珩兴智慧物联制冷行业解决方案

Hengchine Intelligent IOT Refrigeration Industry Solutions

■ 打造企业专属智慧物联平台

Build An Enterprise Exclusive Intelligent IOT Platform

智慧 · 物联

珩兴 Hengchine ™

珩谋格物，物物相联 **Things are connected**

　　珩兴物联网平台为客户提供一整套从设备数据采集、云端服务器到应用平台的整体方案，为客户打造专属物联平台，配和客户联合申请专利，让客户成为行业领头羊，帮助企业有效占领市场！

Hengchine Internet of things platform provides customers with a complete set of overall solutions from equipment data collection, cloud server to application platform, creates an exclusive Internet of things platform for customers, cooperates with customers to jointly apply for patents, makes customers become the industry leader, and helps enterprises effectively occupy the market.

珩兴物联网平台可实现数据远程监控、设备管理、维保售后、数据统计、故障报警、远程诊断等功能，可以为用户有效缓解运维人员管理难、设备维护保养难、运营管控难、运行成本高等问题，提升自身运营管控水平。

Hengchine Internet of things platform can realize the functions of data remote monitoring, equipment management, maintenance and after–sales, data statistics, fault alarm, remote diagnosis, etc., which can effectively alleviate the problems of operation and maintenance personnel management, equipment maintenance and maintenance, operation and maintenance management and control, operation cost, etc., and improve their own operation and control level.

珩兴物联网平台是通过互联网（以太网、GPRS、WIFI等），将现场的大量不同区域设备的数据或者程序，传输到远端的云数据中心，实现远程数据监控，设备诊断、程序维护和故障报警等功能，为用户提供一种简单可靠的互联网数据远程传输方案。珩兴物联网平台基于HTML5技术开发而成，系统包括：

Hengchine Internet of things platform is through the Internet (Ethernet, GPRS, WiFi, etc.). A large number of data or programs of equipment in different areas are transmitted to the remote cloud data center to realize remote data monitoring, equipment diagnosis, program maintenance, fault alarm and other functions, so as to provide a simple and reliable internet data transmission scheme for users. Hengchine Internet of things platform is developed based on htmi5 technology. The system includes:

◆ 工业物联网模块 Industrial Internet of things module
模块连接设备控制器、HMI和仪表等，将设备数据通过网络连接至数采中心

module connects the device controller, HMI, instrument, etc., and connects the device data to the data acquisition center through the network

◆ 数据传输中心 Data transmission center
用于远程连接大量的现场物联网模块，实现大量远程设备的连接管理、数据采集、存储和转发等功能。

It is used to connect a large number of on-site IOT modules remotely, and realize the connection management, data collection, storage and forwarding functions of a large number of remote devices

◆ 运维管控平台 Operation and maintenance management and control platform
PC客户端/WEB客户端/手机APP

PC client / Web client / mobile app / wechat / SMS

系统功能包括 System functions include：

数据实时监控
Real time data monitoring

- 实时数据采集
  Real time data collection
- 实时故障告警
  Real time fault alarm
- 历史数据存储
  Historical data storage
- 程序远程下载和监控
  Program remote download and monitoring
- 远程停机控制
  Remote shutdown control
- 远程修改参数
  Modify parameters remotely
- 远程启停控制
  Remote start stop control
- ......

设备远程运维
Remote operation and maintenance of equipment

- 设备档案维护
  Equipment file maintenance
- 客户信息管理
  Customer information management
- 预防性维护
  Preventive maintenance
- 设备地理位置显示
  Geographical location display of equipment
- 维修申请和派工
  Maintenance application and dispatch
- 库存备件管理
  Inventory spare parts management
- 故障信息记录
  Fault information record
- ......

大数据分析
Big data analysis

- 数据分析
  Data analysis
- 能源管理
  energy management
- 能耗预测和计划
  Energy consumption prediction and planning
- 专家系统
  expert system
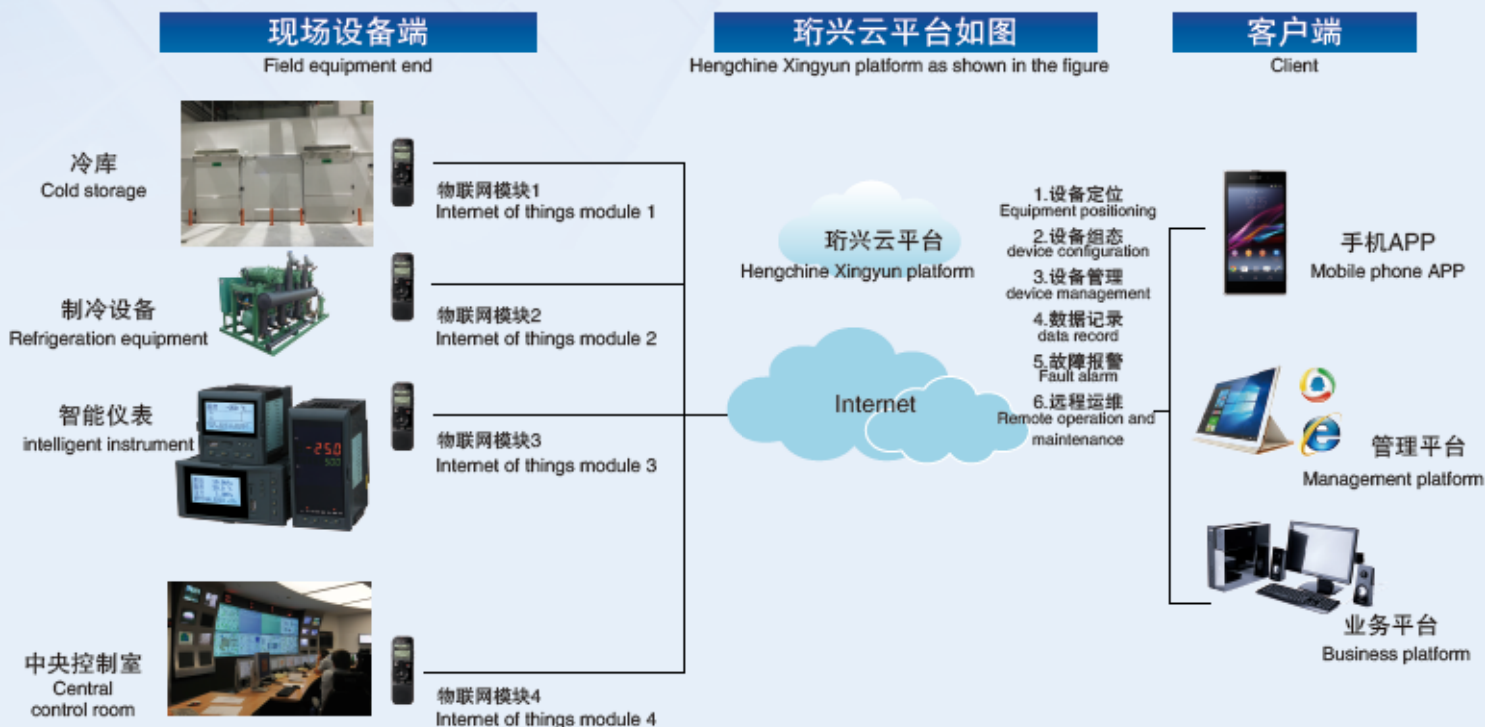- 设备效率分析（OEE）
  Equipment efficiency analysis (OEE)
- ......

主要功能 Major function

1、将大量工业设备连接到一个远程网络中；
Connect a large number of industrial devices to a remote network

2、获取和设置设备远程数据；
Get and set device remote data

3、设备历史数据查询；
Device history data query

4、实时报警推送和查询；
Real time alarm push and query

5、设备售后维护信息管理；
Equipment after-sales maintenance information management

6、PLC远程下载与监控。
PLC remote download and monitoring

系统特点 System features

1、可同时连接数万台设备，保证数据的实时传输；
It can connect tens of thousands of devices at the same time to ensure the real-time transmission of data

2、接口丰富，支持以太网，RS232.RS485.RS422等接口的设备连接；
Rich interfaces, supporting equipment connection of Ethernet, RS232 / 485 / 422 and other interfaces

3、强兼容，内含大量设备驱动，支持主流PLC产品，用户无需了解协议具体内容；
Strong compatibility, including a large number of device drivers, supporting mainstream PLC products, users do not need to understand the specific content of the protocol

4、给客户提供专属物联网平台；
Provide customers with exclusive Internet of things platform

5、可编辑，适用于工程改造，系统集中监控方案；
Editable, applicable to engineering transformation, centralized system monitoring scheme

6、安全可靠，提供工业级的安全接入，加密传输，云端冗余备份，支持多权限访问，安全登录机制，
实现数据的多层防护，构建安全可靠的工业数据接入环境。
Safe and reliable, provide industrial level safe access, encrypted transmission, redundant backup in the cloud, support multi authority access, safe login mechanism, realize multi-layer protection of data, and build a safe and reliable industrial data access environment

系统构架 System Architecture

现场设备端
Field equipment end

珩兴云平台如图
Hengchine Xingyun platform as shown in the figure

客户端
Client

冷库
Cold storage

物联网模块1
Internet of things module 1

制冷设备
Refrigeration equipment

物联网模块2
Internet of things module 2

智能仪表
intelligent instrument

物联网模块3
Internet of things module 3

中央控制室
Central control room

物联网模块4
Internet of things module 4

珩兴云平台
Hengchine Xingyun platform

Internet

1.设备定位
Equipment positioning

2.设备组态
device configuration

3.设备管理
device management

4.数据记录
data record

5.故障报警
Fault alarm

6.远程运维
Remote operation and maintenance

手机APP
Mobile phone APP

管理平台
Management platform

业务平台
Business platform

珩兴智慧物联制冷行业解决方案
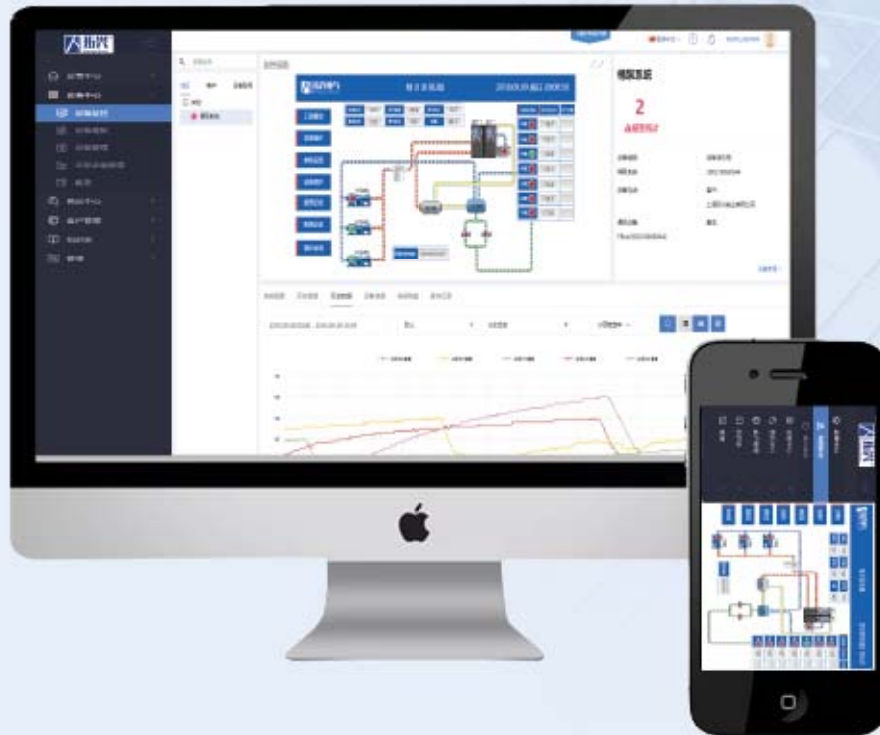## Hengchine intelligent IOT refrigeration industry solutions

运维管控平台 Operation and maintenance management and control platform

　　珩兴研发了一套集中运维管理平台，依靠物联网技术，从高效运维、集中管控、远程诊断、在线控制、设备管理、售后维保、数据统计等多个切入点，帮助企业有效缓解运维人员管理难、设备维护保养难、运营管控难、运行成本高等问题。

　　该平台基于B/S架构，提供Web浏览、手机APP等方式，可以添加不同用户，查看不同权限和设备。

　　Hengchine has developed a set of centralized operation and maintenance management platform. Relying on the Internet of things technology, it helps enterprises effectively alleviate the problems of operation and maintenance personnel management, equipment maintenance, operation management and control, operation cost, etc. from multiple entry points such as efficient operation and maintenance, centralized management and control, remote diagnosis, online control, equipment management, after-sales maintenance, data statistics, etc.

　　Based on the B / S architecture, the platform provides Web browsing, mobile app and other ways. It can add different users and view different permissions and devices.

制冷行业–智慧物联 Refrigeration industry – Smart IOT

站点分布：设备定位，维保售后人员定位；
Site distribution: equipment positioning, maintenance and after-sales personnel positioning

权限登陆：功能、机制、地区多级权限 ；
Permission login: multi level permission of function, mechanism and region

组态界面：工业级组态编辑可取代上位机，中英文切换；
Configuration interface: industrial level configuration editing can replace upper computer and switch between Chinese and English

远程控制：进行视频、制冷参数、历史记录、故障报警等远程采集与控制；
Remote control: remote acquisition and control of video, refrigeration parameters, historical records, fault alarms, etc
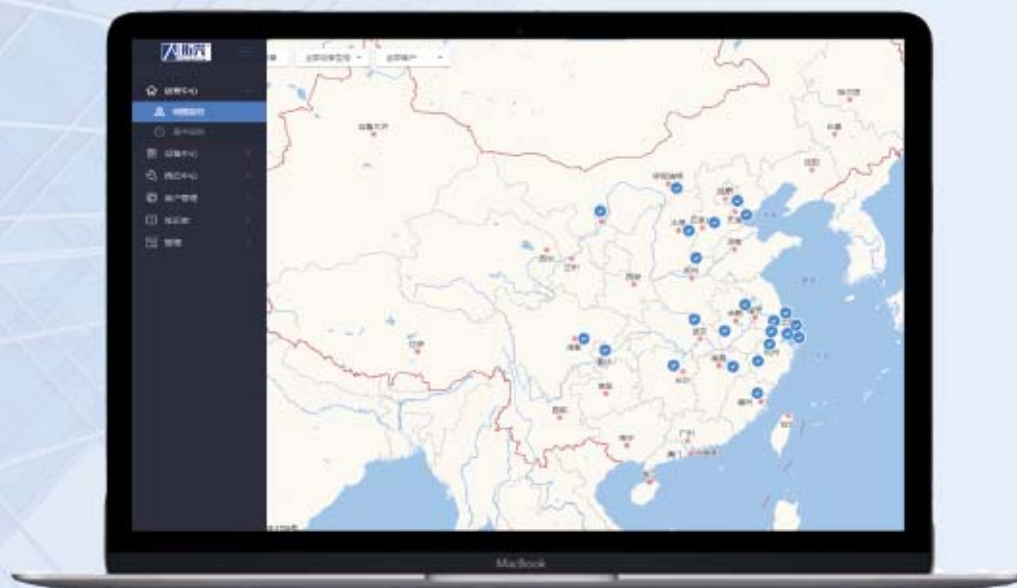
售后系统：派单、维保计划、售后运维；
After sales system: dispatch, maintenance plan, after-sales operation and maintenance

能耗分析：电量、门开关次数、过热度、过冷度等数据采集及分析
Energy consumption analysis: data acquisition and analysis of electric quantity, door opening and closing times, superheat, subcooling, etc
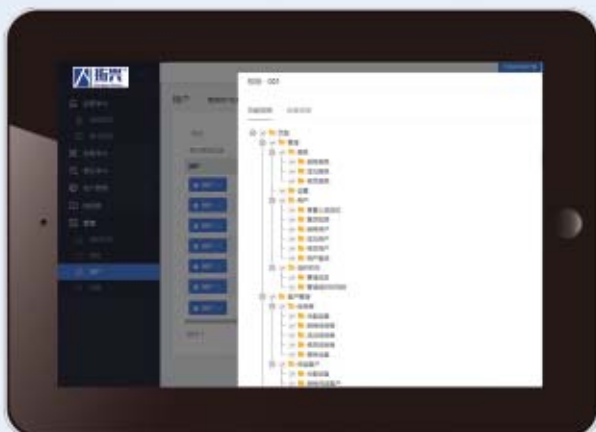
一、站点分布显示 I. site distribution display

　　对设备实现远程监控，通过定位在地图展示公司下属站点分布及具体项目位置，同时能定位所有维保及售后工程师的位置。

　　Realize remote monitoring of the equipment, display the distribution of the company's subordinate stations and the specific project location through positioning and remapping, and locate the positions of all maintenance and after-sales engineers

二、账户与权限管理 II. Account and authority management

◆ 管理员可以自行分配不同用户
　Administrators can assign different users by themselves

◆ 每个用户可以分配不同权限
　Each user can assign different permissions

◆ 权限包括功能权限和设备权限
　Permissions include function permissions and device permissions

◆ 设备权限是指不同的用户看到不同的设备，方便给自己的客户分配账号
　Device authority means that different users can see different devices and easily assign accounts to their customers

三、站点组态画面 III. station configuration screen

实时全方位掌控所有站点的整体运维状况，包括实时数据、设备开启状态等。实时全方位掌控所有站点的整体运维状况。

包括实时数据、设备开启状态：

1.冷凝压力　2.排气温度　3.排气压力　4.蒸发压力　5.吸气压力　6.油温

Control the overall operation and maintenance status of all stations in a real-time and all-round way, including real-time data, equipment opening status, etc. Real time and all-round control of the overall operation and maintenance status of all stations

Including real-time data and equipment opening status:

1. Condensation pressure 2. Exhaust temperature 3. Exhaust pressure 4. Evaporation pressure 5. Suction pressure 6. Oil temperature

四、远程控制 IV. remote control

可实现远程操控，可结合现场运行实际，远程控制设备运行状态，实现最优化运行。

It can realize remote control, combine with the actual field operation, and remotely control the operation status of the equipment to achieve optimal operation

五、设备监控功能 V. equipment monitoring function

视频信号接入，实时通过摄像头查看远程数据。
同样，外勤人员通过移动APP实现生产视频监视。

Video signal access, real-time through the camera to view remote data. Similarly, field personnel use mobile app to realize production video monitoring

六、派单系统 Vi. dispatch system

◆ 售后主管和售后工程师使用；
 Used by after sales supervisor and after sales engineer
◆ 一旦出现设备故障，需要现场运维，售后主管根据目前售后工程师的工作状态和距离，
 优先安排相应的售后工程师进行处理；
 In case of equipment failure, on-site operation and maintenance is required, the after-sales supervisor shall arrange the corresponding after-sales engineer to deal with it according to the working status and distance of the current after-sales engineer
◆ 售后工程师第一时间可以得到相关信息，并且确认。现场维修后，需进行维修过程记录，
 售后主管审批后才能确认，认定工作量；
 After sales engineers can get relevant information and confirm it at the first time. After on-site maintenance, the maintenance process records shall be made and the after-sales supervisor shall approve the records before confirming the workload
◆ 可以针对每一个售后工程师进行工作量和工作效率的统计分析，有助于提升工作效率和部门管理。
 Statistical analysis of workload and work efficiency can be carried out for each after-sales engineer, which is helpful to improve work efficiency and department management
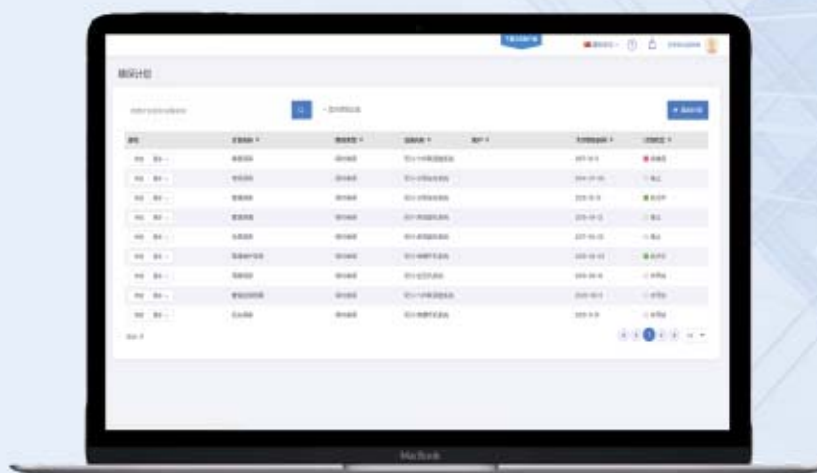
七、维保计划 VII. Maintenance plan

◆ 根据设备使用时间和故障状态，直接将报警信息和运维信息推送给相关人员，第一时间了解设备运行情况，实现主动运维。
According to the use time and fault status of the equipment, the alarm information and operation and maintenance information are directly pushed to the relevant personnel, so as to understand the operation of the equipment at the first time and realize the active operation and maintenance

◆ 可以实现短信报警或者语音报警
SMS alarm or voice alarm can be realized

八、外勤人员定位 VIII. Positioning of field personnel

◆ 可以设置外勤人员的定位功能　　◆ 管理人员可以查询人员定位情况
The positioning function of field personnel can be set　　Managers can query the location of personnel

◆ 可以就近安排外勤人员处理问题
Field personnel can be arranged nearby to deal with problems

九、数据统计与分析 IX. data statistics and analysis

◆ 故障数据统计 Fault data statistics
◆ 运行数据统计 Operation data statistics

物联模块 IOT module

◆ 强兼容 Strong compatibility

包含大量设备驱动和协议转换，使用者不用了解具体协议内容和细节，物联模块直接将数据推送至互联网中，IT人员直接使用，无需自动化基础。

It contains a large number of device drivers and protocol conversion. Users do not need to know the specific protocol content and details. The IOT module directly pushes data to the Internet, which is directly used by IT personnel without automation foundation

◆ 安全可靠 Safe and reliable

提供工业级的安全接入，加密传输，云端冗余备份，支持多权限访问，安全登录机制，实现数据的多层保护，构建安全可靠胡工业数据接入环境。

Provide industrial level secure access, encrypted transmission, cloud redundant backup, support multi authority access, secure login mechanism, realize multi–layer protection of data, and build a secure and reliable industrial data access environment

◆ 高并发，低流量 High concurrency, low traffic

单服务器大量设备并发接入，支持服务器集群和负载均衡；智能终端本地协议通讯解析后差异化推送技术，大幅度降低数据流量。

A large number of devices on a single server are accessed simultaneously, supporting server cluster and load balancing; the differentiated push technology after the local protocol communication analysis of intelligent terminal greatly reduces the data flow

产品型号 Product model	2G–B 2G–B	2G 2G	4G 4G	WIFI WIFI
接入方式 Access mode	2G/以太网 2G / Ethernet	联通GPRS\移动GPRS\以太网 Operator GPRS\Ethernet PLC	联通GPRS/3g/4g 移动GPRS/3g/4g\电信4G/以太网 Operator gprs3g / 4G	以太网–WIFI Ethernet WiFi
串口数 Serial port number	2 Two	3 Three	3 Three	3 Three
以太网PLC Ethernet PLC	支持 Support	支持 Support	支持 Support	支持 Support
数据监控条数 Number of data monitoring	200 two hundred	300 Three hundred	500 Five hundred	300 Three hundred

珩兴云平台 Hengchine Xingyun platform

用于连接现场的模块设备，实现大量远程设备的连接管理、数据采集、存储和传送等功能，是现场设备与用户应用端连接的桥梁。

It is used to connect the field module equipment and realize the connection management, data collection, storage and transmission of a large number of remote equipment. It is the bridge between the field equipment and the user application end

珩兴云平台
Hengchine Xingyun platform

Internet

1.设备定位
Equipment positioning
2.设备组态
device configuration
3.设备管理
device management
4.数据记录
data record
5.故障报警
Fault alarm
6.远程运维
Remote operation and maintenance

手机APP
Mobile phone APP

管理平台
Management platform

业务平台
Business platform

功能 function

1、实现远程设备的数据采集、监控、报警、历史数据存储等功能；

2、实现数据推送功能，将数据通过接口推送至应用端软件；

3、支持多个应用端软件同时访问同一个物联模块数据

4、自建账号系统，可通过分享和权限功能让不同账号同时查看同一物联模块数据；

1. Realize data collection, monitoring, alarm, historical data storage and other functions of remote equipment
2. Realize data push function and push data to application software through interface
3. Support multi application software to access the same IOT module data at the same time
4. Self built account system, which allows different accounts to view the same IOT module data at the same time through sharing and permission functions

特点 Characteristic

1、可同时连接数万台设备，保证数据的实时传输；

2、支持服务器集群和负载均衡，确保大量设备稳定可靠的连接和数据的实时采集

3、开放性强，支持HTTP接口和SDK接口，让开发人员无需自动化背景即可实现应用端软件开发

4、独特的账号分享设置，使得在同一个平台下，不同的人可以看到不同的设备数据，只需简单操作即可，无需建立多套系统。

1. It can connect tens of thousands of devices at the same time to ensure the real-time transmission of data
2. Support server cluster and load balancing to ensure stable and reliable connection of a large number of devices and real-time data collection
3. Strong openness, supporting HTP interface and SDK interface, enabling developers to realize application-side software development without automation background
4. The unique account sharing settings enable different people to see different device data under the same platform. It only needs simple operation and does not need to establish multiple systems

产品 product

珩兴云平台分为珩兴公有云服务和私有云服务器、IT政策严格，有保密需求的企业，不希望借助第三方云服务器，可以选择自建私有云服务器。

Honxing cloud platform is divided into honxing public cloud service and private cloud server. It policies are strict, and enterprises with confidentiality needs can choose to build their own private cloud server instead of relying on the third-party cloud server

产品型号 Product model	珩兴公有云服务器 Hengchine public cloud server	私有云服务器（自建） Private cloud server (self built)	私有云服务器（托管） Private cloud server (hosted)
特点 Characteristic	用户直接使用珩兴公有云服务功能，无需自己架设服务器 Users can directly use the honxing public cloud server function without building their own servers	用户需提供计算机服务器，安装于用户自己的服务器中心 Users need to provide computer server and install their own server center	阿里云/腾讯云/百度云（推荐阿里云） Alibaba cloud / Tencent cloud / Baidu cloud (Alibaba cloud recommended)
价格 Price	免费/端值服务器 Free Admission	包含软件费，实施费，升级维护费 Including software fee, implementation fee, upgrade and maintenance fee	包含软件费，实施费，升级维护费 Including software fee, implementation fee, upgrade and maintenance fee

珩谋格物
兴耀中华
珩兴实业
物联天下

Things are connected

珩兴™
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