and the X axis direction is parallel to the equipment axis



1.4Installation direction

The height direction of intelligent wireless diagnostic instrument (such as the Z axis direction on the right) needs with the pump.

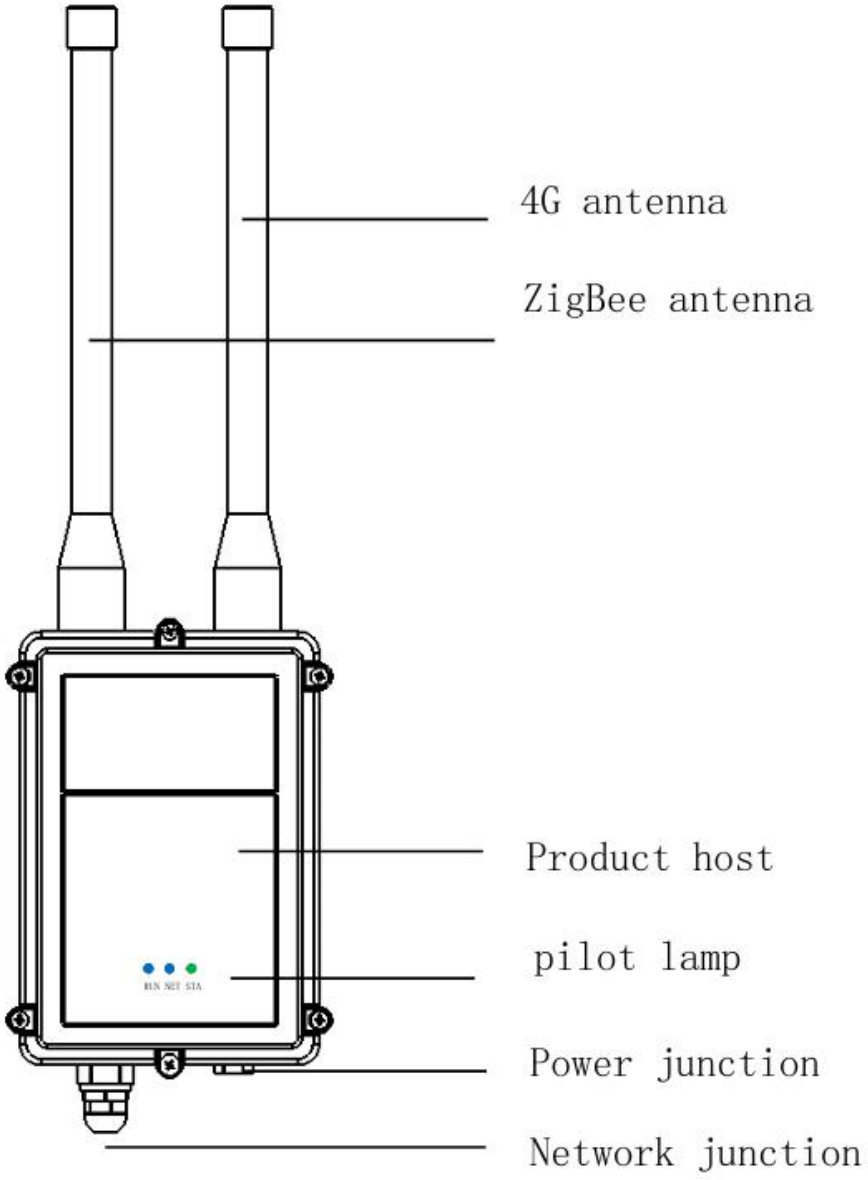
The equipment axis is vertical, and the Y-axis direction is parallel to the axis.

X: Horizontal Y: Axial Z: vertical (spindle)

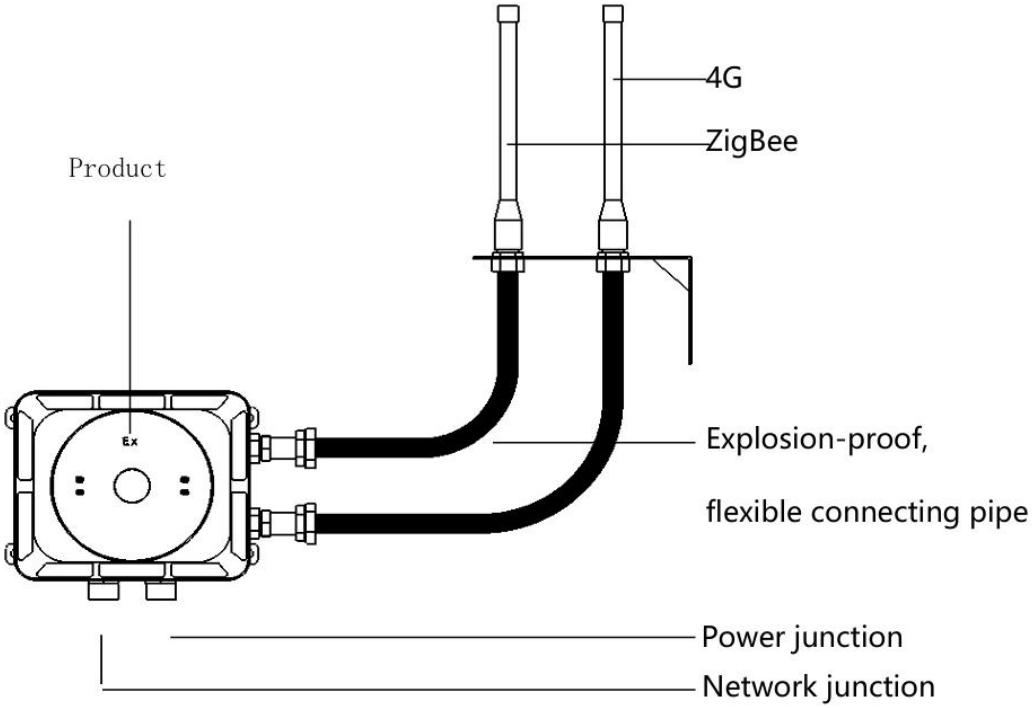
2.Installation of Intelligent Diagnostic data receiver （SD-GW5000）

2.1Product appearance

SD-GW5001 (General Edition)



SD-GW5101 (explosion-proof version)



SD-GW5101 (explosion-proof version)

2.2Indicator Instructions

RUN: move

NET: network

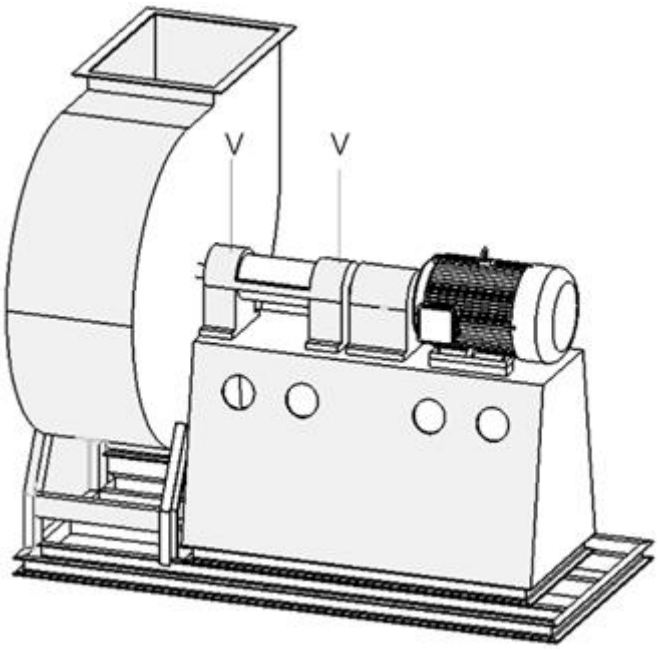
STA: state

（1）The gateway is powered on, the running light is flashing, the state light is always on, waiting for about 3s, and the network light is always on, indicating that the system is running normally;

（2）The gateway is powered on. When the system is running normally, wait for about 40s, the running light is always on, the network light is always on, and the state light is always on, indicating that the gateway enters the configuration mode;

（3）The gateway is powered on, when the system is running normally, wait for about 40s, the running light flashes, the network light flashes, and the state light is always on, indicating that the gateway connection service is normal;

（4）Power on the gateway, when the system is running normally, wait for about 40s, the running light is flashing, the network light is always on, and the state light is always on, indicating that the gateway connection service fails;

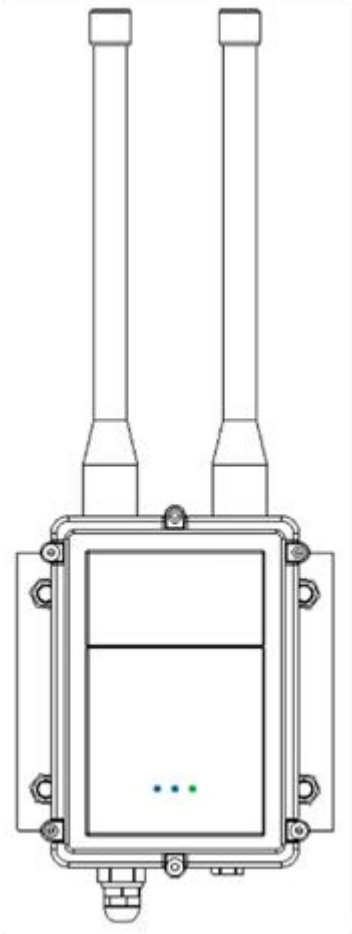


SD-GW5001 (General Edition)

Wall-mounted installation:

1.Use the connections to the smart gateway fixed.

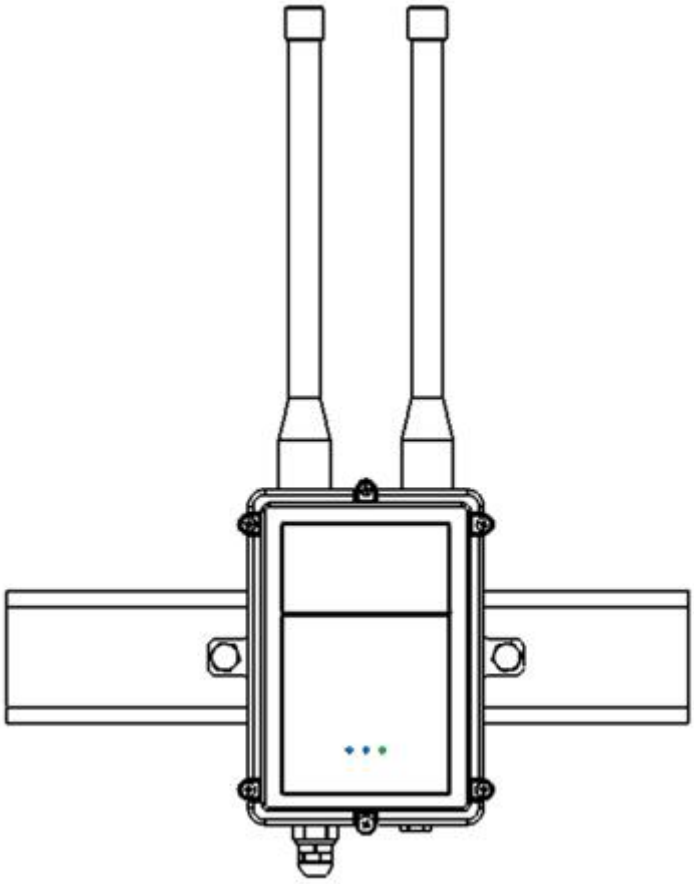
2.Wall drilling (punching diameter to the used contact hole distance and expansion bolt diameter match) make connect the installed smart gateway with an expansion bolt fixed with the wall surface.



Trough-type steel-type installation:

Use the connections to the smart gateway fixed.

Site groove steel hole (hole size to be used connector hole size and hole spacing are the same) use screw the bolt will install the connection parts of the intelligent gateway with the site the trough steel is fixed.

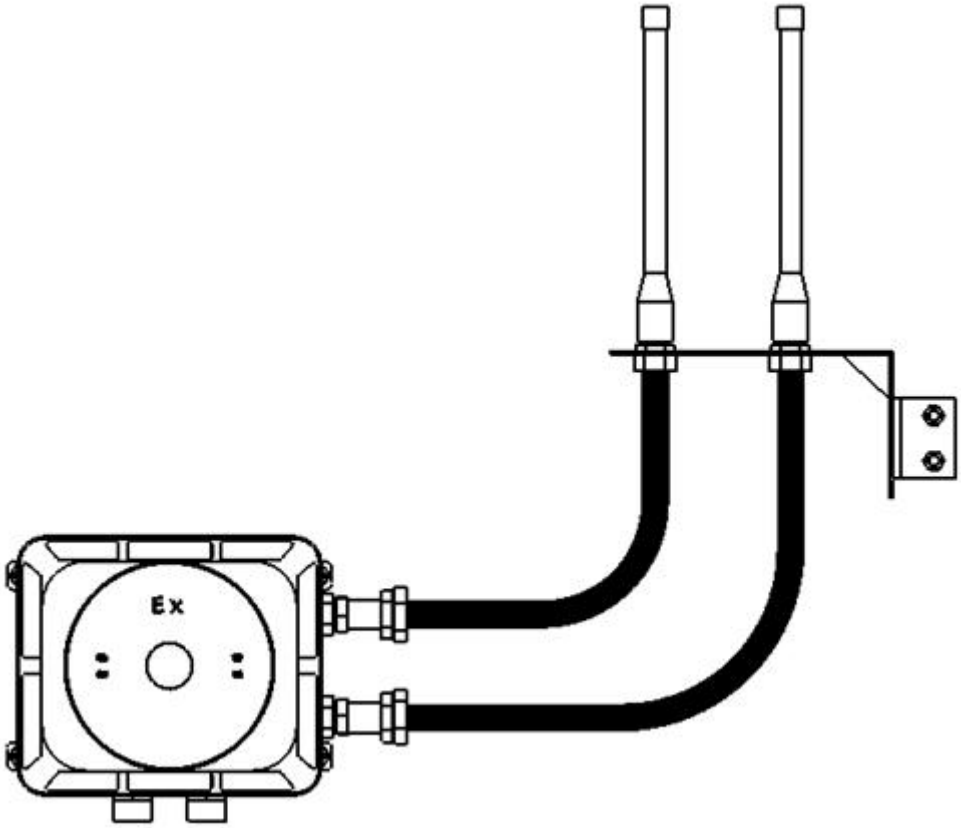


SD-GW5101 (explosion-proof version)

Wall-mounted installation:

1.Wall drilling (punching diameter and the day used holdistance of bracket support and diameter of expansion bolts match) Use expansion bolts to be an intelligent explosion-proof gateway fixed with the wall surface.

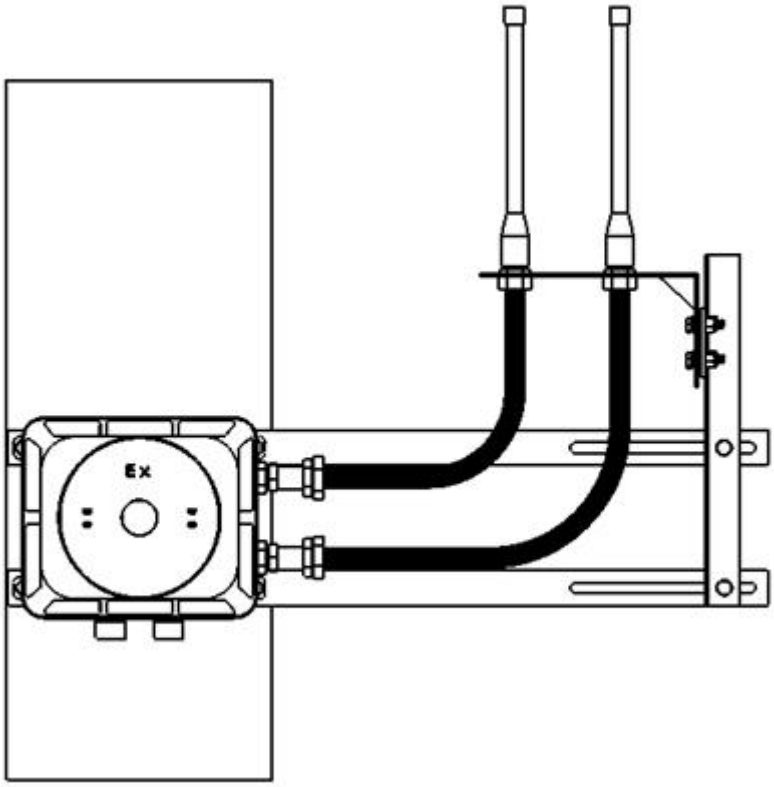
2.Attach the antenna support attachment with the expansion bolts good (the length of the expansion bolt is determined according to the site wall thickness) fixed the antenna support and the connections with the bolts.



Welding installation of prefabricated supports:

1.Select the position on the bearing pipe welded on the load-bearing column;

2.Use bolts to connect the intelligent gateway, prefabricated support A,the prefabricated bracket B can be assembled and fixed.



Note: Do not remove the host shell and antenna. Otherwise, it may lead to product failure.

3.Hardware of Intelligent Data Acquisition Unit （SD-GW5000）

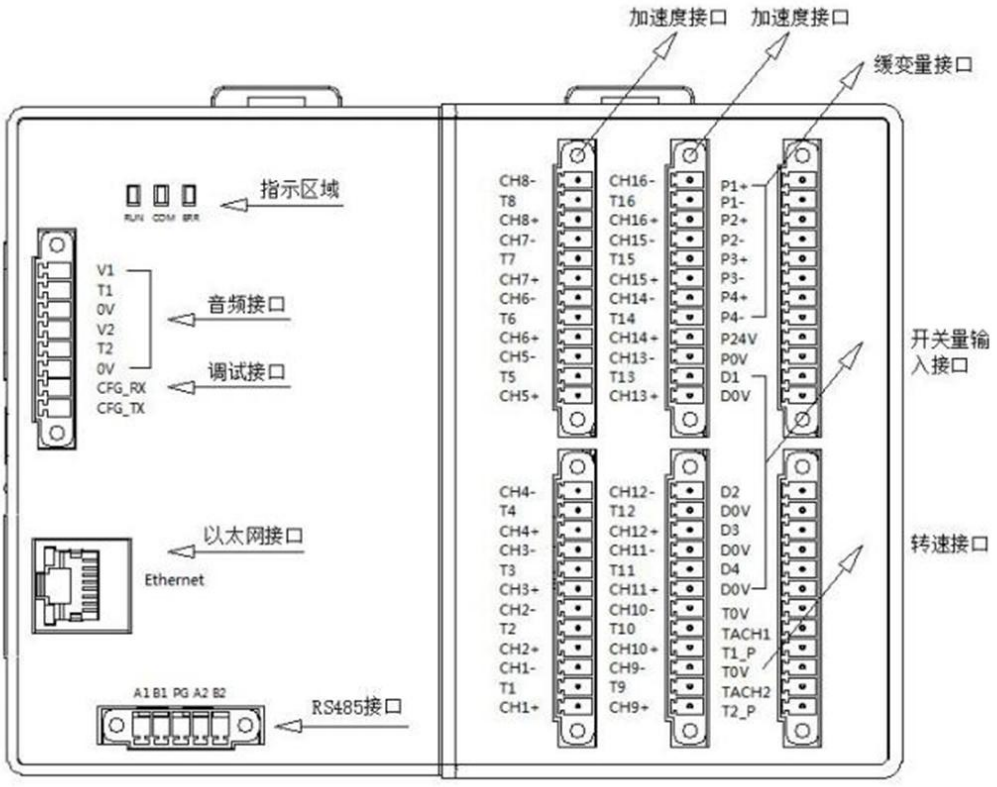
3.1Overview

The SD-DA7008/7016/7024 is a multi-channel condition monitoring system launched by SINSEGYE, designed for the non-steady-state operation characteristics of key industrial equipment. The product features 8, 16, or 24 channels for acceleration and temperature acquisition, speed measurement, and slow-variable acquisition. The system's main feature is its modular design, supporting up to 24 channels of acceleration and temperature acquisition. It can also be configured for 12 channels of slow-varying physical quantity acquisition, such as pressure, temperature, voltage, and current. The product includes two channels for speed measurement, allowing speed-correlated acquisition, and is equipped with configurable IO input and output modes.

The SD-DA7008/7016/7024 models offer the most comprehensive communication modes, supporting Ethernet, optical fiber, Wi-Fi, 4G, and other options, ensuring suitability for on-site applications. At the same time, data can be transmitted to DCS or PLC through two RS485 channels or an EtherCAT bus, truly integrating with on-site control systems. The online monitoring unit features 24-channel fully synchronous acquisition, accurately detecting equipment faults, and is a powerful tool for

maintaining critical industrial equipment.

3.2Function Panel

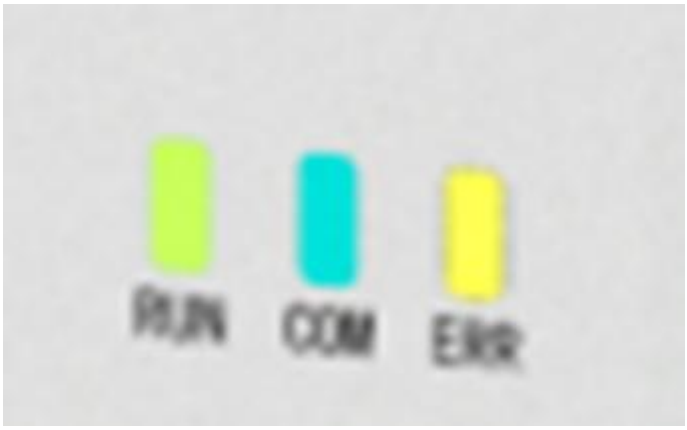


SD-DA7008/7016/7024 online monitoring unit, default configuration as shown in the figure below, front view:

- 16-channel IEPE acceleration interface connects to acceleration sensors, with optional sensors featuring temperature measurement functionality.
- 4-channel slow variable interface, capable of collecting voltage and current;
- 4-channel digital input interface, dry and wet contacts;

- Dual speed measurement interface, connected to the speed sensor;
- The product comes with Ethernet and RS485 communication features.
- Audio interface, connected to IEPE sound sensor, to determine the on-site noise conditions;
- Debug interface, can use the debug serial port for configuring the collection unit;
- Indicates the area and shows the operating status of the product.

3.3Indicator Instructions



RUN Indicator :

When the system is powered on, wait for about 20 seconds. If the RUN light flashes, it indicates that the system is operating normally; if it does not flash, it indicates that the system is malfunctioning.

COM Indicator :

When the system is powered on, the COM light stays on steadily. After about 30 seconds, the COM light starts flashing, indicating that the device is properly connected to the server. If it remains constantly on, it indicates a connection failure.

ERR Indicator :

Power on the system. If the ERR light remains on, wait for about 30 seconds. If the ERR light flashes, it indicates an abnormal system self-check; if it stays on continuously, it means the self-check is normal.

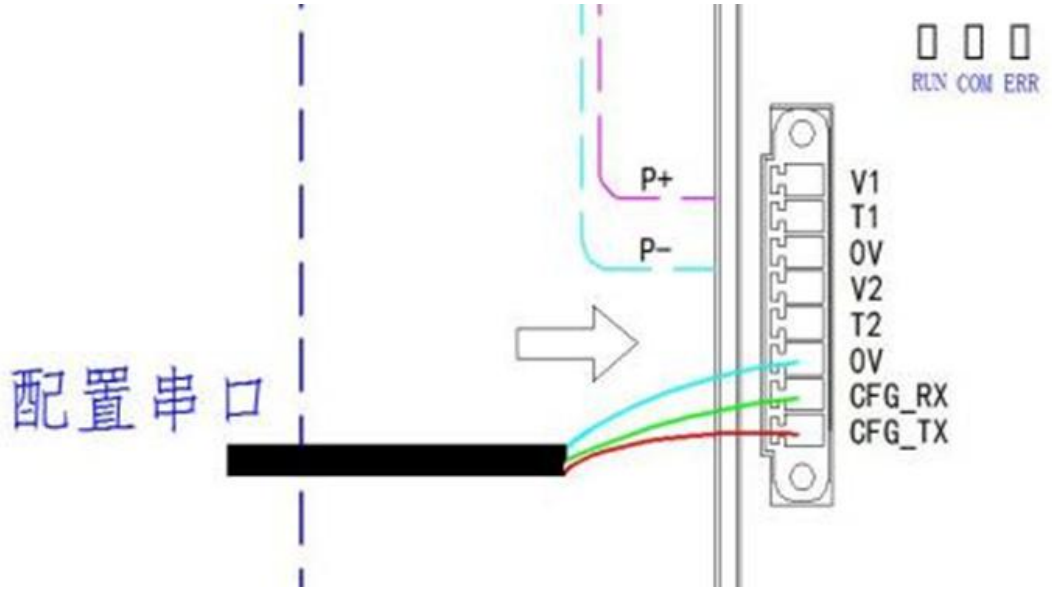
3.4Monitoring unit power access (power area)

When taking the monitoring unit out of the package for the first time, check that the appearance is normal. Then connect it to an 8~36V DC power supply using P P-, paying attention to the polarity (there is polarity protection). Also, make sure the casing is connected to a protective ground for surge protection.

3.5Monitoring unit debugging interface

Monitoring unit debugging interface (currently using a configured serial port, later to be changed to WiFi hotspot configuration)

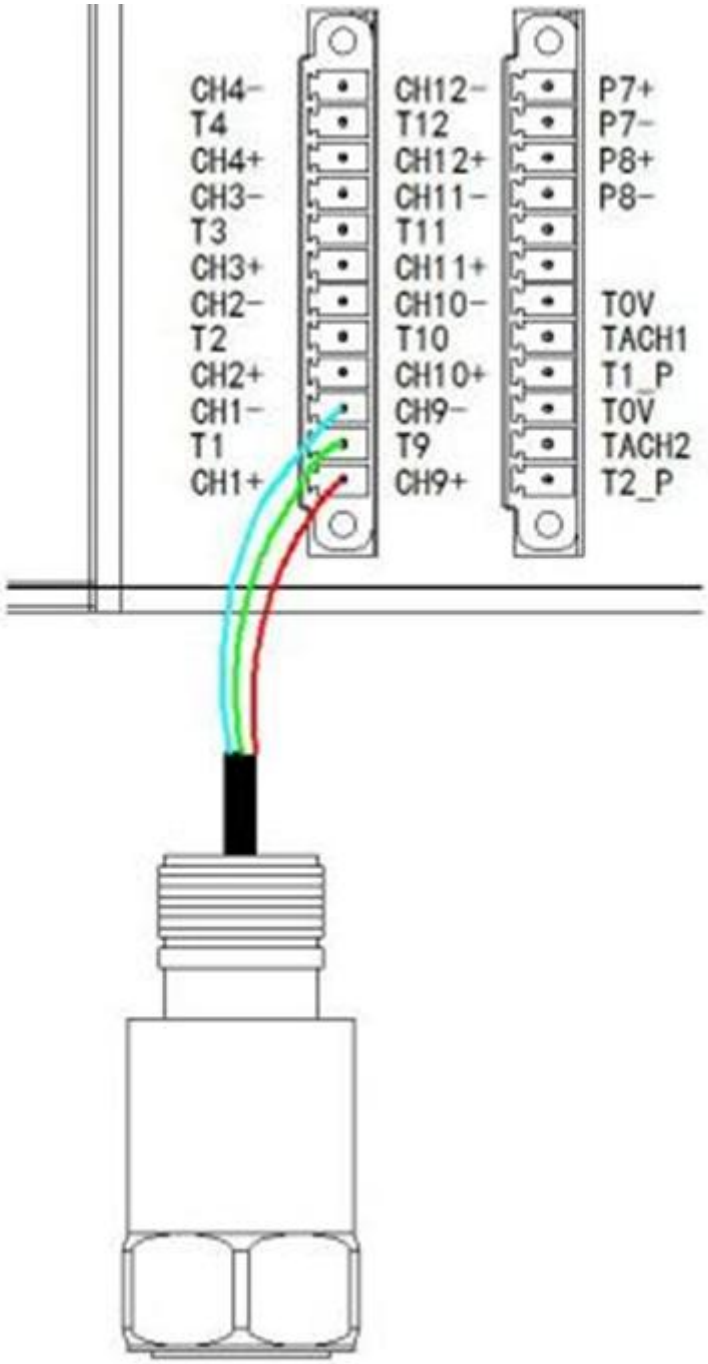
Take out the configuration serial port from the attachment, connect one end to the PC's USB port, and connect the other end to CFG RX/CFG TX/0V. Run the serial configuration tool installed on the PC, and configure various parameters after powering on the SD-DA7000.



3.6Wiring of acceleration measurement points for monitoring unit

The monitoring unit supports the collection of 8/16-channel integrated acceleration and temperature sensors.

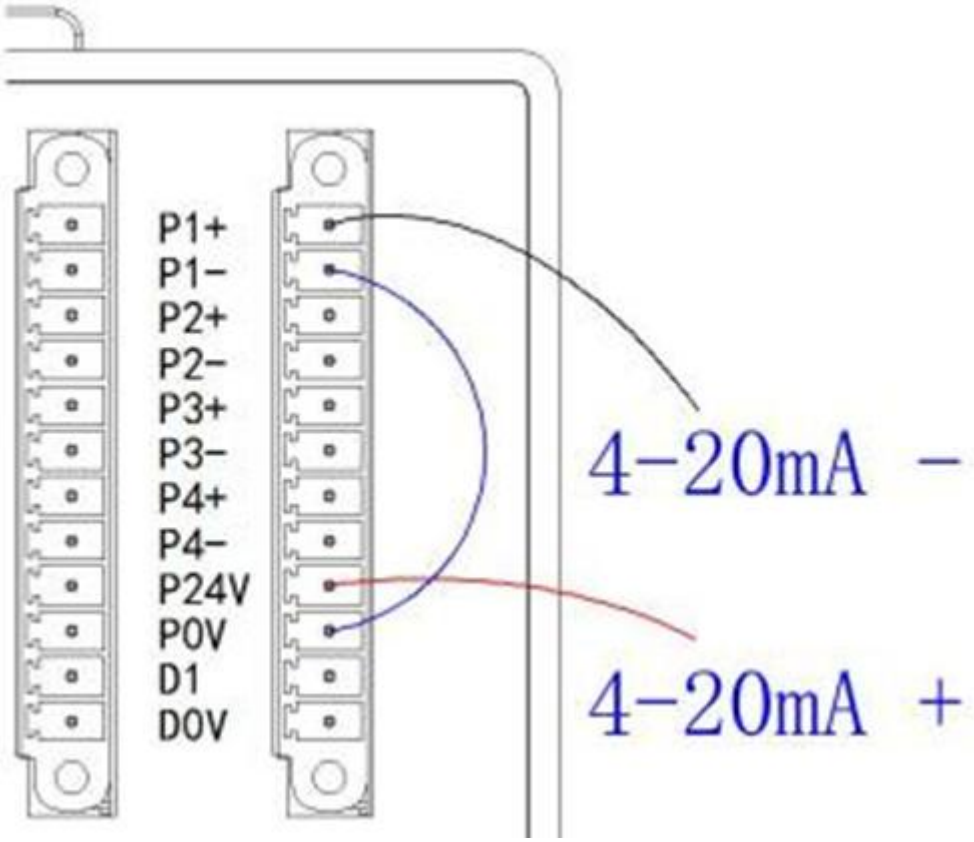
The integrated accelerometer-temperature sensor is of the three-wire type and is not a PT100 type. Please consult with us in advance regarding the selection of the relevant sensors.



3.7Buffer Variable Interface

The slow variable interface refers to certain physical interfaces for process data at the site, such as pressure, flow, torque, temperature, and other physical quantities. These physical quantities exist in the form of voltage (0~5V, 0~10V) or 4~20mA current. Voltage signals can be directly connected according to the schematics, while 4~20mA signals have three wiring methods. The monitoring unit supports 4-channel interfaces in 2-wire, 3-wire, and 4-wire configurations.

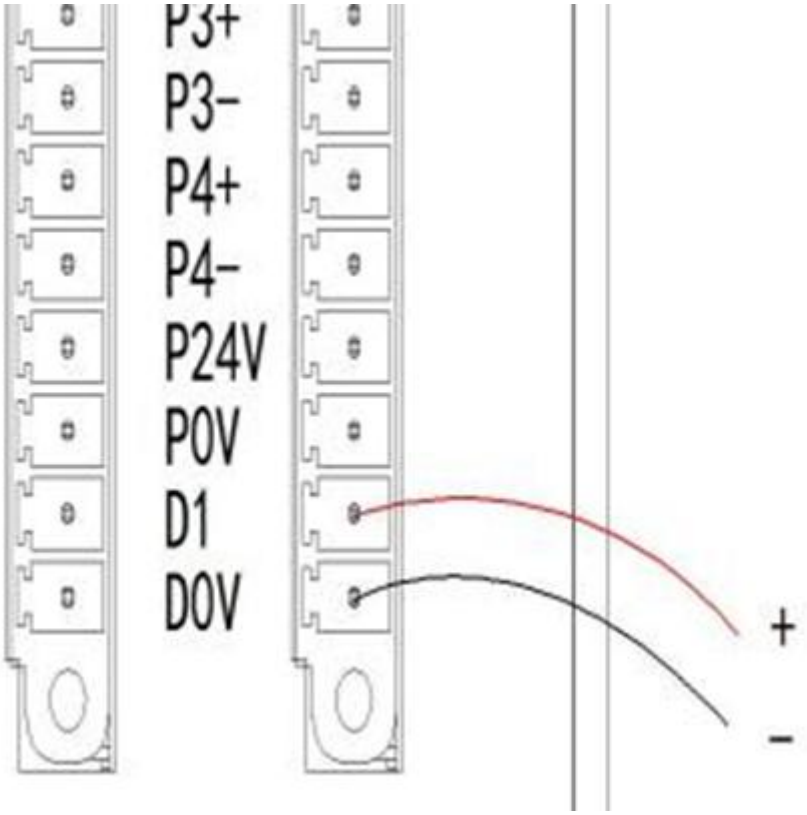
The right figure shows the wiring method for a 2-wire 4~20mA system. If it is a voltage signal, there is no need to connect to 24V; it can be connected directly to P1, P1-.



3.8Digital input/output interface

The switch interface currently supports 4-channel IO input.

The switch input can be directly connected to D1 and D0V. The wet contact voltage supports 12~24V levels, and there is 3.5KV electrical isolation.

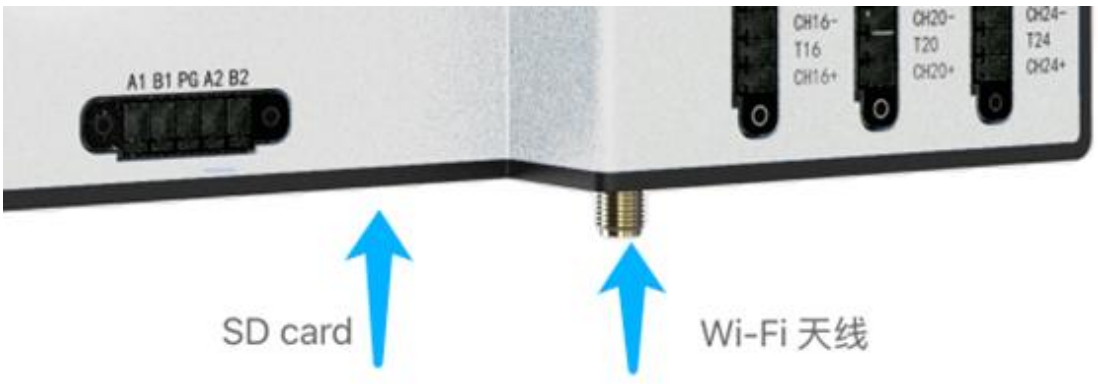


3.9Other interfaces

4G interface: When choosing the 4G version, this interface needs to be connected to a 4G antenna;

WIFI interface: when selecting the WIFI version, this interface needs to be connected to the WIFI antenna;

Industrial-grade SD card interface, removable storage;



Additionally, there is a fiber optic interface and a fiber optic indicator light. When selecting the fiber optic version, this interface connects to the fiber optic cable;

Ⅳ.Appendix

1.Use of Attributes and Annotations

The following table provides an overview of all compilations and annotations that can be configured in the server. These can be defined in various real-time environments in <Product Name> to implement different functions. Refer to the following table for a detailed description of the properties and annotations.

Symbol description/legend	**Meaning**

2.Error Diagnosis

Extended diagnostics may be required if undesirable operating behavior occurs. According to specific circumstance, this may include the following actions: <Action 1>, <Action 2>, <Action n>. Details can be found in the table below:

Action	**Use cases**	**Link**

The following table provides an overview of possible unexpected operation behaviors and solutions.

3.Support and Services

SINSEGYE provides comprehensive support and services for the company's products and solutions, ensuring a fast and professional response to relevant issues.

Data download

Our data download section covers a wealth of file resources, including application cases, technical documentation, and product descriptions, to meet your diverse needs.

Data download address: https://help.sinsegye.com

Get support

Please contact us for local support and service of SINSEGYE products. You can visit

our official website www.sinsegye.com to find out the branch address of SINSEGYE and get more information about SINSEGYE.

In addition, you can contact us by:

- Hotline: (+86) 400-013-2158
- Email Address: support@sinsegye.com.cn