



**KING PIGEON  
COMMUNICATION CO., LTD**



WWW.IOT-SOLUTION.COM

# KING PIGEON COMMUNICATION CO., LTD

**KING PIGEON  
COMMUNICATION CO., LTD**

Website: [www.iot-solution.com](http://www.iot-solution.com)

Tel: 0755-29451836

Office address: 3F,B Building,Huafeng International Robot Industry Park,Baoan District,Shenzhen,518126 China

Factory address:E Building,Ganghuaxing Industrial Zone,Qiaotou Community,Fuyong Town,Bao'an District,Shenzhen,518103,China



SCAN FOR WECHAT SUPPORT



SCAN THE QR TO SMART PHONE

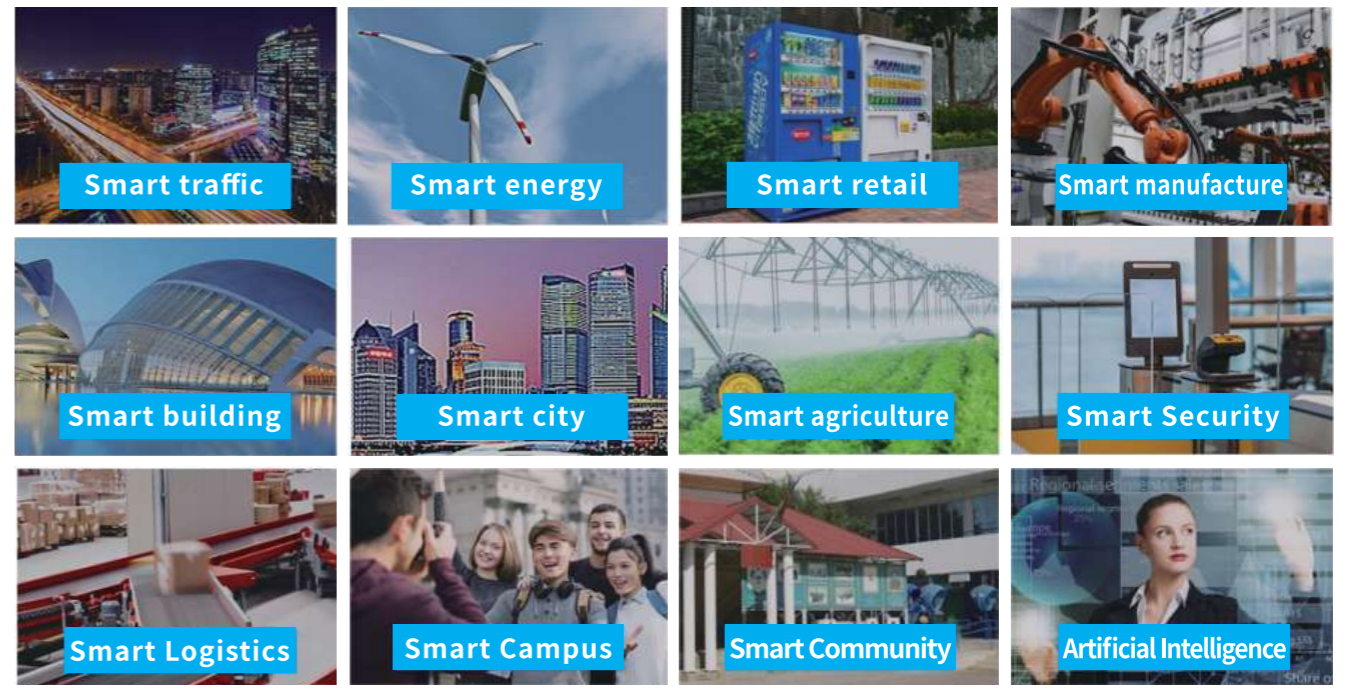
Specialized in Cellular Gateways, 4G Industrial VPN Routers, Industrial Ethernet IO Modules  
IoT Cloud Platform OEM ODM Since 2005. Provide One Step Complete IoT Solutions



**Industrial IoT software and hardware R&D expert**  
**Leading the global industry benchmark company**  
**CE,FCC Certification**

**Many years experienced in Export R&D**  
**Provide complete on-demand customized solutions for front-end data collection, intermediate wireless transmission, back-end mobile App monitoring and remote Web monitoring.**

## APPLICATION



## Certification and Honor



King Pigeon Communication Co.,Ltd. found in 2005. Specialized in Cellular M2M RTU, Cellular IoT Gateway, LoRa Gateway, Industrial Remote IO Modules manufacturing and IoT Cloud Platform development, Provides One Step Complete IoT Solutions. Since its inception, King Pigeon has been dedicated to the improvement of IoT solution technology and the development of new and innovative IoT solutions to address the increasingly rigorous demands placed on worldwide. So far, more than 220 IoT Devices are available, sold more than 1,000,000 IoT Devices to 200 countries and regions, and the growing trend still keeps at high speed. We confident that with our R&D, quality and service, we can supply more and more industrial IoT solutions to satisfy our customers.

## COOPERATION AND SERVICE

- BUY DEVICE
- ACCESS CLOUD PLATFORM
- OEM/ODM
- IOT CLOUD PLATFORM CUSTOMIZATION
- ONE-STOP SOFTWARE AND HARDWARE SOLUTIONS

# COMPANY PRODUCT SERIES

			
<p><b>IoT Modules</b></p> <p>Supports secondary development, can be embedded in instruments, sensors and equipment to achieve rapid IoT upgrades, such as PLC, frequency converter, electric meter, liquid level sensor</p>	<p><b>Cloud Platform</b></p> <p>Support device data collection, linkage control, task management, role management, support LOGO customization, company name, API, private cloud deployment</p>	<p><b>LoRa Gateway</b></p> <p>Inbuilt Lora Module, wireless distances upto 2.5Km; Supports 100 wireless temp&amp;humi sensors and 100 Rs485 Converter;</p>	<p><b>DTU</b></p> <p>Used to convert serial RS485/232/TTL data to internet over GPRS/3G/4G Cellular networks or Ethernet, supports transparent transmission and Modbus to TCP protocol</p>
			
<p><b>Power monitoring</b></p> <p>Measuring the DC or AC electric power parameters, includes voltage, current, factor, watts, frequency, active power, reactive power and other power parameters.</p>	<p><b>Network Fault Monitoring RTU</b></p> <p>remote monitoring Ethernet Devices communication status and power supply status ,abnormal occurrence of fast phone SMS email APP alarm parameters.</p>	<p><b>Cellular Industrial IoT Gateways</b></p> <p>Acquisition control, protocol conversion, wireless transmission, built-in IO, support Modbus master and slave, modbus RTU to MQTT, SMS, Modbus TCP, Compatible OPC, SCADA and MES systems.</p>	<p><b>Battery Monitoring Module</b></p> <p>Can measure 12 single battery voltages,6 battery group and 1 300V DC total voltage,2 AIN monitor battery current and temperature.</p>
			
<p><b>DIN SMS Alarm controller</b></p> <p>Multi-channel digital monitoring, used to monitor water level, door sensor, infrared, vibration, etc., linkage relay when abnormal</p>	<p><b>DO.Remote Relay Switch</b></p> <p>Multiple relays, support automatic control, SMS control, status query, widely used in agriculture, water pumps, machiner rooms, etc.</p>	<p><b>Wireless Gate Opener</b></p> <p>Support call, SMS, APP remote control switch, support 200 authorized numbers, used for unattended machine room, base station, control box.</p>	<p><b>Industrial Remote IO Module</b></p> <p>For PLC industrial automation measurement, control expansion, support Modbus, CANopen, DeviceNet, support analog, digital, relay, thermocouple, high-speed pulse, etc.</p>
			
<p><b>4G Industrial Router</b></p> <p>Adopt industrial-grade processor, provide multiple network ports, RS485/232/WIFI interface, can connect serial port, Ethernet, wifi equipment at the same time, realize data transparent transmission and routing function.</p>	<p><b>Industrial Switch</b></p> <p>Support 100M/Gigabit photoelectric combination, plug and play, used in video surveillance, industrial automation, intelligent transportation</p>	<p><b>PLC Gateway</b></p> <p>Support PLC remote monitoring, PLC program remote download, remote debugging. Support Siemens, Mitsubishi PLC protocol, others can be customized</p>	<p><b>Industrial IoT Gateway</b></p> <p>Supports modbus master and slave, modbus RTU to MQTT, SMS, Modbus TCP, Compatible OPC, SCADA and MES systems.</p>

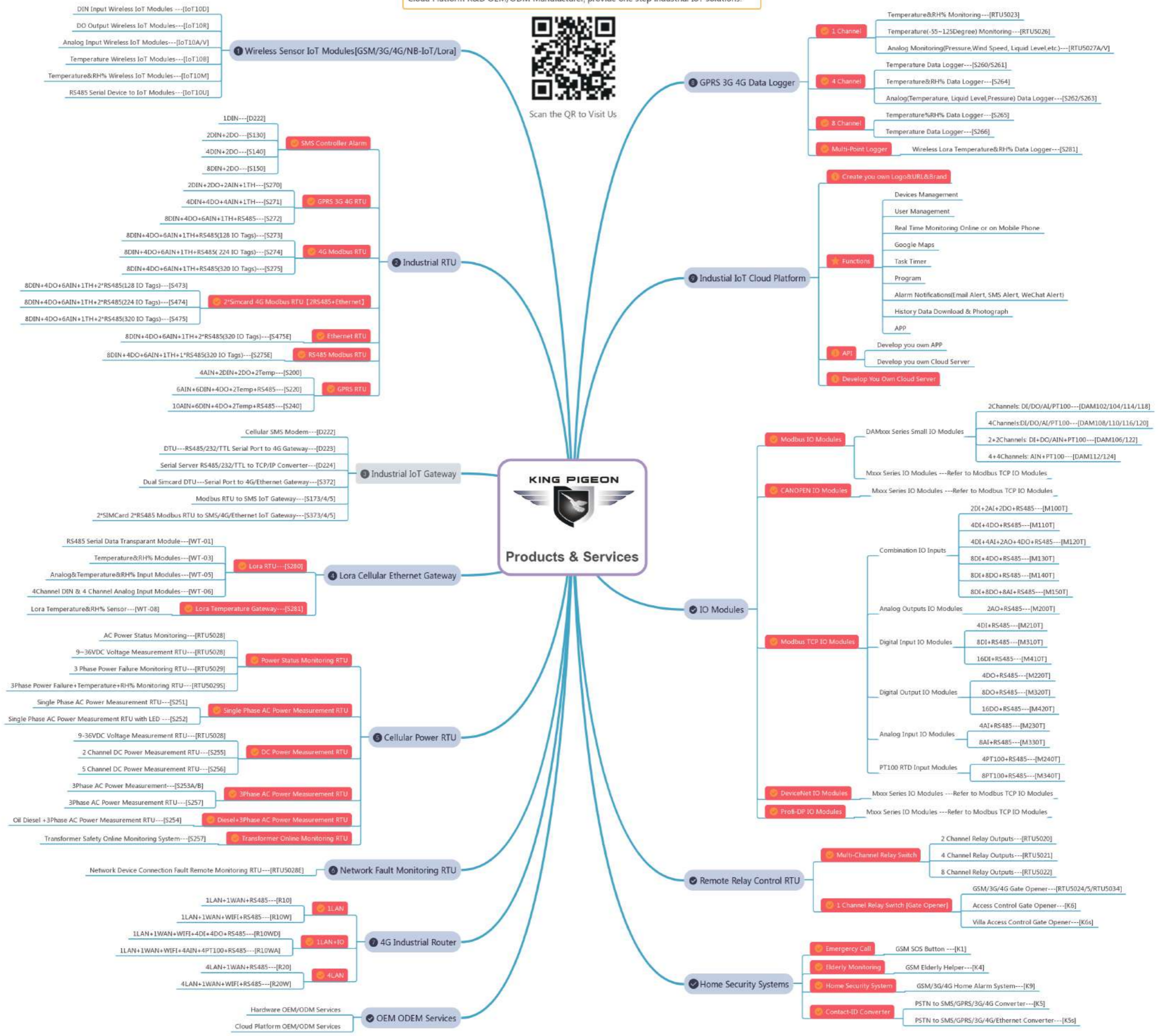
# CONTENT

02	<a href="#">Introduction</a>	
04	<a href="#">Catalog</a>	
05	<a href="#">Selection Table</a>	
08	<a href="#">Marketing System</a>	
09	<a href="#">King Pigeon Cloud Platform</a>	
12	<a href="#">Cloud Platform Customization</a>	
13	<a href="#">4G industrial Router</a>	
15	<a href="#">Industrial Switch</a>	
17	<a href="#">IoT Module</a>	
19	<a href="#">Cellular IoT Switches</a>	
21	<a href="#">Cellular DTU</a>	
23	<a href="#">LoRa Gateway</a>	
25	<a href="#">Industrial IoT Gateway</a>	
27	<a href="#">Cellular M2M IoT RTU</a>	
29	<a href="#">Ethernet Remote IO Module</a>	
31	<a href="#">Modbus Remote IO Module</a>	<a href="#">Air Compressor Solution</a> 59
33	<a href="#">CANopen IO Module</a>	<a href="#">Temperature and Humidity Monitoring Solution</a> 60
35	<a href="#">DeviceNet IO Module</a>	<a href="#">Electrical Fire Monitoring Solution</a> 61
37	<a href="#">Serial Server</a>	<a href="#">Battery Real-time Monitoring Solution</a> 62
39	<a href="#">PLC Gateway</a>	<a href="#">Chemical Plant Safety Monitoring Solution</a> 63
41	<a href="#">Network Fault Monitoring RTU</a>	<a href="#">Smart Agriculture Solution</a> 64
43	<a href="#">Power Failure Alarm</a>	<a href="#">Water Quality Monitoring Solution</a> 65
45	<a href="#">Three-phase AC Power Monitoring RTU</a>	<a href="#">Blood Bank Temperature Monitoring Solution</a> 66
47	<a href="#">Battery Monitoring Module</a>	<a href="#">Network Fault Monitoring Solution</a> 67
49	<a href="#">LED Controller</a>	<a href="#">Power Failure Alarm Solution</a> 68
51	<a href="#">Temperature Humidity Data Logger</a>	<a href="#">Aquaculture Monitoring Solution</a> 69
53	<a href="#">4G SMS Controller Alarm</a>	<a href="#">Environmental Weather Monitoring Solution</a> 70
55	<a href="#">4G Cellular Remote Relays</a>	<a href="#">Machine Room Dynamic Environment Monitoring Solution</a> 71
57	<a href="#">Wireless Apartment Intercom</a>	<a href="#">Partner</a> 72

A Professional GSM/GPRS/3G/4G/NB-IoT/Lora/Ethernet IoT RTU & Industrial IoT Gateway & Cloud Platform R&D OEM/ODM Manufacturer, provide one step industrial IoT solutions.



Scan the QR to Visit Us





# COMPANY VISION

MEET CUSTOMER NEEDS THROUGH TECHNOLOGICAL INNOVATION AND LEAD THE DEVELOPMENT OF THE INDUSTRY

# CORPORATE CULTURE

TEAMWORK, MARKET-CENTRIC



## MARKETING SYSTEM

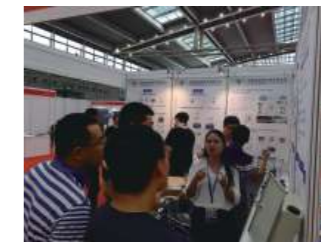
### EXHIBITION



HI-TECH FAIR



SHANGHAI INDUSTRY FAIR



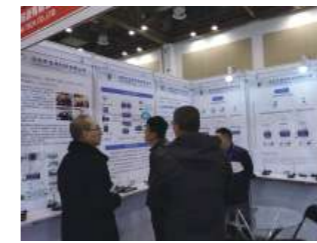
SHENZHEN IOT EXHIBITION



OVC EXPO



INDONESIA EXHIBITION



SCE



HANOVER, GERMANY



CANTON FAIR



SHANGHAI SENSOR EXHIBITION



SHANGHAI INDUSTRY FAIR



SHENZHEN ELECTRONICS FAIR



SHENZHEN HI-TECH FAIR

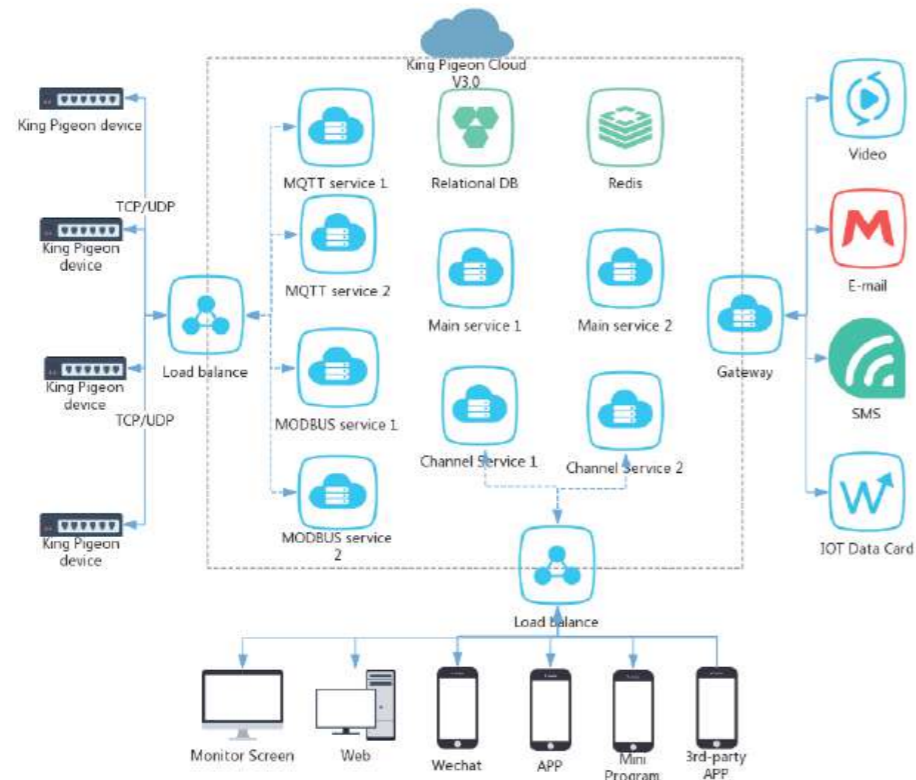
### ONLINE MARKETING PLATFORM



# CLOUD PLATFORM

King Pigeon IoT Cloud Platform V3.0 aims to provide a safe, stable and efficient IoT connection platform, enable you to realize remote data collection and remote control. It can not only realize the interaction between the devices, upload data and remote control, but also the cloud platform API for your application, and the storage, calculation and intelligent analysis of massive device data.

## SYSTEM STRUCTURE



## APP DISPLAY



Monitor center



Add device



Group management



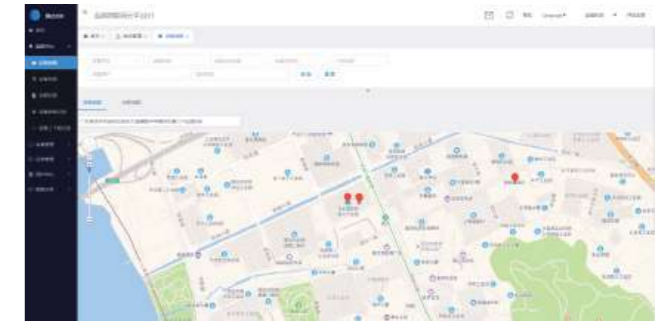
Icon display

## CORE FUNCTIONS



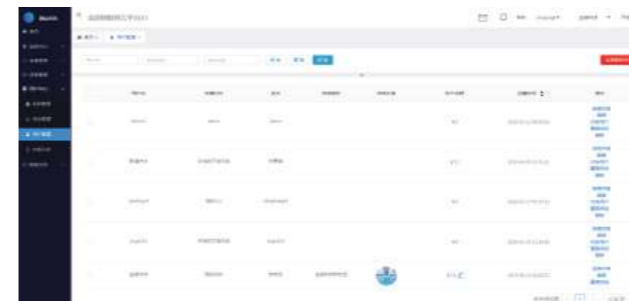
### Real-time monitoring

Large Screen Display: Supports multiple languages, Large screen displaying information such as the total number of devices, the total number of users, alarm records, and the execution of triggered tasks.



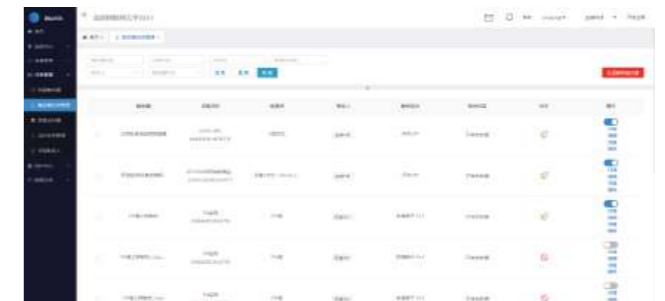
### Device management

One-key access: KingPigeon IoT devices are connected to the cloud platform by default, and APP one-key scanning is easy to access, which can easily realize the data collection/control of the equipment.  
Equipment grouping: Support equipment grouping display.  
GIS map display: The map displays the location of the equipment and supports the recording of the equipment operation track.



### User Center

Authority management and control: user management mechanism in three dimensions of department, role, and user. Through flexible configuration, it can support multi-level organizational structure management modes such as manufacturers-dealers-users, provinces, cities, counties and villages, as well as individual user mode/enterprise user mode.  
Personal user mode: The user can only view the devices under his own name.  
Enterprise user mode: Allow multiple users to manage the device at the same time, and differentiate user operation permissions by role.



### Task Management

Trigger tasks: rich trigger conditions, support high/low limit triggers/delayed confirmation alarms/device offline/multiple data comprehensive judgments triggering conditions, when the trigger conditions are reached, it supports group sending alarm information.  
Various alarm methods: support phone/SMS/e-mail/WeChat/APP at the same time  
Linkage control: When the trigger condition is reached, it supports linkage control equipment.



### Timer Task

Timer tasks: A wealth of timed tasks are used to manage the equipment, and it supports timed methods such as daily, weekly, and fixed time intervals.



### Data Analysis

Historical data query: support query and display of historical data such as sensor data, device online and offline, device alarms, device control, and chart display.  
Historical data export: Support for downloading and exporting historical data in EXCEL format.

# CLOUD SERVICE

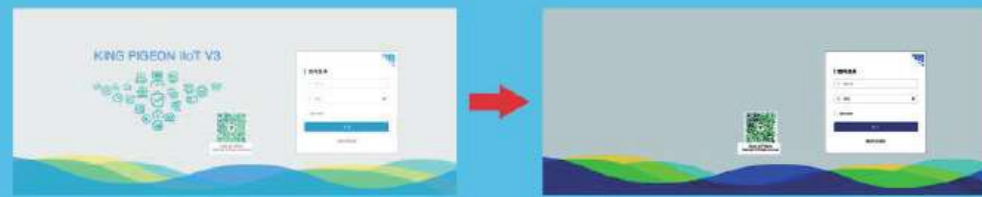
## Device access

Provide all kinds of electric meters, water meters, sensors, PLC, UPS, inverters and other Modbus devices to connect to the cloud platform



## Neutral management

Customize corporate LOGO, domain name, name and other information, and have your own cloud platform



## Custom industry interface

Professional technical team, providing customized development services for personalized application interfaces



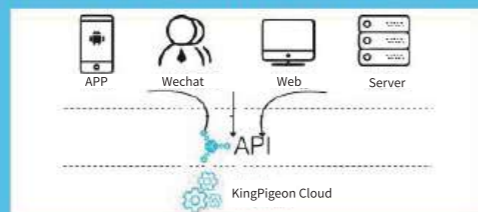
## Privatization deployment

Privatization deployment, Own server



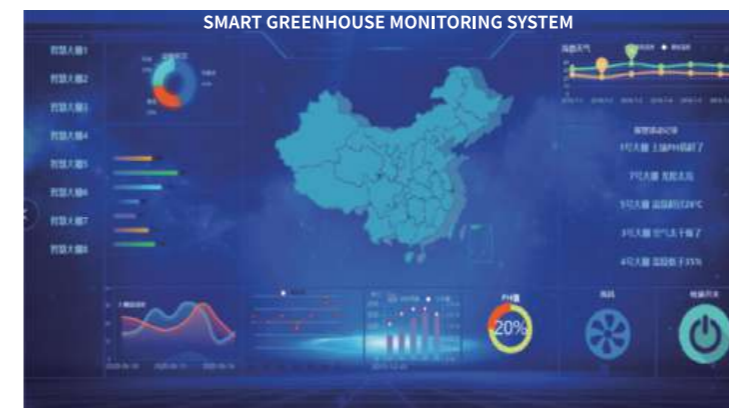
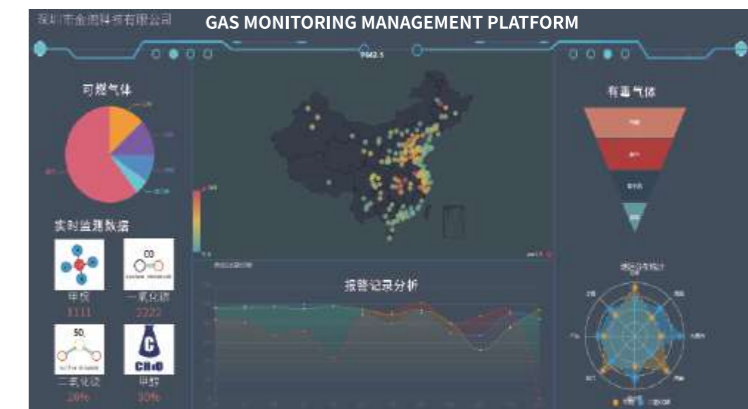
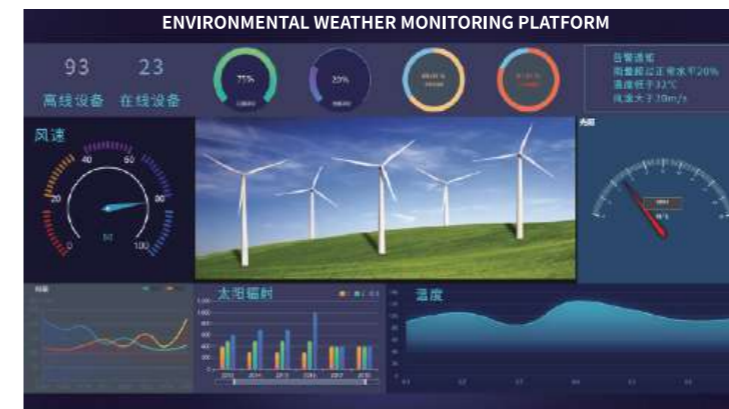
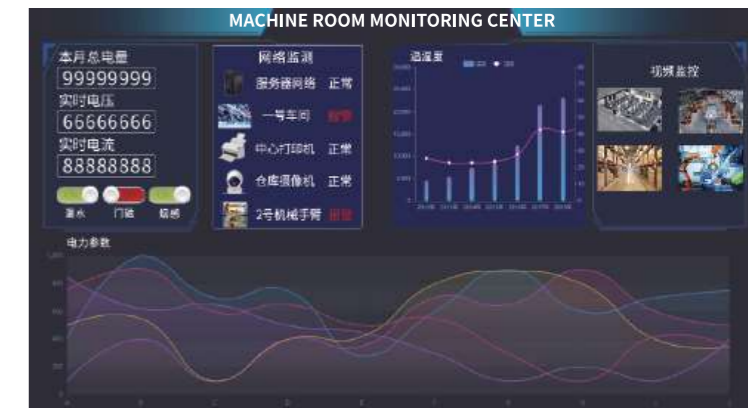
## API

Provide API for personalized application interface development and access to third-party cloud platforms



# INDUSTRY APPLICATION CUSTOMIZATION SERVICE

King Pigeon Technology not only has a strong hardware R&D team, but also a professional software development team, as well as experienced market personnel. They can serve different sub-industries and effectively receive customer needs and find customer pain points. Provide customers in various industries with customized development services for cloud platforms, realize efficient application customization in segmented industries, and bring customers greater industrial value and more effective industrial applications. Choose professional people to do professional things, professional enough to meet your every need.





# 4G INDUSTRIAL ROUTER R40B

The 4G industrial router is a multifunctional IoT host that integrates routers, RTU (wireless remote collection terminal), and DTU (data transmission terminal). It can be connected to cameras, instrumentation, PLC, DI switch, DO relay, AI analog, serial RS485/232 and other equipment, and realize wireless remote monitoring through 4G/network cable networking. Support multiple VPNs, dual SIM cards, Wifi, wide voltage, etc. It is widely used in intelligent traffic wireless video monitoring, intelligent street lamp environmental monitoring, outdoor power line monitoring, water conservancy environmental monitoring, etc.

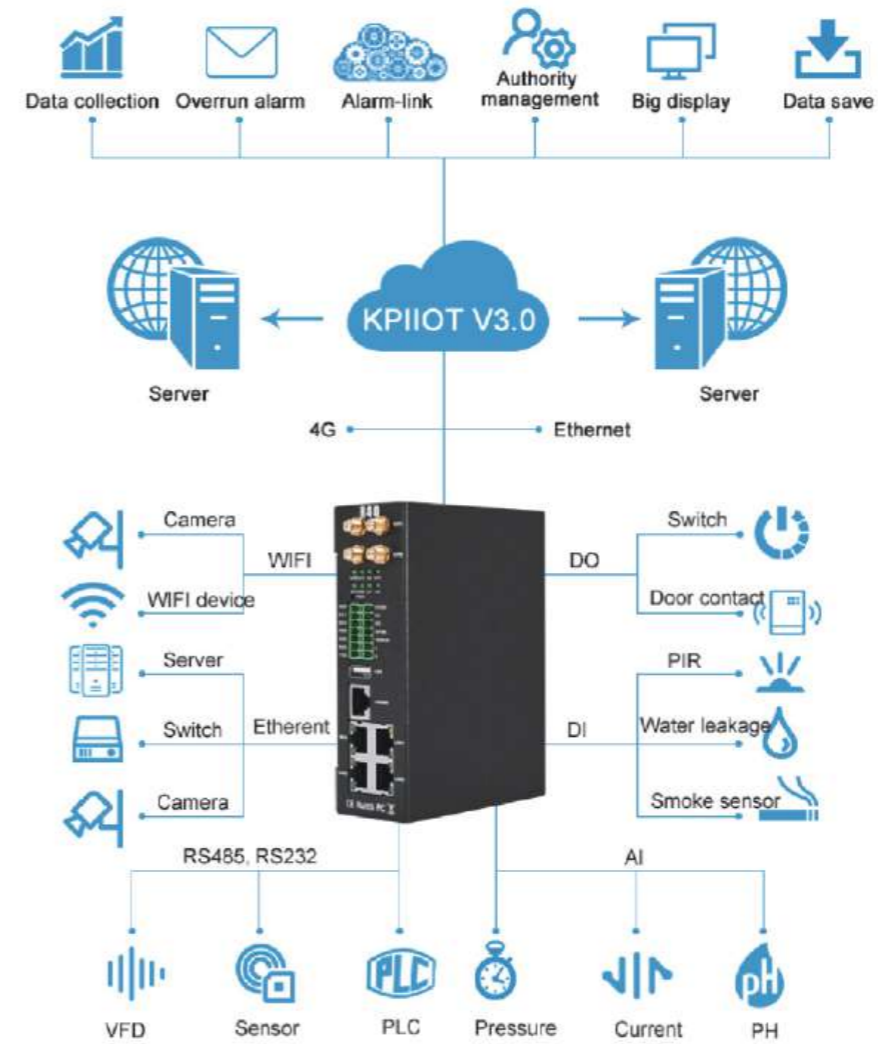
## MAIN FEATURES

- Support 4G, Ethernet WAN, WLAN WAN link switching and ICMP detection;
- Support multiple VPNs such as IPsec/OpenVPN/L2TP;
- Wifi supports AP and client mode (2.4GHz);
- 1 WAN port, 3 LAN ports, RJ45 interface type, 10M/100Mbps, self-adaptive MDI/MDIX;
- With IO input (2DI+2DO+4AI), the number of IO can be expanded;
- 1 RS485, 1 RS232, support command mode and transparent transmission mode, easy to expand IO, connect PLC, instrument and meter;
- Support MQTT, Modbus RTU, Modbus TCP protocol;
- Support Modbus RTU to Modbus TCP/MQTT; Modbus TCP to MQTT multiple protocol conversion;
- Support TCP client/server, UDP;
- Support DHCP Server Web to upgrade the firmware SMS and restart regularly;
- Support POE output power supply, saving wiring cost;
- Dual SIM card redundancy design, stable and reliable.



PARAMETER	DESCRIPTION
WAN	1 RJ45, 10M/100Mbps, Adaptive MDI/MDIX
LAN (POE)	3 RJ45, 10M/100Mbps, Adaptive MDI/MDIX; Supports 3 POE output, compatible IEEE802.3at/af, single POE output power max 30W, With power management function, voltage range:48~57V
Wifi	Supports AP,client,802.11a/b/g/n (mixed) ; safety: Open,WPA,WPA2; Encryption: AES,TKIP,TKIPAES; Maximum connections 16 pcs, maximum rate is 300Mbps; outdoor is unobstructed/open, and the coverage range can reach 20 meters
VPN	Supports L2TP,IPSEC,OPENVPN VPN protocol
Protocol	PPP, PPPOE, TCP, UDP, DHCP, ICMP, NAT,HTTP,HTTPS,DNS,ARP, NTP, SMTP,SSH2, DDNS etc..
Firewall	DMZ, DOS defense,IP packet, domain name and MAC address filtering, port mapping, access control
AIN	4 channel,16bit ADC Resolution,support 0~5V/0~20mA/4~20mA,Can set upper and lower limits, support alarm trigger
DO	2 channel,SINK output, The maximum load voltage is 50VDC, the load current is 500mA (single channel), 625mW; the output can be set according to the trigger condition
DIN	2 channel, dry or wet contact,High level (1) 5-30V DC, low level (0) 0-1V,NO/NC/Pulse counting, frequency<100HZ,abnormal alarm trigger
Serial interface	1 RS485, 1 RS232, Support command mode and transparent transmission mode, easy to expand IO, connect PLC, instrument and meter
protocol	Modbus RTU,Modbus TCP,MQTT,transparent transmission
Protocol conversion	Modbus RTU to Modbus TCP/MQTT,Modbus TCP to MQTT
Specification	Size:145mm * 110mm * 45mm,Metal,Net weight: 790g,Wall-mounted, rail-mounted installation
Working environment	Working temperature: -40~85°C;Store temperature:-40~105°C;Relative humidity:5~95%RH

## DIAGRAM



## APPLICATION

Intelligent traffic wireless video monitoring, smart street lamp environment monitoring, outdoor power line monitoring, water conservancy environment monitoring, etc.

## SELECTION TABLE

Model	SIM CARD	WIFI	WAN	LAN	RS232	RS485	DI	DO	AI	GPS	POE	Extend function
R10	1	✓	1	1	Optional is RS232, default is RS485		×	×	×	×	×	
R20	1	✓	1	3	Optional is RS232, default is RS485		×	×	×	×	×	
R40	2	✓	1	3	1	1	2	2	×	Optional	Optional	Supports Modbus Slave /MQTT
R40A	2	✓	1	3	1	1	2	2	×	Optional	Optional	Supports Modbus Master /Slave/MQTT
R40B	2	✓	1	3	1	1	2	2	4	Optional	Optional	Supports Modbus Master /Slave/MQTT
R42	2	✓	1	3	1	1	2	2	×	Optional	Optional	Supports PLC data acquisition remote download Supports Modbus Slave/MQTT
R42A	2	✓	1	3	1	1	2	2	×	Optional	Optional	Supports PLC data acquisition remote download, Modbus Master/Slave/MQTT
R42B	2	✓	1	3	1	1	2	2	4	Optional	Optional	Supports PLC data acquisition remote download, Modbus Master/Slave/MQTT

# INDUSTRIAL SWITCH

Typical model:N81

The N80/N81 industrial intelligent Ethernet switch supports various 100/Gigabit photoelectric combinations, supports Gigabit optical ports, and supports plug and play. The switch adopts low power consumption and fanless design to ensure no noise interference. At the same time, it supports -40~85°C operating temperature and good EMC electromagnetic interference compatibility performance to ensure stable work in harsh working environments. It is factory automation and intelligent Industrial application fields such as transportation and video surveillance establish fast and stable network terminal access networks to provide safe and reliable solutions.

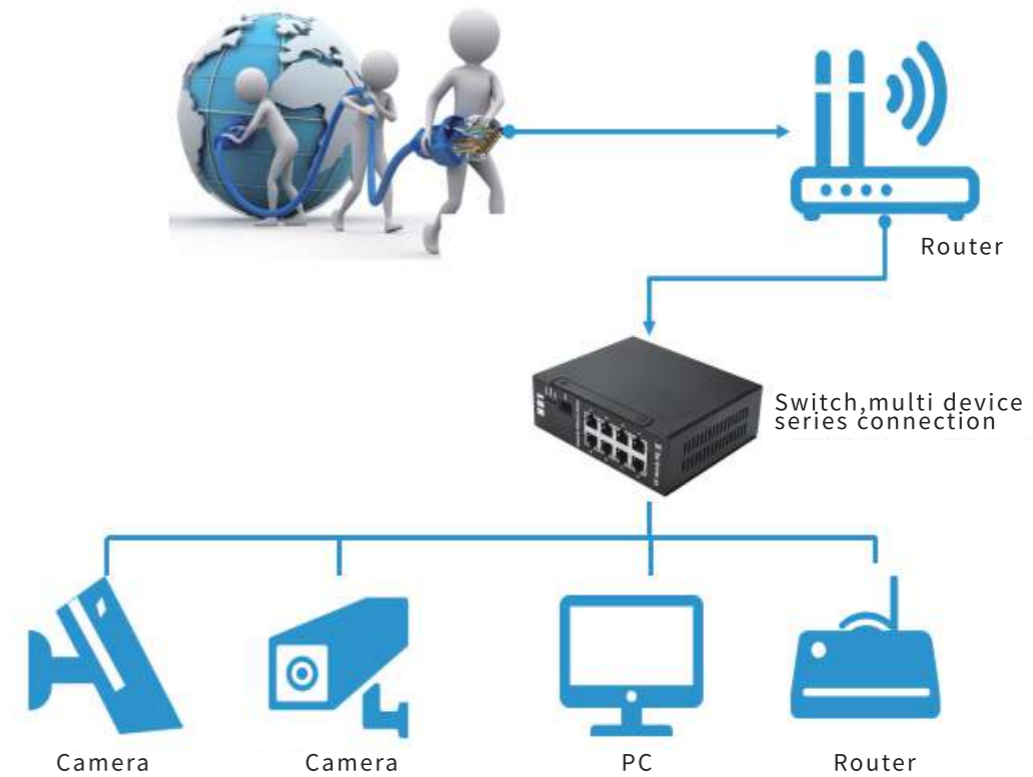


## MAIN FEATURES

- 10/100/1000Base-T(X) auto detect, Full/half duplex MDI/MDI-X automatically adapt
- Inside take a store-and-forward mechanism, cache 8 K;
- Redundant dual power supply, working power supply 9-60-VDC, The relay will act after a power failure;
- Support -40~85°C working temperature and good EMC performance;
- Surge protection, can pass 4KV common mode, 1KV differential mode surge impact;
- IP30 protection level

PARAMETER	DESCRIPTION
Fiber optic port	1 channel,SFP slot,100/1000Base-X port
LAN	8 RJ45, 10/100/1000Base-T(X), MDI/MDI-X automatically adapt PoE
Relay output	Type:NO/NC Capacity:1A@120VAC or 1A@24VDC Isolation protection:3k VDC or 2k Vrms
Exchange performance	Forwarding rate:1.48810Mpps Transmission mode: store and forward MAC address cache:8K
Transmission distance	Category 5e twisted pair: 100m Fiber patch cord single mode: 1310nm 20/40/60Km 1550nm 80/100/120Km Fiber patch cord single mode: 1310nm 2Km
Protocol Standard	IEEE 802.3 10BaseT IEEE 802.3u 100BaseT(X) IEEE 802.3x Flow Control IEEE 802.3z 1000BaseT IEEE 802.3af PoE(12.95W) IEEE 802.3at PoE(30W)
Optical fiber interface	FC type,SC,LC,ST
Power supply	Input voltage:9~60VDC,Support dual power supply redundant input Current:40mA@12V Overload protection: support Connection: 1 7-pin terminal Reverse connection protection: support
Specification	Size:145mm * 125mm * 45mm;Metal material;Netweight:450g;Wall-mounted, rail-mounted installation
Working environment	Working temperature:-40~85°C;Storage:-40~105°C;Relative humidity: 5~95%RH (no condensation)

## DIAGRAM



**APPLICATION**  
Industrial automation, smart transportation, smart manufacturing, infrastructure, ports, video surveillance, etc.

## SELECTION TABLE

Model	Electrical interface	Fiber port	Network Management	PoE	Rate (100/1000M)
N40	4	×	Optional	Optional	Optional
N41	4	1	Optional	Optional	Optional
N80	8	×	Optional	Optional	Optional
N81	8	1	Optional	Optional	Optional
N164	16	4	Optional	Optional	Optional

# 4G WIRELESS IOT MODULE

## lot10x series

lot10x series of wireless IoT modules quickly and reliably connect digital inputs, analog inputs, relay outputs, single-point temperature DS18B20, temperature and humidity sensors, and RS485 serial devices to the cloud platform.

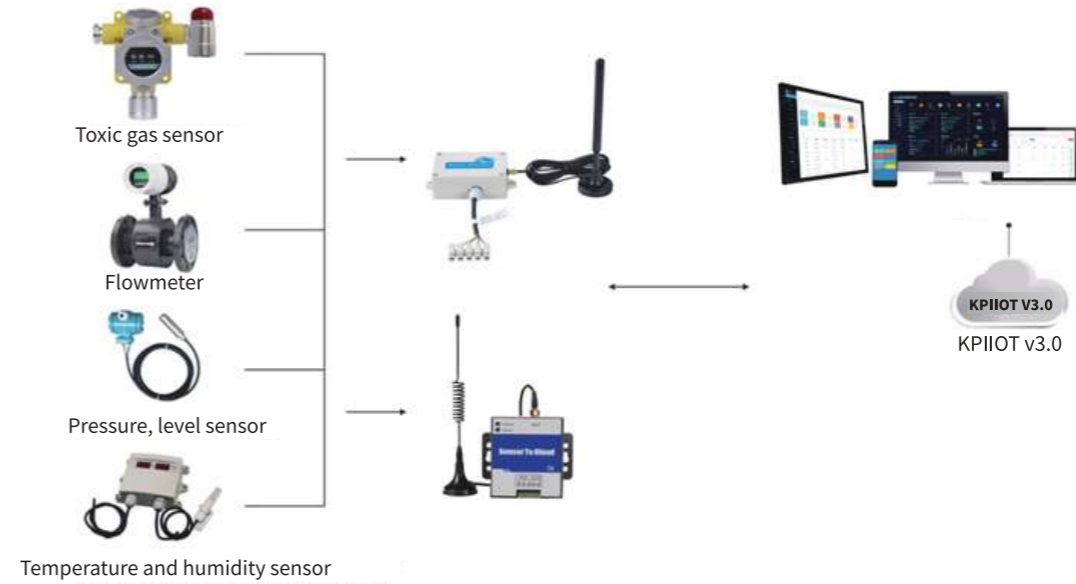


### MAIN FEATURES

- It can be used as a complete product or as a PCBA module for secondary development;
- 2 working mode are optional:  
Normal mode: data transmission in real time, so that users can understand the situation on the spot in a timely manner;  
Low power mode: ultra low power source design (less than 230uA), suitable for the periodic collection of recorded data sites;
- Communication: 2G,3G,4G etc.
- Diversified functions: switch control, digital input monitoring, analog input monitoring, temperature and humidity monitoring, RS485 serial communication, etc.
- Supports 10 user numbers, each of which can be set up separately to receive specific alarm messages and alarm calls
- Supports 2 different server centers that can set IP addresses or domain names.

PARAMETER	DESCRIPTION
RS485	1 channel,Data transparent transmission, a single data packet transmitted through the RS485 serial port can be up to 250 bytes
DIN	Dry and wet contact compatible,Dry contact :Open is logic 0,close is logic 1 Wet contact:0~3V is close, 5~30V is open;DIN Pulse counter,Debounce mode:max pulse frequency is 50HZ; No debounce mode: max pulse frequency is 1KHz
DO	OC type - open collector output, maximum load 1.5A/25V DC
AIN	1 channel 4~20mA or 0~5V
Temp&humi input	1 AM230x:temperature range:-40°C~80°C, Precision ±0.5°C, Humidity range: 0~100%RH, Precision ±3%RH
Temperature input	1 DS18B20,range:-55°C~125°C, Precision ±0.5°C
Communication	GSM,GPRS,3G,4G
Protocol	Modbus RTU Over TCP,MQTT,transparent transmission
Power consumption	Standby in low power consumption mode <230uA; standby in normal mode 10mA~30mA; maximum power consumption 230~360mA
Power supply	Wide working voltage design, support 7~24VDC power supply
Specification	Size: 101mm×69mm×39mm (waterproof,IP66) ; 50.3mm * 36.8mm * 1.6mm (PCBA)
Working environment	-10~+60°C, 5~95%RH

## DIAGRAM



**APPLICATION**

Meter access to cloud, smart grid, smart transportation, unattended computer room environmental monitoring, smart factory, environmental monitoring, etc.

## SELECTION TABLE

Model	I/O type	Communication(optional)	Protocol (optional)
IOT100	RS485 Transparent transmission	1. 2G 2. 3G 3. 4G	1.Modbus RTU Over TCP 2.MQTT 3.Transparent transmission (RS485)
IOT101	Digital input		
IOT102	DO-OC output		
IOT103	AIN 4~20mA or 0~5V		
IOT104	AM2301 temp&humi		
IOT105	DS18B20 temperature		

# 4G INDUSTRIAL IOT GATEWAY

## Typical model:S475

S475 is a multifunctional industrial-grade wireless IoT gateway terminal device, which integrates 4G full Netcom module and Ethernet module, supports dual cards, comes with multiple IO ports, and 2 RS485 can be used for expansion to realize industrial field data access Third-party SCADA software, PLC, HMI equipment can also be connected to the Jin Ge IoT cloud platform to directly monitor, manage, and set up remote terminals through cloud SMS, WeChat, APP, and Web interfaces, so as to realize remote industrial site monitoring. It is widely used in UAV room, water pump control, sewage treatment, meteorological environment, intelligent breeding and other occasions.

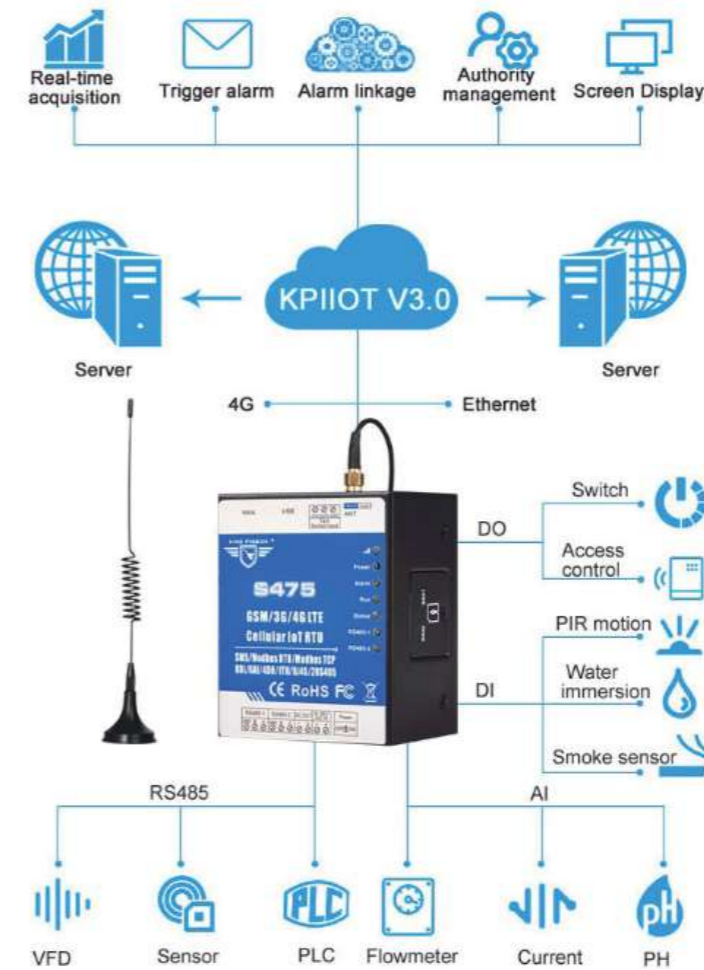
### MAIN FEATURES

- Multiple IOs, 8 digital inputs, 6 analog inputs and 4 digital outputs;
- 1 Ethernet port (RJ45) interface, supports the network port to collect 5 PLC data through Modbus TCP protocol and upload it to the cloud, and supports SMS warning;
- 2 RS485, support Modbus Slave and Modbus RTU Master protocol, can expand 320 data points;
- Built-in TCP/IP protocol stack, support Modbus RTU/TCP, MQTT and transparent transmission;
- Support Modbus RTU/TCP and MQTT protocol mutual conversion;
- Built-in powerful telephone and SMS alarm functions, support remote SMS restart and configuration device parameter functions;
- Support dual SIM card interface, SIM card 1 is the main use, SIM card 2 is the standby mode, improve the communication quality;
- Built-in TCP monitoring port, which can be used as TCP Server, supporting up to 5 terminal access;
- Built-in 8G large-capacity SD card for storing historical records, the historical record reaches ten thousand;
- Wide working voltage design, support 9~36VDC power supply, and with anti-reverse connection protection design;
- Complete anti-drop mechanism to ensure that the data terminal is always online, and the data is retransmitted when the connection is dropped;
- Built-in powerful timer function.



PARAMETER	DESCRIPTION
DIN	8 , compatible with dry contact and wet contact, logic level 0~0.5V NC, logic level 3~30V NO, the first input can be used as pulse counter, sampling frequency is 1KHz
AIN	6 channels, 24-bit high precision, compatible with 0~5VDC, 0~20mA, 4~20mA
DO	4 relay outputs, rated output 5A@250VAC or 5A@30VDC
Temp&humi	Temperature range: -40°C to +80°C, Humidity Range: 0~100%RH;
RS485	2 RS485, Support Transparent transmission, Modbus RTU Slave, Modbus RTU Master
Extend IO Tags	Max 320 (Bool,16bit,32bit,64bit)
Ethernet	1 isolated 10/100M adaptive Ethernet interface, with 15KV ESD protection, supporting Server and Client protocols
Protocol	Modbus RTU over TCP,Modbus TCP,MQTT,KingPigeon IOT protocol
Memory Capacity	Internal 8G SD card inside, can save the data for 10000events.
Battery	3.7V/900mA,support power failure alarm
Consumption	Normal 130mA@12V,max 500mA@12V
Power supply	Wide working voltage,range 9~36VDC
Specification	Size :88mm×70mm×52mm;Metal material;Weight:350g;Wall-mounted, rail-mounted installation
Working environment	Temp&humi:-45~85°C, 5~95%RH

## DIAGRAM



**APPLICATION**  
 Sewage treatment, smart grid, smart transportation, smart construction sites, smart factories, environmental monitoring, etc. need to collect and control scenarios

## SELECTION TABLE

Model	2G/3G/4G	Ethernet	Temp&humi	RS485	DI	AI	DO	Extend IO Tags			
								bool	16bit	32bit	64bit
S475	√	1	1	2	8	6	4	64	128	64	64
S475E	×	1	1	2	8	6	4	64	128	64	64

Note: S475E without communication module, so it cannot make calls, SMS alarms, etc.

# WIRELESS DATA TRANSMISSION TERMINAL

Typical model: D223

The GSM/GPRS/3G/4G IOT M2M Modem DTU D223 is a powerful and programmable multi-purpose wireless cellular modem and data transfer unit (DTU). It provides a secure, high speed, reliable wireless data transmission between com port and internet connection for customers over GPRS/3G/4G wireless cellular network. Also, it can be used as SMS modem and Modbus RTU to Modbus TCP converter. Supports SMS,GPRS,3G, 4G Lte Cellular Networks.Compatible Modbus TCP and MQTT IoT Protocols and can intergrate to the KPIIoT IoT Cloud Platform and OPC, SCADA and MES systems.

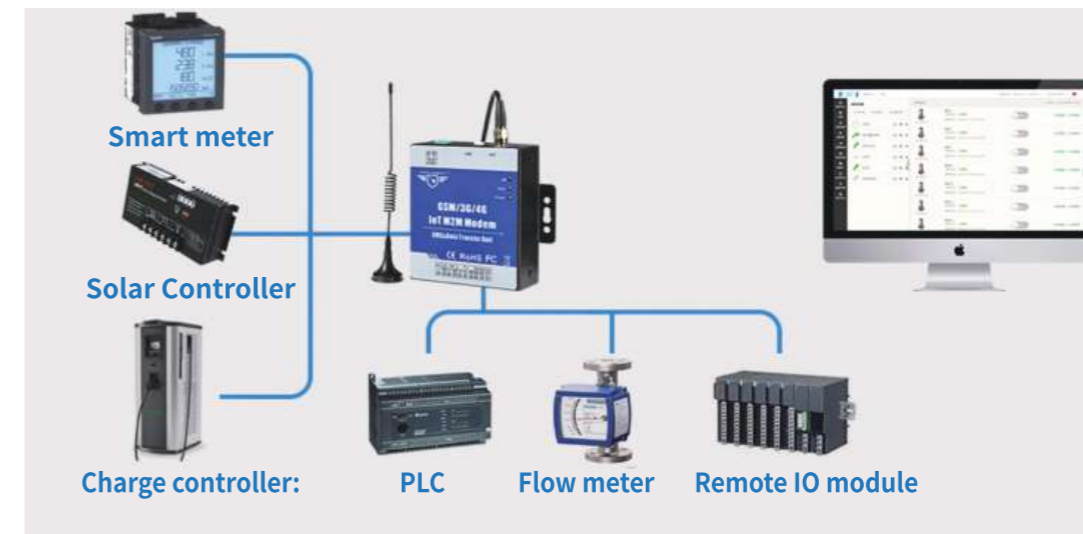
## MAIN FEATURES

- Multi-functional, supports AT Commands, Transparent SMS ,Modbus RTU to Modbus TCP;
- 1 TTL port can be used for TTL device data transfer;
- 1 three-wire RS485 serial port, RS232 is optional, Baud rate adjustable from 1200~115200bps, ± 15KV ESD protection;
- 1 digital input, supports dry contact, wet contact, pulse counter can be used as alarm, or trigger to wakeup or online event;
- DIN status, counting function can be uploaded to the server in transparent transmission and modbus protocol mode, support counting clear to 0;
- Build-in protocol stack, support TCP/UDP network protocol;
- Support backup server, if the main server fails, it will take the initiative to transfer to the backup server;
- Heartbeat function and autodial to ensure the device online;
- Supports remotely restart the device, and configure it by SMS commands remotely;
- Up to 10 user's phone number to receive alarm and daily report SMS/Call.



PARAMETER	DESCRIPTION
Serial port	1 RS485 communication interface, optional RS232/TTL
DIN	①1 channel, supports both dry contact and wet contact (NPN) ②Dry contact closed: short-circuit disconnected: open end ③Closed wet contact: 0~0.5VDC Disconnected: 3~30VDC ④Support pulse counter, support start value, interval value, total value, count reset
Protocol	SMS,AT Commands,Transparent transmission,Modbus RTU to Modbus TCP
Consumption	Normal:16mA@12V, max:150mA@12V
Power supply	Wide working voltage design,range 9~36VDC
Specification	size: 70mm×88mm×30mm; Metal; weight:235g; Wall-mounted, rail-mounted installation
Working environment	Working Temp&humi: -45~+85°C, 5~95%RH

# APPLICATION SCENARIO



Smart grid, industrial automation, weather station, energy system, charging pile, PLC and other data collection

# SELECTION TABLE

Model	2G/3G/4G	Ethernet	RS485	RS232	TTL	DI	CAN	GPS	Note
D223	1	×	DefaultRS485	OptionalRS232/TTL		1	×	×	Transparent transmission (Cellular)
D224	×	1	1	1	1	×	×	×	Transparent transmission (Ethernet)
D225	×	1	1	1	1	×	×	×	PLC protocol conversion (Ethernet)
D226	1	1WAN, 1LAN	1	1	×	×	1	Optional	PLC protocol conversion (Cellular)

# LORA GATEWAY

## Model:S281

The Lora Gateway S281 is the latest Lora technology for industrial internet of things solutions. It supports upto 99 wireless temperature humidity modules, and 99 wireless serial port modules with a monitoring radius of upto 2500m.it is widely used in agricultural greenhouse temperature and humidity collection and monitoring, chemical plant temperature and humidity collection and monitoring, electroplating plant temperature and humidity collection and monitoring, hospital sites and fruit and vegetable storage warehouses and other places temperature and humidity collection and monitoring. Supports SMS,GPRS,3G, 4G Lte Cellular Networks.Compatible Modbus TCP and MQTT IoT Protocols and can intergrate to the KPIIOT IoT Cloud Platform and OPC, SCADA and MES systems to build an industrial IoT Solution.

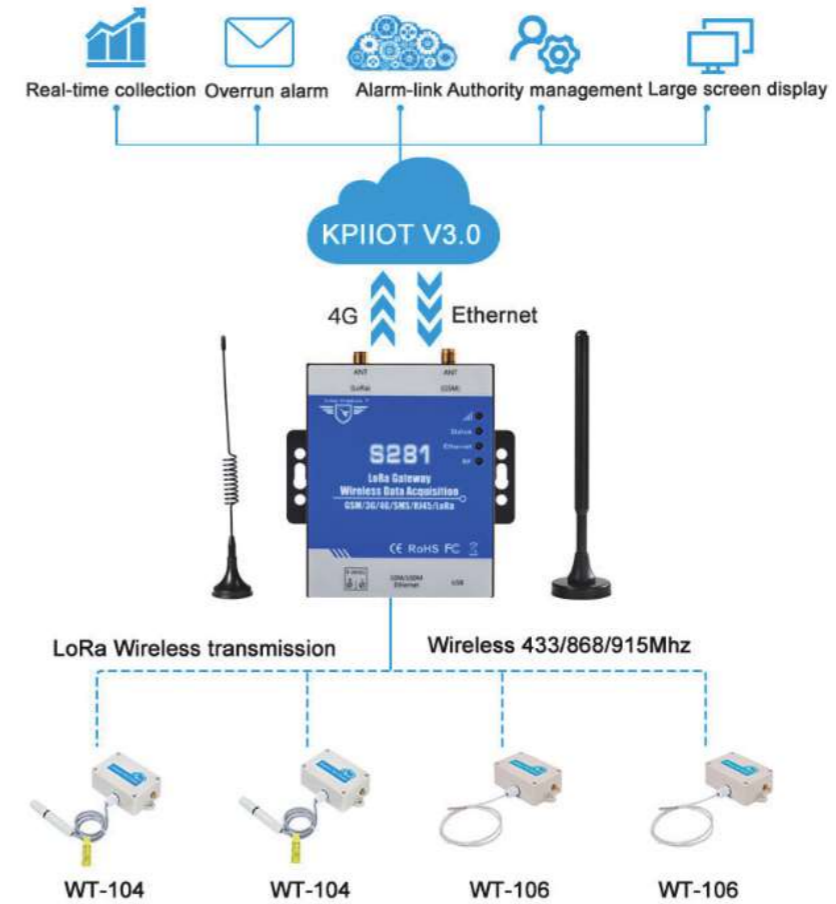
### MAIN FEATURES

- Supports 100 wireless temp&humi data points ;
  - Supports 100 RS485 serial wireless data points;
  - Up to 2KM wireless distance;
  - Supports 10 user numbers to receive SMS alarm triggered by device daily reports, dropped calls, serial data overruns, and abnormal triggers;
  - It can monitor the battery power of the terminal in real time to ensure that the device data is not dropped;
- It adopts local configuration software, remote SMS and APP to set parameters, which is convenient to operate and easy to use.



PARAMETER	DESCRIPTION	
LoRa Gateway	Distance	Open area up to 2KM
	Data point	100 RS485, 100 temp&humi
	Communication	GSM/3G/4G Lte
	Protocol	Modbus RTU,Modbus TCP,Transparent transmission (RS485 node)
	Frequency	420MHz~450MHz (868MHz and 915MHz can be customized)
	Consumption	Normal: 130mA@12V, max: 150mA@12V
	Collection mechanism	Adopt time division multiplexing, multi-channel mounting, less interference, more mounting nodes
	Power	Wide working voltage design, support 9 ~ 36VDC
	Battery	3.7V/900mAh, power failure alarm
	Specification	size: 88mm×75mm×30mm; Metal; weight: 235g; Wall-mounted, rail-mounted installation
LoRa node	Working environment	Temp:-45~85°C, Humi:5~95%RH
	WT100 (RS485Data Transmission Terminal)	1 RS485, Data Transmission Terminal
	WT100D (RS485 Point-to-point transparent transmission)	Support a pair of LoRa nodes, point-to-point transparent transmission of RS485 serial data
	WT104 (AM2301 temp&humi)	Temp range:-40°C~80°C, ±0.5°C, Humi range 0~100%RH, ±3%RH
	WT105 (DS18B20 temp)	'-55~+125°C, : ±0.3°C
	WT106 (PT100 temp)	'-50~+200°C; ±0.2°C
	Node working mode	Wake up,Proactively report
	Node power supply	3xAAA battery (3.3V~5V)
Node Specification	size: 101mmX69mmX39mm; waterproof IP65 plastic	
Working environment	Temp:-10~+60°C, 5~95%RH	

## DIAGRAM



**APPLICATION**

Distributed and inconvenient wiring scenarios such as smart agricultural greenhouses, smart breeding, smart workshops, warehouses, underground pipelines, smart power, and environmental monitoring

## RS485 SERIAL DATA WIRELESS TRANSMISSION



# MODBUS TO 4G MQTT GATEWAY

## Model: S375

S375 is a multifunctional industrial IOT data monitoring and acquisition control terminal that supports Ethernet communication, dual SIM cards, with 2 RS485, which can be used for expansion to realize industrial field data access to third-party SCADA software, PLC, HMI, or Access to the King Pigeon IoT cloud platform to directly remotely monitor, manage, and set up remote terminals through cloud SMS, WeChat, APP, and Web interfaces, so as to realize the monitoring of remote industrial sites. It is widely used in sewage treatment, power acquisition, PLC remote monitoring and other occasions.

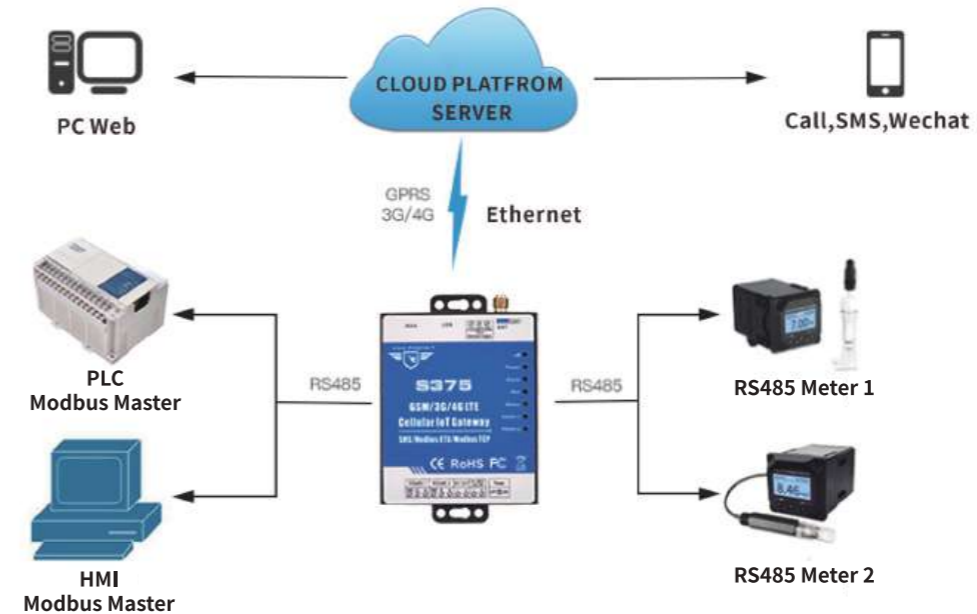
### MAIN FEATURES

- 1 Ethernet port (RJ45) interface, support the network port to collect 5 PLC data via Modbus TCP protocol and upload it to the cloud, support SMS warning;
- 2 RS485 port supports Modbus RTU Master and Slave;
- Complete anti-drop mechanism to ensure that the data terminal is always online, and the data is retransmitted when the connection is dropped;
- Support remote SMS restart device and configure device parameters;
- Support scheduled automatic reporting, scheduled SMS daily report, scheduled online, scheduled offline, scheduled restart, etc.;
- Built-in TCP/IP protocol stack, support Modbus RTU/TCP, MQTT and transparent transmission;
- Built-in TCP monitoring port, which can be used as TCP Server, supporting up to 5 terminal access
- support Modbus RTU to MQTT, Modbus TCP to MQTT;
- Support dual SIM cards: SIM card 1 is used as primary and SIM card 2 is in standby mode to improve communication quality.



PARAMETER	DESCRIPTION
Serial port	2 RS485, supports Modbus Slave and Modbus RTU Master, can extend 320 IO tags
Ethernet	1 isolated 10/100M adaptive Ethernet interface, with 15KV ESD protection, supporting Server and Client protocols
Temp&humi	Temperature range: -40°C to +80°C, Humidity Range: 0~100%RH;
Protocol	Modbus RTU over TCP, Modbus TCP, MQTT, KingPigeon IOT protocol
Extend IO Tags	Max 320 (Bool, 16bit, 32bit, 64bit)
Memory Capacity	Internal 8G SD card inside, can save the data for 100000 events.
Battery	3.7V/900mA, support power failure alarm
Consumption	Normal: 130mA@12V, max: 500mA@12V
Power supply	Wide working voltage design, support 9 ~ 36VDC
Specification	Size: 88mm × 70mm × 30mm; Metal material; Weight: 300g; Wall-mounted, rail-mounted installation
Working environment	Temp&humi: -45~85°C, 5~95%RH

## DIAGRAM



### APPLICATION

Smart grid, smart transportation, supply chain automation, smart factory, environmental monitoring, smart agriculture, etc.

## SELECTION TABLE

Model	2G/3G/4G	Ethernet	Temp&humi	RS485	Extend IO Tags			
					bool	16bit	32bit	64bit
S175	✓	×	1	2	64	128	64	64
S375	✓	1	1	2	64	128	64	64
S375E	×	1	1	2	64	128	64	64

# CELLULAR IOT MODBUS RTU

## Model: S275

S275 is a multi-functional wireless industrial IoT data monitoring and collection control SMS alarm terminal, which is widely used in remote data monitoring and collection in the industrial Internet of Things industry chain, such as smart grid, smart transportation, industrial automation, smart buildings, fire protection, public Security, environmental protection, meteorology, digital medical treatment, agriculture, forestry, water affairs, coal mining, petrochemical and other fields.

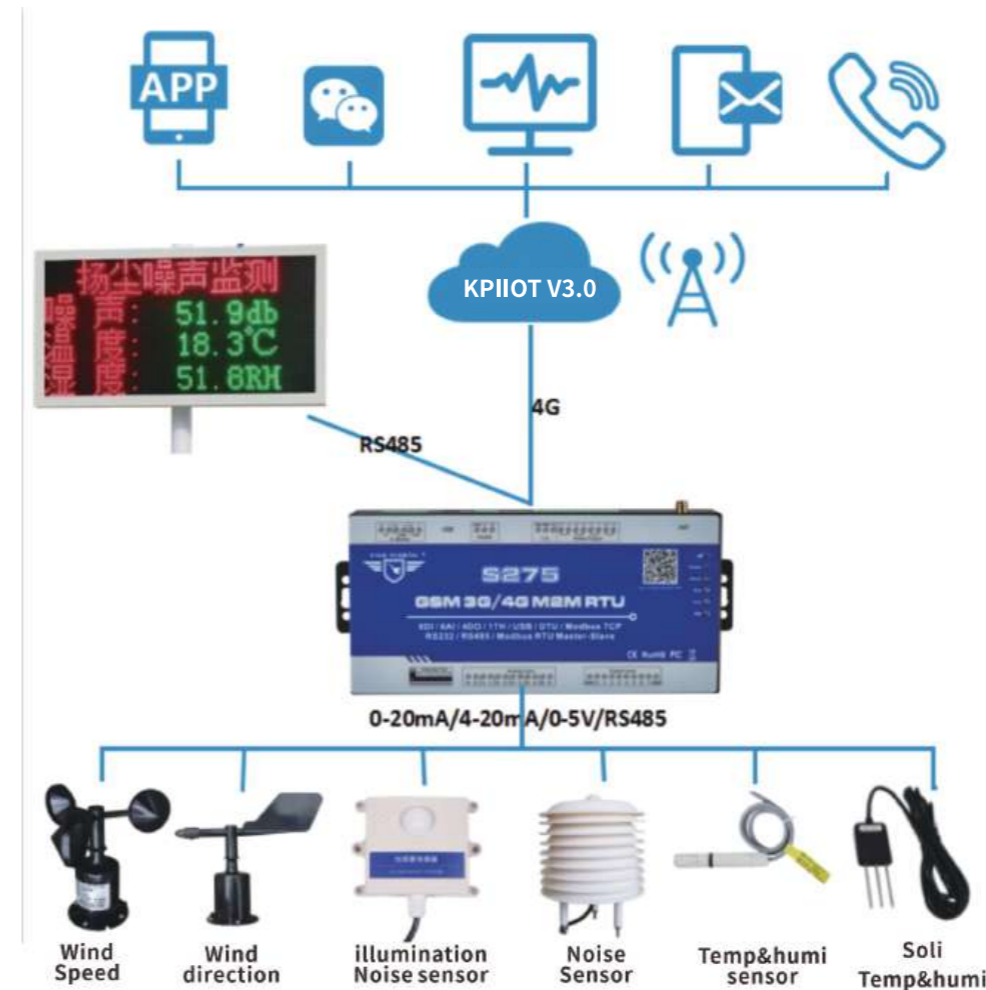
### MAIN FEATURES

- Multiple IOs, 8 digital inputs, 4 relay outputs, 6 analog inputs and 1 temperature and humidity;
- 1 RS485 port, supports Modbus RTU Master and Slave, Max. 320 I/O tags can be used to extend I/O ports or meters;
- Built-in TCP/IP protocol stack, support Modbus RTU/TCP, MQTT and transparent transmission;
- Supports SMS Alert when I/O triggered or recovery, and external power lost or recovery;
- Inbuilt inter-lock logic programmer and powerful timer program function;
- Complete anti-drop mechanism to ensure that the data terminal is always online, and the data is retransmitted when the connection is dropped;
- Support remote SMS restart device and configure device parameters;



PARAMETER	DESCRIPTION
DIN	8, dry/wet contact, logic level 0~0.5V NC, logic level 3~30V regarded as NO, the first input can be used as a pulse counter, sampling frequency is 1KHz
AIN	6 Analog Inputs. 24 bit resolution, 0-5V or 0-20mA or 4-20mA;
DO	4, Rated: 5A/30VDC, 5A/250VAC
Serial interface	1 RS485, Support Transparent transmission and Modbus RTU Slave, Modbus RTU Master
Temp.&Hum Inputs	Temperature range: -40°C to +80°C, Humidity Range: 0~100%RH;
Protocols	Modbus RTU over TCP, Modbus TCP, MQTT, KingPigeon IOT protocol
Extend IO Tags	Max 320 (Bool, 16bit, 32bit, 64bit)
Memory Capacity	Internal 8G SD card inside, can save the data for 100000 events.
Battery	3.7V/900mA, support power failure alarm
Consumption	Normal: 50mA@12V, max: 150mA@12V
Power supply	Wide working voltage design, support 9 ~ 36VDC
Specification	size: 175mm × 88mm × 30mm; Metal; Weight: 350g; Wall-mounted, rail-mounted installation
Working environment	Temp&humi: -45~85°C, 5~95%RH

### DIAGRAM



**APPLICATION**  
Intelligent breeding, smart greenhouse, smart electricity, weather station, unattended computer room, smart factory, environmental monitoring

### SELECTION TABLE

Model	2G/3G/4G	Temp&humi	RS485	DI	AI	DO	Extend IO tags			
							bool	16bit	32bit	64bit
S270	✓	1	×	2	2	2	×	×	×	×
S271	✓	1	×	4	4	4	×	×	×	×
S272	✓	1	1	8	6	4	64	64	×	×
S275	✓	1	1	8	6	4	64	128	64	64



# ETHERNET REMOTE IO MODULES

Series:MxxxT

Industrial Ethernet Remote I/O data acquisition module M series adopts industrial-grade design, supports AI, DI, PT100 input and AO, DO output, as high-speed pulse counting and high-speed pulse output, provides 1 RS485 support Modbus master and slave, 1 RJ45 Ethernet supports TCP Server and TCP Client, supports Modbus TCP and MQTT protocols, and supports 5 TCP links when used as TCP Server. It is widely used in industrial automation and intelligent manufacturing workshop nodes, instruments and other data acquisition and control fields.

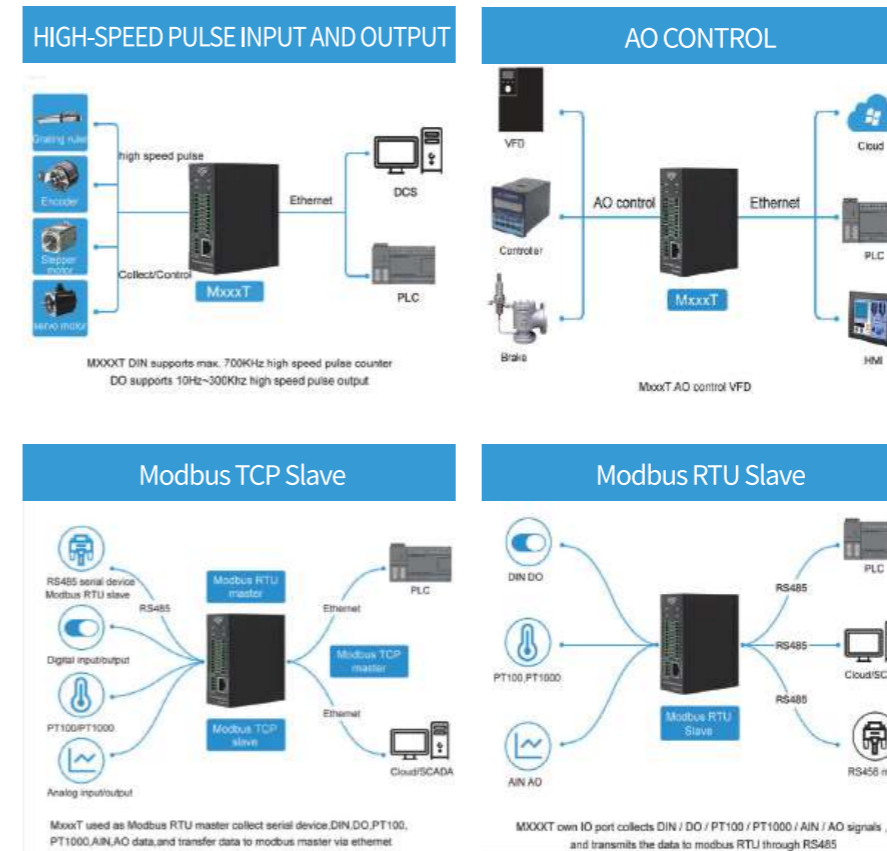
## MAIN FEATURES

- supports AI, DI, PT100 input and AO, DO output;
- Supports high-speed pulse counting and high-speed pulse output;
- Supports modbus master and slave;
- 1 RJ45 Ethernet interface supports TCP Server and TCP Client services;
- Support Modbus TCP and MQTT protocols, can access SCADA, MES and cloud platforms;
- As a TCP server, it can support 5 TCP links at the same time;



PARAMETER	DESCRIPTION
DIN	Dry or wet contact,first channel supports Max. 700KHz high speed pulse counter
DO	Sink output,supports 10Hz~300KHz high speed pulse output;
AIN	12-bit resolution, supports 0~20mA,4~20mA,0-5VDC, 0-10VDC
AO	12-bit resolution, supports 0-10VDC
PT100	supports PT100 and PT1000 resistance sensor, compatible 2 or 3 wires
RS485	supports Modbus RTU/ASCII Master, can extend I/O modules
Ethernet	1 RJ45 Ethernet interface supports TCP Server and TCP Client services
Protocol	Modbus TCP,Modbus RTU over TCP
Consumption	Normal:50mA@12V, max:150mA@12V
Power supply	Wide working voltage design, support 9 ~ 36VDC
Specification	Size:82mm*40mm*99mm; Metal;Wall-mounted, rail-mounted installation
Working environment	Temp&humi:-20~+70°C, 5~95%RH

## DIAGRAM



Smart factory workshop instrumentation data acquisition, industrial automation, PLC expansion IO, SCADA, MES acquisition

## SELECTION TABLE

Model	RJ45	RS485	DIN	DO	AI	AO	PT100/1000
M100T	1	1	2	2	2	×	×
M110T	1	1	4	4	×	×	×
M120T	1	1	4	4	4	2	×
M130T	1	1	8	4	×	×	×
M140T	1	1	8	8	×	×	×
M150T	1	1	8	4	4	×	×
M160T	1	1	8	8	8	×	×
M200T	1	1	×	×	×	2	×
M210T	1	1	4	×	×	×	×
M220T	1	1	×	4	×	×	×
M230T	1	1	×	×	4	×	×
M240T	1	1	×	×	×	×	4
M310T	1	1	8	×	×	×	×
M320T	1	1	×	8	×	×	×
M330T	1	1	×	×	8	×	×
M340T	1	1	×	×	×	×	8
M410T	1	1	16	×	×	×	×
M420T	1	1	×	16	×	×	×

# MODBUS EXTEND IO MODULES

Series:DAMxxx

Modbus remote data acquisition module is designed to meet the needs of harsh industrial application environments, providing 2/4 digital input , 2/4 analog and thermal resistance PT100 temperature input, 2/4 relay output Control, used as Modbus slave extension module, cooperate with RTU, PLC, HMI and other Modbus master stations to realize the functions of remote digital signal, analog, thermal resistance temperature acquisition and digital and relay remote control. It is widely used in various industrial automation measurement and remote control systems.

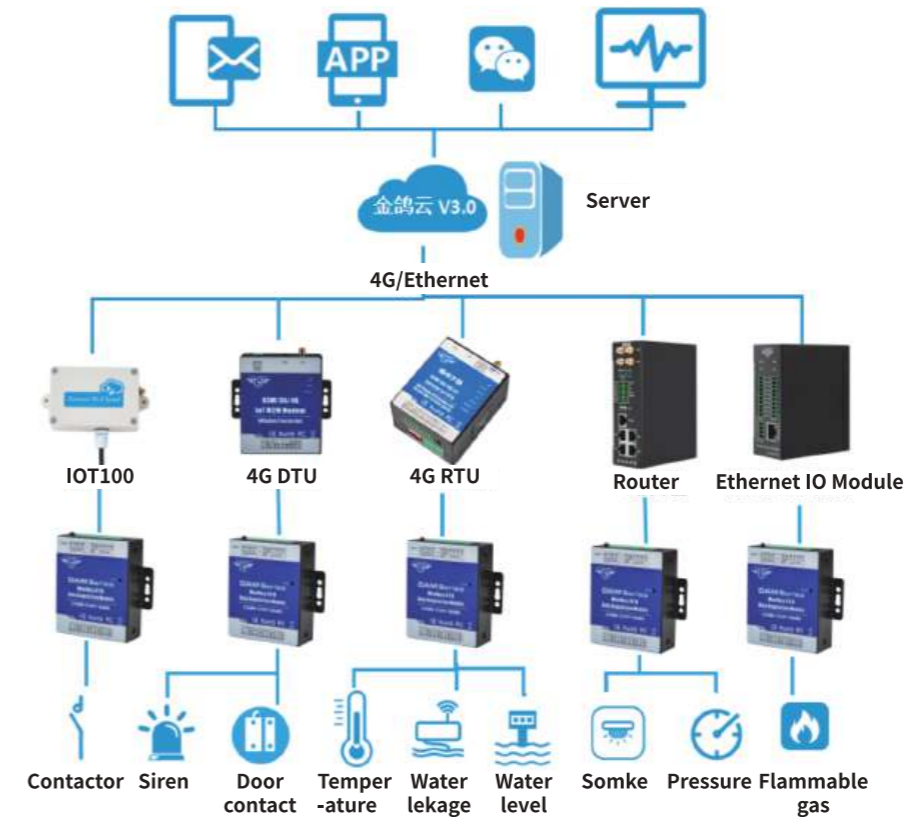


## MAIN FEATURES

- Supports AI,DI,PT100 input and DO;
- supports Pulse Counter and TTL;
- 1 RS485 supports Modbus slave.

PARAMETER	DESCRIPTION
DIN	①2/4, Passive contact or voltage type input can be connected ②Logic level: 0~0.5V or short circuit is 0, +3~30V or open circuit is 1; ③Input level range: 0~30V, the limit range is -10~40V; ④Counting function: counting sampling frequency 1KHz, the width of pulse high and low level is required to be >1mS; when the module detects that each channel has a transition from 1 to 0, the count value is increased by 1; the maximum count value of each channel is 4 bytes: FFFFFFFFH
DO	①Relay output:2/4, 250V*5A(AC)or 14V*20A(DC); ②It can be set to output in level mode or pulse mode, and the pulse width can be set from 0.1S to 25S during pulse output; ③Can be set to maintain the relay state function after power failure
AIN	Supports 0~5V,0~10V,0~20mA,4~20mA
PT100.RTD input	PT100 (default) , PT1000 optional;2 or 3 wire input
RS485	1 RS485 (RS422 optional) , Support Modbus RTU standard protocol
Protocol	Standard Modbus RTU
Consumption	≤3W
Power supply	Wide working voltage design, support 9 ~ 36VDC
Specification	Size: 70mm×88mm×30mm; Metal; Weight235g; Wall-mounted, rail-mounted installation
Working environment	Temp&humi: -20~+70°C, 5~95%

## DIAGRAM



APPLICATION  
Intelligent transportation, smart power, underground pipe gallery monitoring, supply chain automation, smart factories, environmental monitoring, smart agriculture and other equipment IO expansion

## SELECTION TABLE

Model	RS485	DI	DO	AI	PT100/1000
DAM102	1	2	×	×	×
DAM104	1	×	2	×	×
DAM106	1	2	2	×	×
DAM108	1	4	×	×	×
DAM110	1	×	4	×	×
DAM112	1	4	4	×	×
DAM114	1	×	×	2	×
DAM116	1	×	×	4	×
DAM118	1	×	×	×	2
DAM120	1	×	×	×	4
DAM122	1	×	×	2	2
DAM124	1	×	×	4	4

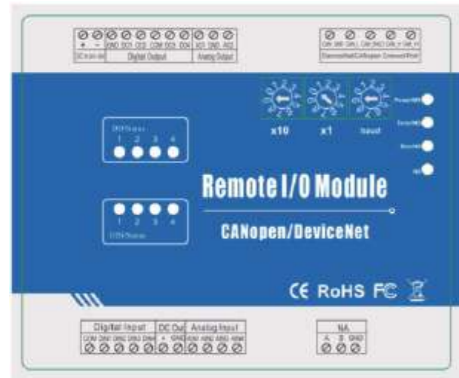
# CANOPEN REMOTE IO MODULES

Model: MxxxC series

The Mxxx CANOpen Series Remote I/O Module are industrial class, high reliability, high stability and high precision data acquisition module, it provides multi DI,DO,AI,AO,PT100/PT1000 and 1 isolated CAN Bus interface and multi I/O, supports standard CANOpen Protocol, based on the CAN bus and mainly used for the embedded network of the machine control, such as industrial machine control , aircraft engines monitoring, factory automation, medical equipments control, remote data acquisition, environmental monitoring, and packaging machines control.

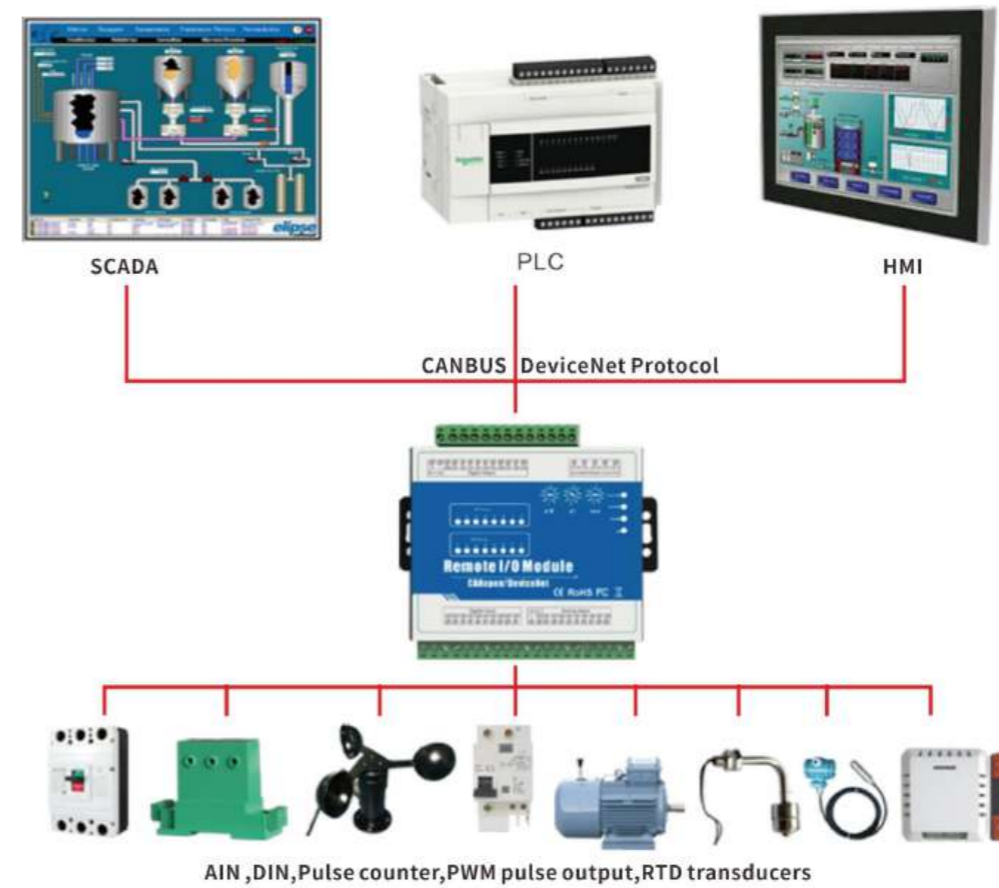
## MAIN FEATURES

- 1 CANBUS, multi DI,DO,AI,AO,PT100/PT1000;
- Dynamic PDO-Link and Mapping;
- Support polled IO connection;
- Two LEDs indicate the status of the device, in line with CiA303-3;
- Support rotary switch to set station number and baud rate;
- Support configurable disconnection error handling mechanism;
- 1 DC power supply output to other devices on site, saving on-site wiring difficulty and cost.



PARAMETER	DESCRIPTION
CANopen interface	1,supports CANopen CiA301, CiA401; PIN: Open 5-pin connector (Open Style), pitch 5.08mm; each CANopen network can connect up to 128 devices
DIN	DIN input supports dry contact/wet node input, Optocoupler isolation digital input, support dry and wet node input (both compatible), one of which can be used as pulse counting, supports high-speed pulse and low-speed pulse mode, the default is the maximum high-speed pulse frequency of 1MHz, the maximum optional low-speed pulse frequency 10Khz
DO	Sink or relay output, relay contact capacity DC 5A/30V, 5A/250VAC, one of which can be used as high-speed pulse output, supports pulse frequency 10Hz~300Khz, and can be used as PWM
AIN	12-bit resolution, supports 0~20mA, 4~20mA, 0-5VDC, 0-10VDC
Anglog output	12-bit resolution, supports 0-10VDC; Precision: ±0.1% FSR @ 25°C, ±0.3% FSR @ -10 和 60°C; Max load: 1A
PT100.RTD input	12bit PT100; PT1000 optional
Consumption	Typical standby power consumption: ≤1.7W, if relay action: 0.15W per action
Power supply	No analog output equipment: DC12~36V power supply, peak voltage must not exceed +40V; With analog AO output device: DC24~36V power supply, peak voltage must not exceed +40V
Specification	Size: 105mm*88mm*30mm; Metal; DIN rail installation
Working environment	Working Temp: -20~+70°C; Storge temp: -40~+85°C; Humi: 5~95%

## APPLICATION



Intelligent transportation, smart power, underground pipe gallery monitoring, supply chain automation, smart factories, environmental monitoring, smart agriculture and other equipment IO expansion

## SELECTION TABLE

Model	DI	DO	AI	AO	PT100/1000	CAN
M100C	2	2	2	×	×	1
M110C	4	4	×	×	×	1
M120C	4	4	4	2	×	1
M130C	8	4	×	×	×	1
M140C	8	8	×	×	×	1
M150C	8	4	4	×	×	1
M160C	8	8	8	×	×	1
M200C	×	×	×	2	×	1
M210C	4	×	×	×	×	1
M220C	×	4	×	×	×	1
M230C	×	×	4	×	×	1
M240C	×	×	×	×	4	1
M310C	8	×	×	×	×	1
M320C	×	8	×	×	×	1
M330C	×	×	8	×	×	1
M340C	×	×	×	×	8	1
M410C	16	×	×	×	×	1
M420C	×	16	×	×	×	1

# DEVICENET REMOTE IO MODULES

Model: MxxxD series

The Mxxx DeviceNet Series Remote I/O Module are industrial class, high reliability, high stability and high precision data acquisition module, it provides multi DI,DO,AI,AO,PT100/PT1000 and 1 isolated CAN Bus interface and multi I/O, supports standard DeviceNet Protocol, based on the CAN bus and mainly used for the embedded network of the machine control, such as industrial machine control, aircraft engines monitoring, factory automation, medical equipments control, remote data acquisition, environmental monitoring, and packaging machines control.

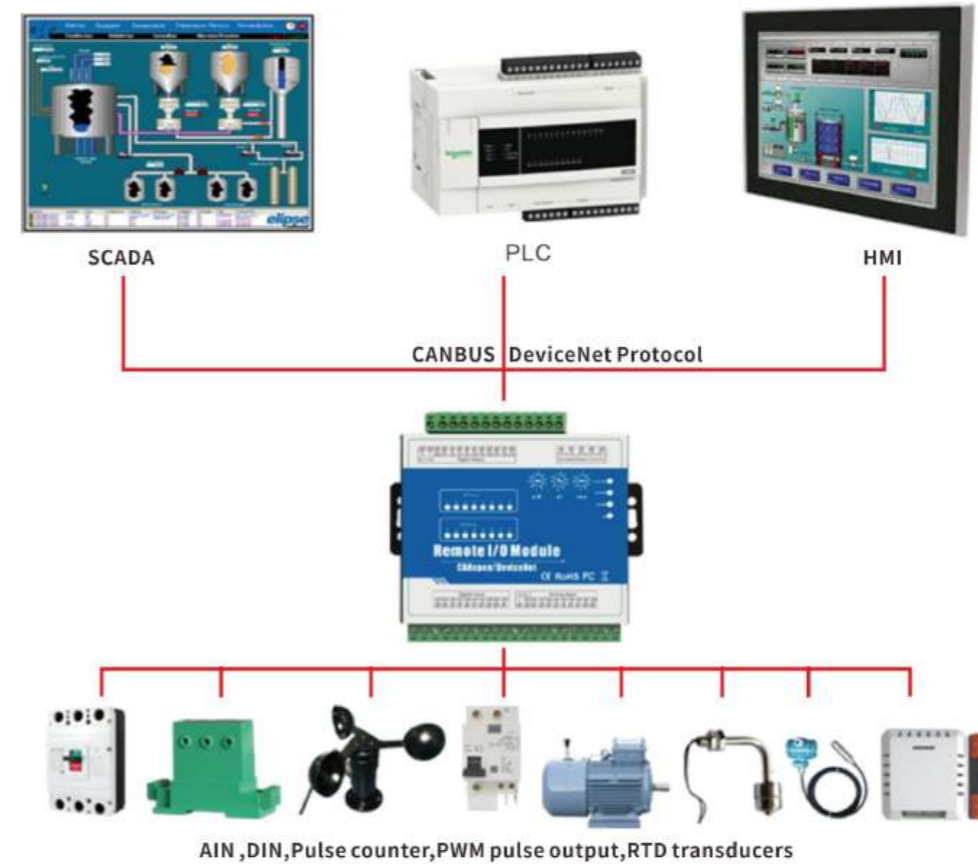
## MAIN FEATURES

- 1 CANBUS, multi DI,DO,AI,AO,PT100/PT1000;
- Supports Group 2 only server;
- Support polled IO connection;
- Support standard MS, NSLED indication and abundant I/O status indication;
- Support rotary switch to set station number and baud rate;
- Support configurable disconnection error handling mechanism;
- It adopts industrial-grade 32-bit chip, built-in watchdog, and has perfect lightning protection and anti-interference measures to ensure reliability.



PARAMETER	DESCRIPTION
DeviceNet interface	1 CANBUS interface, compatible with DeviceNet specification Volume I/ II, Release 2.0, Errata 5; drive capability: each DeviceNet network can connect up to 64 devices; support information group: provide 2 sets of services
DIN	DIN input supports dry contact/wet node input. Optocoupler isolation digital input, support dry and wet node input (both compatible), one of which can be used as pulse counting, supports high-speed pulse and low-speed pulse mode, the default is the maximum high-speed pulse frequency of 1Mhz, the maximum optional low-speed pulse frequency 10Khz
DO	Sink or relay output, relay contact capacity DC 5A/30V, 5A/250VAC, one of which can be used as high-speed pulse output, supports pulse frequency 10Hz~300Khz, and can be used as PWM
AIN	12-bit resolution, supports 0~20mA, 4~20mA, 0-5VDC, 0-10VDC
PT100.RTD input	Support PT100, optional PT1000 type; temperature measurement range: -120~+420°C; accuracy: ±0.1% FSR @ 25°C, ±0.3% FSR @ -10 and 60°C; sampling rate (all channels): per second 20 acquisitions, 3 confirmations, with digital filtering, strong anti-shake processing
Consumption	Typical standby power consumption: ≤1.7W, if relay action: 0.15W per action
Power supply	No analog output equipment: DC12~36V power supply, peak voltage must not exceed +40V; With analog AO output device: DC24~36V power supply, peak voltage must not exceed +40V
Specification	Size: 105mm*88mm*30mm; Metal; DIN rail installation
Working environment	Working Temp: -20~+70°C; Storge temp: -40~+85°C; Humi: 5~95%

## APPLICATION



Smart transportation, smart power, underground pipe gallery monitoring, supply chain automation, smart factories, smart agriculture and other equipment IO expansion

## SELECTION TABLE

Model	DI	DO	AI	AO	PT100/1000	CAN
M100D	2	2	2	×	×	1
M110D	4	4	×	×	×	1
M120D	4	4	4	2	×	1
M130D	8	4	×	×	×	1
M140D	8	8	×	×	×	1
M150D	8	4	4	×	×	1
M160D	8	8	8	×	×	1
M200D	×	×	×	2	×	1
M210D	4	×	×	×	×	1
M220D	×	4	×	×	×	1
M230D	×	×	4	×	×	1
M240D	×	×	×	×	4	1
M310D	8	×	×	×	×	1
M320D	×	8	×	×	×	1
M330D	×	×	8	×	×	1
M340D	×	×	×	×	8	1
M410D	16	×	×	×	×	1
M420D	×	16	×	×	×	1

# SERIAL DEVICE SERVER

## Model:D224

The D224 Serial Device Server provides is a useful device to convert RS485/232/TTL data to TCP/IP network, it also can be used as converting Modbus RTU to Modbus TCP, and performs as a serial port converter to create the communication from RS485 to RS232 or TTL, moreover, it can be used as a repeater for two serial device communication directly, e.g.: PLC to PLC. The D224 Serial Device Server provides a simple and cost-effective way to bring the advantage of remote management and data accessibility to thousand of devices that can not connect to a network. It is the most popular industrial internet of things (IIOT) gateway.



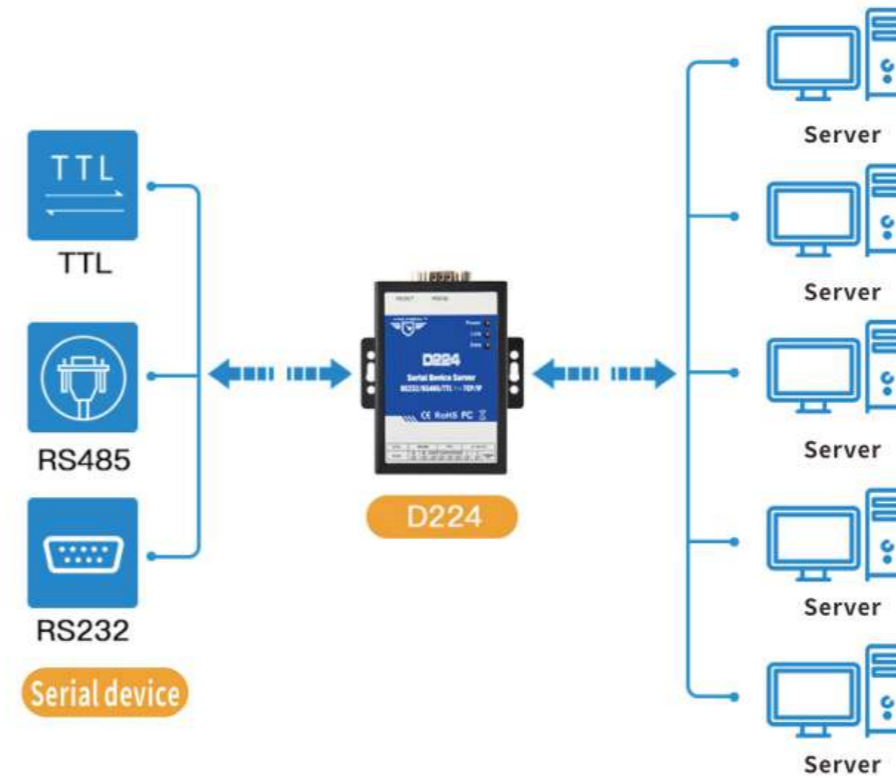
### MAIN FEATURES

- Serial port→server supports transparent transmission to 5 servers at the same time;
- Transparent transmission between RS485, RS232 and TTL;
- Support Server and Client online at the same time;
- Rich and complete registration package mechanism and anti-drop mechanism;
- Modbus gateway, support Modbus RTU and Modbus TCP protocol conversion;
- Support custom device name to facilitate user identification;
- Support server domain name resolution.

PARAMETER	DESCRIPTION
Ethernet	1 x RJ45,10Mbps,ESD contact: 8KV, surge: 4KV (10/1000us)
Serial	1 x RS232,1 x RS485,1 x TTL
Protocol	TCP/IP Data transparent transmission,Modbus RTU to Modbus TCP
Working mode	Supports TCP Server,TCP Client,UDP Server,UDP Client; As a server, it also functions as a client. As a server, it supports connecting up to 5 TCP/UDP clients; as a client, it supports connecting up to 5 TCP/UDP target servers
Serial port strategy	Support the serial port strategy function, and the data path can be freely selected, such as: RS232 and RS485 mutual transparent transmission (RS232↔RS485), RS232 and server 1 mutual transparent transmission (RS232↔server 1), RS485 and TTL mutual transparent transmission (RS485↔TTL) Wait
Max links	Support simultaneous connection of 5 TCP/UDP target servers and 5 TCP/UDP clients
Data path	Support custom selection of mutual transparent transmission between RS485, RS232 and TTL
Power supply	Wide working voltage design, support 9~36VDC power supply
Specification	Size:96mm*68mm*25mm; Metal; Net weight: 260g; Wall-mounted, rail-mounted installation
Working environment	Temp&humi: -35~+75°C, 5~95%RH

## APPLICATION

### APPLICATION DIAGRAM



**APPLICATION**  
Smart factories, smart grids, smart transportation, supply chain automation, environmental monitoring, smart agriculture and other occasions that require serial port to Ethernet

### SELECTION TABLE

Model	2G/3G/4G	Ethernet	RS485	RS232	TTL	DI	CAN	GPS	Note
D223	1	×	Default is RS485.RS232/TTL optional			1	×	×	Serial port transparent transmission (cellular network)
D224	×	1	1	1	1	×	×	×	Serial port transparent transmission (Ethernet)
D225	×	1	1	1	1	×	×	×	PLC protocol conversion (Ethernet)
D226	1	1WAN, 1LAN	1	1	×	×	1	optional	PLC data acquisition (cellular network)

## PLC GATEWAY Model: D225

The PLC gateway D225 is a converter for converting the data protocol of Mitsubishi PLC into Modbus TCP RTU protocol. The D225 can store the I/O data of the PLC to the gateway through the RS-232 or RS-485 serial port of Mitsubishi PLC. The gateway transmits the data to the cloud platform through the Modbus protocol, and also allows your software to pass through the local area network anywhere. Or Internet access to serial port devices.

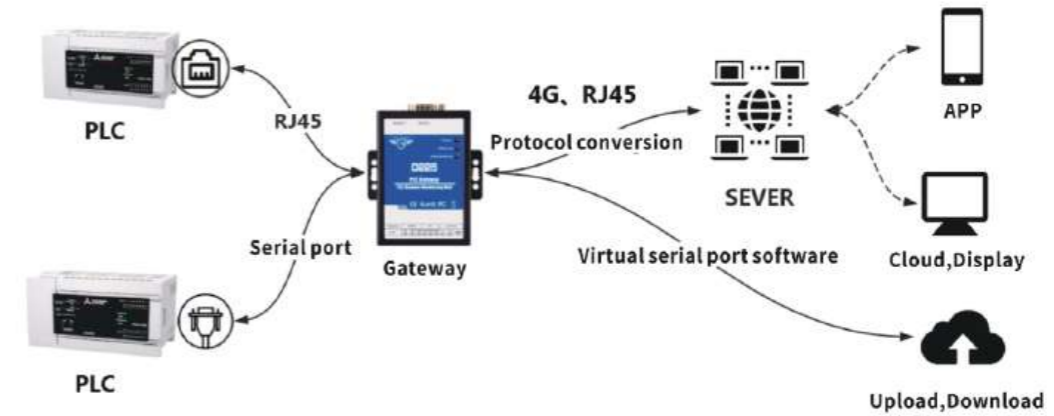


### MAIN FEATURES

- Support common PLC protocol conversion, Siemens S7-200smart, Mitsubishi FX2N, Mitsubishi FX1S, Mitsubishi FX3S, Mitsubishi FX3U, other models can be customized;
- 1 RS-232, 1 RS-485, 1 TTL;
- 1 RJ45, with link and data indicator light, built-in isolation transformer for the network port, up to 2KV electromagnetic isolation;
- Support the RESET button to restore the factory function (long press for 3 seconds to restore) to prevent parameter setting errors;
- configuration software to set device parameters, support WIN XP, WIN 7, WIN 8 and WIN 10, friendly interface;
- Support static IP address or DHCP to obtain IP address automatically, and query the devices in the network through UDP broadcast protocol;
- Support local HMI touch screen and remote simultaneous access to PLC for data acquisition and monitoring
- Support server domain name resolution;
- Support firmware upgrade through TTL, firmware update is more convenient.

PARAMETER	DESCRIPTION
Supports PLC models	Siemens S7-200smart, Mitsubishi FX2N, Mitsubishi FX1S, Mitsubishi FX3S, Mitsubishi FX3U, other models can be customized;
Serial port	1 RS485, 1 RS232, 1 TTL; Baud rate 4800bps-128000 bps; None, Odd, Even Parity;
Ethernet	1x RJ45, 10Mbps; ESD contact : 8KV, Surge: 4KV (10/1000us)
Portocol	TCP/IP transparent transmission, Modbus RTU
Configuration	Software, web
IP Obtain	Static IP/DHCP
DNS	Supports
Cache	Transmit: 8Kbyte; Receive: 8Kbyte
Registration package	Supports self definition
Heartbeat message	Supports self definition
Power supply	Wide working voltage design, support 9~36VDC
Specification	Size: 96mm*68mm*25mm; Metal; Weight: 260g; Wall-mounted, rail-mounted installation
Working environment	Temp&humi: -45~85°C, 5~95% RH

## APPLICATION



**APPLICATION**  
Smart factories, smart grids, smart transportation, unattended computer room environmental monitoring, supply chain automation, environmental monitoring, smart agriculture, etc. require serial to Ethernet scenarios

## SELECTION TABLE

Model	2G/3G/4G	Ethernet	RS485	RS232	TTL	DI	CAN	GPS	Note
D223	1	×	Default RS485.optional:RS232/TTL			1	×	×	Serial port transparent transmission (cellular network)
D224	×	1	1	1	1	×	×	×	Serial port transparent transmission (Ethernet)
D225	×	1	1	1	1	×	×	×	PLC protocol conversion (Ethernet)
D226	1	1WAN, 1LAN	1	1	×	×	1	Optional	PLC data acquisition (cellular network)

# NETWORK FAULT MONITORING RTU

Model: RTU5028E

The Network Fault Monitoring RTU5028E is an innovation product, it is special designed for remote monitoring Ethernet Devices communication status and power supply status. It can detect the Ethernet device fault caused by power supply or network communication. If network communication fault, it can remote or automatically restart the Switch or Router or Device to solve almost all of the problems, no need maintenance engineer to process, save time and maintenance cost.



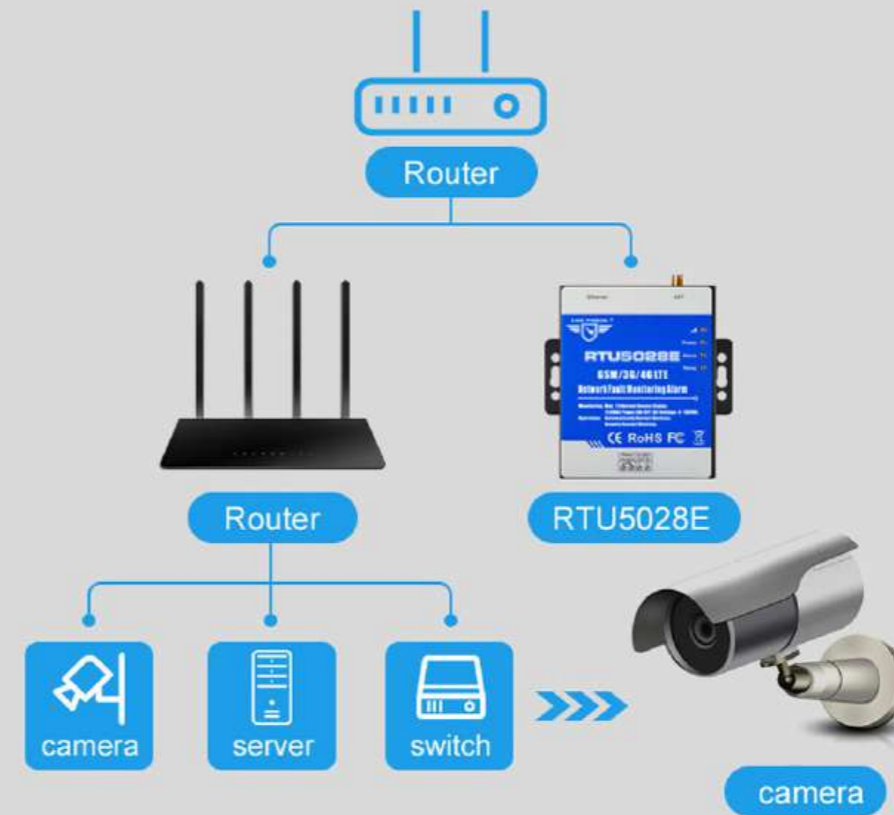
## MAIN FEATURES

- Multi-channel real-time monitoring network failure + power failure + network fault;
- Support simultaneous monitoring 7 network devices, including WIFI devices;
- Automatically determine whether the network equipment failure is caused by the network or the power outage;
- The device can be restarted automatically or manually;
- Built-in 4G and Ethernet communication mode;
- Support KingPigeon IoT cloud platform and SCADA and other monitoring centers.

PARAMETER	DESCRIPTION
Monitoring network	7 LAN IP and internet
Ethernet	1 RJ45, Support DHCP to obtain IP dynamically or static fixed IP
DO	1 NC relay output, contact capacity 7A/125VAC, 5A/250VAC, 20A/14VDC; it can be restarted after network disconnection, manual control function
Communication	SMS, Call, GPRS/3G/4G, Ethernet
Protocol	Modbus RTU Over TCP, Modbus TCP, MQTT
Capacity	100 historical alarm records
Battery	3.7V/900mAh, supports power failure alarm
Consumption	Standby: 100mA@12V; Max: 380mA@12V
Power supply	Standard adapter: 12VDC, Range 9~36VDC
Specification	Size: 70mm*88mm*30mm; Metal; Weight: 320g; Wall-mounted, rail-mounted installation
Working environment	Temp&humi: -10~60°C, Relative humidity 95% (condensation free)

## APPLICATION

After multi-level router switch, RTU5028E can still monitor the status of the bottom camera



APPLICATION

Network equipment disconnection monitoring for smart transportation, smart cities, base stations, computer rooms, network cameras, etc.

## SELECTION TABLE

Model	LAN IP	Internet	Power failure alarm
RTU5028E	7	√	√
R40	R40 router ip	√	×

# PHASE LOSS POWER OFF ALARM

## Model:RTU5029S

RTU502x series products are temperature/humidity/analog/supply voltage/power failure monitoring alarms. The high and low alarm values of temperature/humidity/analog/supply voltage can be set according to actual applications. Once the current value reaches the alarm value, user will receive an alarm message and calling. Support Modbus RTU Over TCP and Modbus TCP protocol to connect to the cloud platform, real-time monitoring of the current status via Web, APP, and WeChat. It is widely used in farms, warehouses, factories, laboratories and other places where power and temperature need to be monitored.

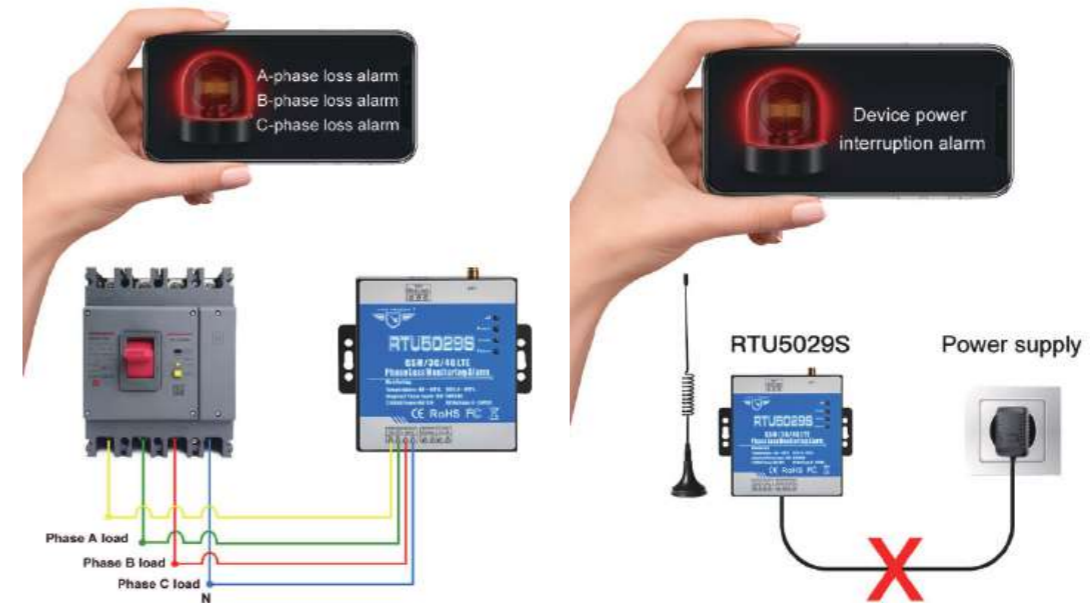


### MAIN FEATURES

- Multiple monitoring types: temperature, humidity, power supply voltage, three-phase phase loss, single-phase power failure, etc.;
- Up to 10 authorized phone numbers, 5 can be used to receive call or SMS, and 5 can be used to call and SMS while alarm occurrence;
- Can set timer report and every x hours automatically send its status/value to the first authorized number;
- Rechargeable backup battery inside can last 8 hours;
- Support Modbus RTU Over TCP and Modbus TCP, can be connected to cloud platform.

PARAMETER	DESCRIPTION
Phase power input	Phase power voltage:100~500VAC
Temp.&Hum Input	AM230x:temperature range -40°C~80°C,accuracy±0.5°C, humidity range 0~99%RH,accuracy ±3%RH
Temp input	DS18B20:temperature range -55°C~125°C,accuracy ±0.5°C
Protocol	Modbus RTU Over TCP,Modbus TCP
Battery	3.7V/900mA, supports power failure alarm
Power consumption	Standby: 12V/20mA;Working Max:12V/150mA
Power supply	Standard adapter:12VDC, Range 9~36VDC
Specification	Size:80mm*88mm*30mm; Metal;Weight:320g;Wall-mounted, rail-mounted installation
Working environment	Temp: -10°C~60°C, Relative humidity 95% (condensation free)

## APPLICATION



Smart power, unattended base stations, computer rooms, power distribution cabinets, smart transportation, smart farms and other scenarios that require electricity monitoring

## SELECTION TABLE

Model	Monitoring Type	2G/3G/4G	Siren	SMS App
RTU5023	220V power failure, DC 9-36V, 1 temperature and humidity monitoring	✓	×	✓
RTU5026	220V power failure, DC 9-36V, 1 temperature monitoring	✓	×	✓
RTU5028	220V power failure, DC 9-36V, DC12V output	✓	✓	✓
RTU5029S-A	220V power failure, 380V 3phase 4 wire, DC 9-36V,DC 12V output	✓	✓	✓
RTU5029S-B	220V power failure,110-2500V single phase, DC 9-36V,DC 12V output	✓	✓	✓



# THREE-PHASE AC MONITORING RTU

## Model:S257s

S257s integrates metering, monitoring, alarm, display, communication, and control functions. It can measure voltage, current, power factor, active power, reactive power, apparent power, and three-phase total active power of each phase; it can detect each phase Loss of voltage, loss of current, open phase, reverse, overload, over current, over voltage, under voltage, cut current and other events, and has a variety of extended functions, providing 2 DIN, 2 DO and 1 temperature Humidity input, 1 RS485 and 1 RJ45 port. S257 uploads data to the cloud or monitoring center via 4G/Ethernet, and uses standard Modbus TCP or Modbus RTU over TCP to facilitate access to third-party platforms.

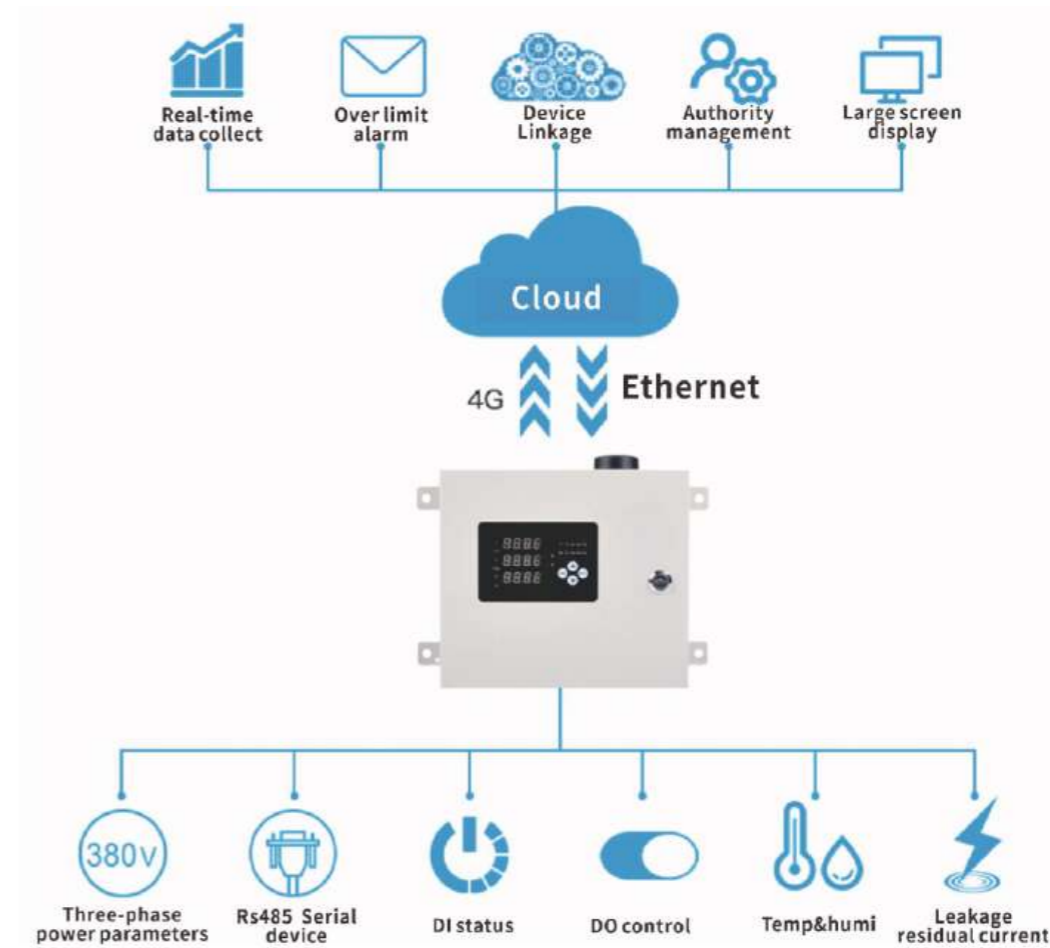


### MAIN FEATURES

- It can collect three-phase electrical parameters, including 32 electrical parameters such as voltage, current, power, and electric energy;
- Built-in TCP listening port, can be used as TCP Server, support multi-terminal access;
- Support dual SIM card interface: SIM card 1 is used as primary, SIM card 2 is in standby mode;
- Support 10 user numbers for receiving alarm information such as daily report, offline, data overrun, abnormal trigger, etc.;
- Support 1 RS485, 2 digital inputs, 2 relay outputs and 1 temperature and humidity input.

PARAMETER	DESCRIPTION
DIN	2 Digital input, NC/NO type, Logic level 0~0.5V NC, logic level 3~30V regarded as NO
DO	2. It can be controlled automatically by timer, event association or remotely via SMS or network
Temp.&Hum Inputs	1 AM2301 ,Temperature range: -40°C to +80°C, Humidity Range: 0~100%RH;
Ethernet	1 RJ4
RS485	1 RS485,support Modbus RTU Master/Slave,data transparent transmission
Protocol	KingPigeon IoT RTU,Modbus RTU,Modbus TCP
Input voltage	Rated AC 100V-400V
Current	Rated 1A(5)A
Working voltage	60~500VAC/80~700VDC
Power consumption	<5VA
Capacity	Max 100,000 historical records or alarm events
Battery	3.7V/900mA, supports power failure alarm
Power supply	60-500VAC/80-700VDC
Specification	Size: 250mm×220mm×70mm; Metal, Weight: 1500g; Wall mount
Working environment	Temp&humi: -25~+60°C, 5~95%RH

## APPLICATION



Smart power, smart transportation, computer room dynamic environment monitoring, smart factories, unattended base stations, etc.

## SELECTION TABLE

Model	3 phase 4 wire	3 phase 3 wire	With display 3 phase 4 wire/3 phase 3 wire
S257A	✓	×	×
S257B	×	✓	×
S257S	✓	✓	✓

# BATTERY MONITORING MODULE

Model: BMS100

The battery monitoring module BMS100 is specially developed for battery monitoring in unattended scenes. It adopts 9-60VDC wide voltage power supply and can measure the voltage of 12 2V, 6V, 12V single cells.

It can be measured in groups, and can be divided into 6 groups at most. The total voltage of the battery pack that can be measured is 300V, and 2 analog inputs are reserved for measuring the total current, total voltage and battery pack temperature of the battery pack. It can be connected to the Golden Pigeon IoT cloud platform, seamlessly connecting to most SCADA.

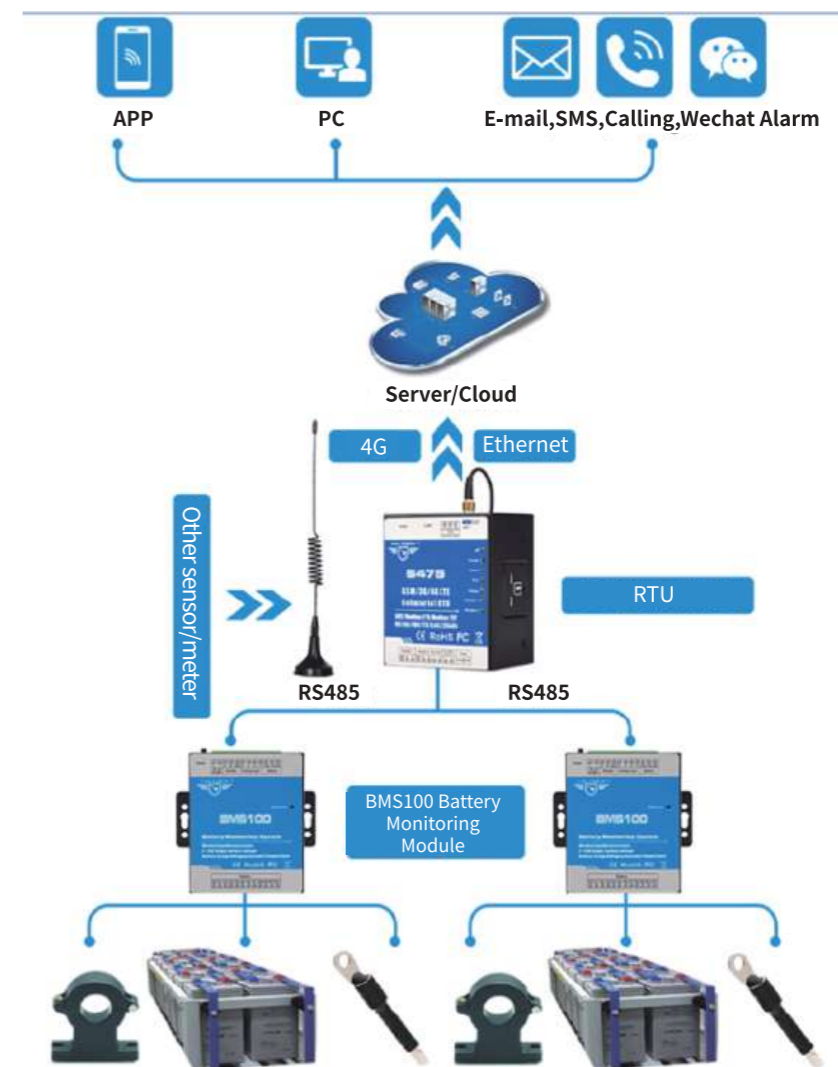


## MAIN FEATURES

- Can measure 12 basic voltages, 1 total voltage; support 12 2V, 6V, 12V single battery voltage monitoring, max voltage is 300VDC;
- Support 2 analog inputs, 4~20mA or 0~5V, plus corresponding instruments to support real-time measurement of total current, total voltage and temperature of battery pack;
- 1 ESD-protected RS485 serial port, supports Modbus RTU protocol, working with King Pigeon Modbus gateway can upload data to the cloud platform, and realize over-threshold SMS, phone calls, and WeChat alarms;
- Support multiple connection modes of battery series, cascade, parallel and group;
- Cascading to monitor small battery packs with more than 12 cells;
- Support group monitoring of battery pack voltage, up to 6 groups.

PARAMETER	DESCRIPTION
Single Battery	Supports 0-3V,0-6V,0-15V range; can measure 2V,6V,12V single battery
Total voltage input	0~300VDC
Analog input	2 4~20mA or 0~5V, 12-bit AD acquisition processing
RS485	1 RS485, With ESD protection, it can be connected to KingPigeon RTU, PLC, SCADA, etc.
Protocol	Modbus RTU Slave
Wiring	Support battery series, cascade, parallel, grouping
Power Consumption	≤0.3W
Power supply	9~60V DC
Specification	Size: 70mm×80mm×30mm; Metal; Weight 180g; Wall-mounted, rail-mounted installation
Working environment	Temp&humi: -10~+60°C, 5~95%RH

## APPLICATION



**APPLICATION**

Unattended computer room battery monitoring, unattended base station battery monitoring, solar photovoltaic power generation battery pack monitoring, forklift battery monitoring, etc.

## SELECTION TABLE

Model	AI	DI	DO	RS485	Temp&humi	Measure range
BMS100	2	×	×	1	×	12 channel 0-3V, 0-6V,0-15V
BMS110	2	2	1	1	1	5 channel 0-15V

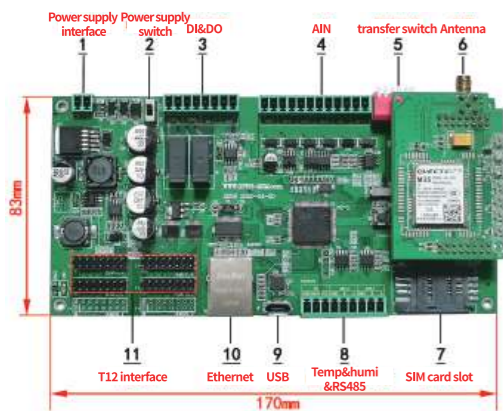
# 4G WIRELESS LED CONTROLLER

## Model: S258

The 4G remote data acquisition LED display control board S258 can be directly fixed in the LED display frame to achieve on-site data collection and control and display through the LED screen. At the same time, the 4G wireless network performs data exchange with remote servers and control centers to achieve remote monitoring and Mobile APP real-time viewing function. A five-in-one structural design that integrates data acquisition, control output, data processing, display processing, and communication processing. It is widely used in construction site environmental monitoring, outdoor environmental monitoring, public area noise environment monitoring and display, reservoir monitoring and display, forest Fire monitoring and display, traffic flow collection and road condition prompting, speed collection and warning prompt, road safety warning, factory production data collection and display, etc. need data collection, control output, LED display and other occasions.

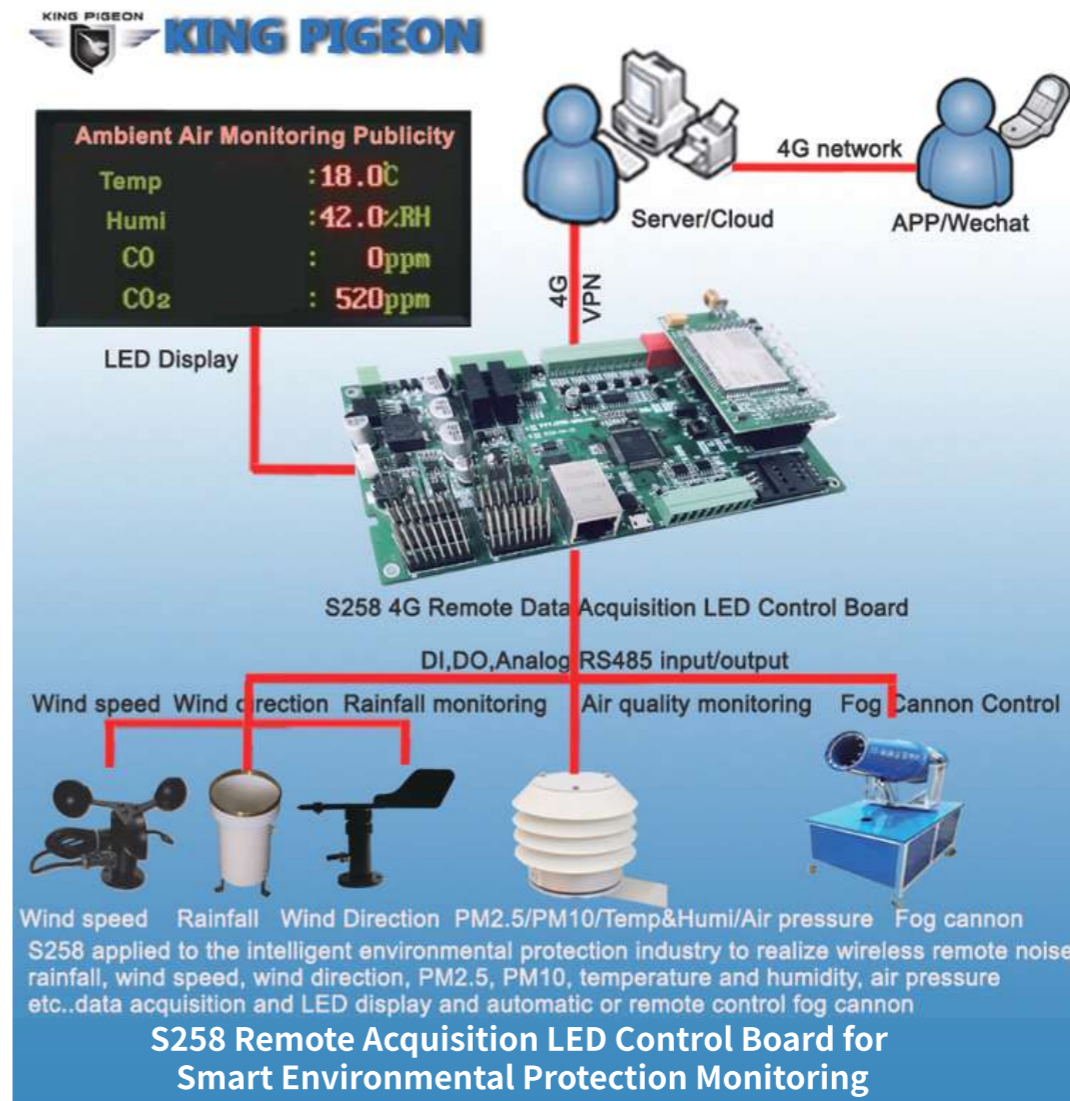
### MAIN FEATURES

- Support environment scene LED large screen display and cloud platform remote display;
- Support T12 standard LED display interface, the brightness of the LED light can be adjusted;
- Support custom display screen parameters , area scrolling (shift left, right) / fixed selection;
- Supports FLASH playback modes, suitable for occasions with frequent information updates;;
- Support anti-dismantling alarm, can link fog cannon machine;
- Supports up to 4 lines per screen, 32 characters (16 Chinese characters) per line, and can automatically turn pages to display up to 100 messages;;
- Support cloud platform history record preservation for half a year, support local history record 1000 preservation.



PARAMETER	DESCRIPTION
Communication	GSM,GPRS,3G,4G,Ethernet optional
Protocol	Modbus RTU over TCP,Modbus TCP,MQTT
Power Consumption	Normal:130mA@12V, Max:500mA@12V
RS485	2 RS485,supports Modbus RTU Master/Slave
DIN	2, dry contact and Wet contact (NPN)
DO	2, 5A@250VAC或5A@30VDC;
AIN	6 4~20mA/0~20mA/0~5V differential input
Temp%humi input	1 AM230x:Temp range -40°C~80°C, accuracy ±0.5°C, humi range 0~100%RH, accuracy ±3%RH
Power supply	9~36VDC
Battery	3.7V/900mA, support power failure alarm
Specification	170mm*83mm*33mm, 350g, PCBA
Working environment	Temp&humi:-45~85°C, 5~95%RH

## APPLICATION



APPLICATION

Site environment monitoring, factory environment monitoring, outdoor weather monitoring, and field warnings need to display and collect data scenarios.

## TEMP&HUMIDITY MONITORING ALARM

Model: S265

The 4G RTU remote temperature and humidity acquisition alarm controller S265 is the most cost-effective IoT temperature and humidity data monitoring RTU. Users do not need to visit the site in person, and can set the high limit alarm and low limit alarm thresholds of temperature and humidity. When the temperature or humidity reaches the set high and low alarm thresholds, it will immediately send sms, make calls, and GPRS, 3G, and 4G networks notify users and transmit data to the monitoring center, cloud platform, APP, and automatically perform actions to turn off or turn on the devices.



### MAIN FEATURES

- 8 temp&humi inputs, 2 digital output, can be set to automatic control or remote control via SMS, GPRS, 3G, 4G network;
- Up to 10 user's phone number to receive alarm and daily report SMS/-Call;
- Support alarm recording, interval recording, large memory can store up to 200,000 historical records;
- Support timer automatic reporting, timer restart, timer automatic turn on/off device;
- Supports external power failure alarm and recovery alarm;
- Supports real-time control via KingPigeon Cloud Platform Web, APP, WeChat.

PARAMETER	DESCRIPTION
Temp&humi input	AM230x:temp range-40°C~80°C, accuracy±0.5°C, humi range 0~100%RH, accuracy±3%RH
Temp input	DS18B20:range -55°C~125°C, accuracy ±0.5°C
DO	2, Rated output 7A/125VAC, 20A/14VDC
communication method	GSM,3G,4G
protocol	Modbus RTU,King Pigeon IOT
Capacity	Up to 200,000 historical records or alarm events
Battery	3.7V/900mA, supports power failure alarm
Power consumption	standby: 12V/16mA; max: 12V/150mA
Power supply	9~36VDC
Power output	2 channel 3.3VDC ouput, can supply power to external devices
Specification	Size: 70mm*88mm*30mm; Metal; Weight 320g; Wall-mounted, rail-mounted installation
Working environment	Temp&humi: -10~60°C, 5~95%RH

## APPLICATION



### APPLICATION

Classrooms, hospitals, food warehouses, office spaces, factories, libraries, laboratories, etc. need to monitor temperature and humidity scenarios

## SELECTION TABLE

Model	2G/3G/4G	Type	Range	Relay Outputs	Alarm numbers
S265	✓	8 AM230X temp&humi sensor	Temp range:-40°C~80°C, accuracy±0.5°C, humi range: 0~100%RH, accuracy±3%RH	2	10
S266	✓	8 DS18B20 temp sensor	Temp range:-55°C~125°C, accuracy±0.5°C	2	10

# 4G SMS ALARM CONTROLLER

Model: S150

The multi-function remote SMS alarm S150 is the most cost-effective remote SMS monitoring controller, which supports 8 digital input alarms, recovery status alarms and 2 relay outputs. Users can easily realize remote control (on and off) devices, query status, monitoring, and anti-theft protection through SMS or SMS APP software anytime and anywhere.



## MAIN FEATURES

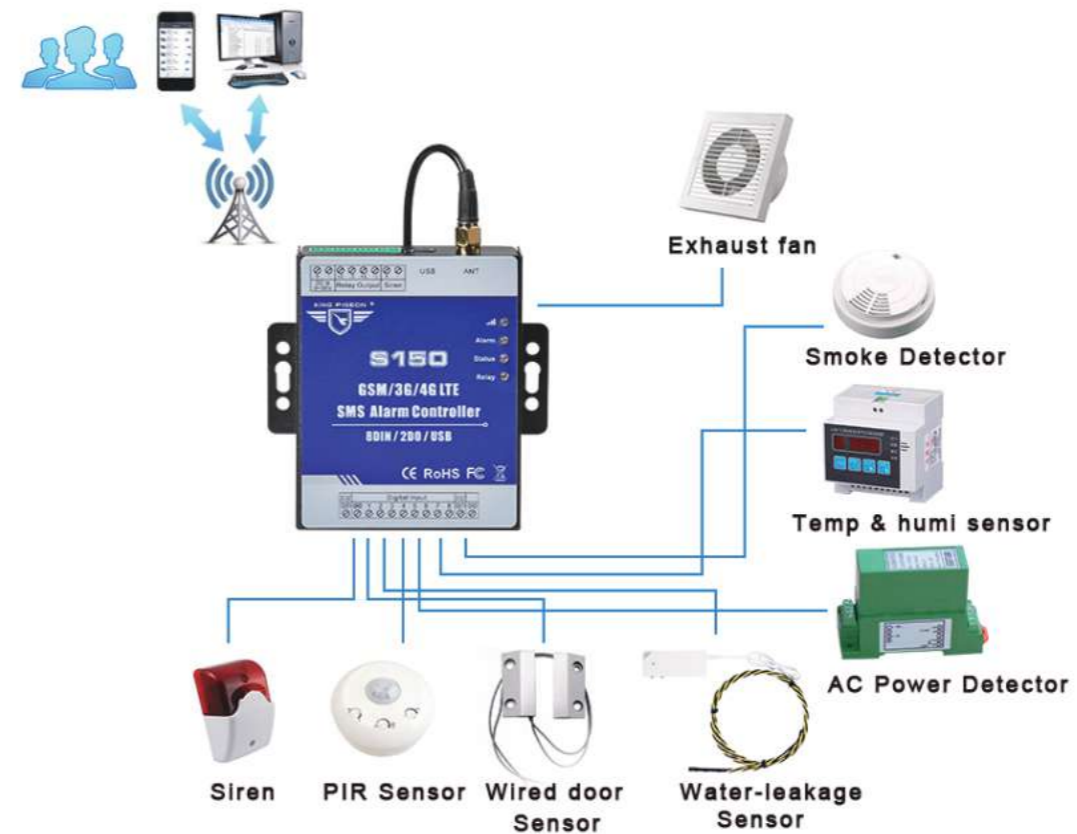
- 8 digital inputs, 1 alarm-link relay, 1 sms control relay output;
- SMS arm/disarm;
- Supports input status recovery, external power failure alert by SMS;
- Regular inspection, you can set the automatic reporting function for 0-240 hours, so as to avoid the failure of the alarm due to the insufficient balance of the device SIM card.

PARAMETER	DESCRIPTION
DIN	8, dry contact, NO/NC, end-of-line resistance
DO	2 relay output, Rated output 240VAC@3A, Relay 1 output; Alarm-Link Output Relay, Relay 2 output; Control by SMS Commands
Battery	3.7V/900mA, supports power failure alarm
Power consumption	Normal: 50mA@12V, max: 150mA@12V
Power supply	Wide range power supply 9~36VDC
Specification	Size: 70mm*88mm*30mm; Metal; Weight: 320g; Wall-mounted, rail-mounted installation
Working environment	Temp&humi: -45~85°C, 5~95%RH

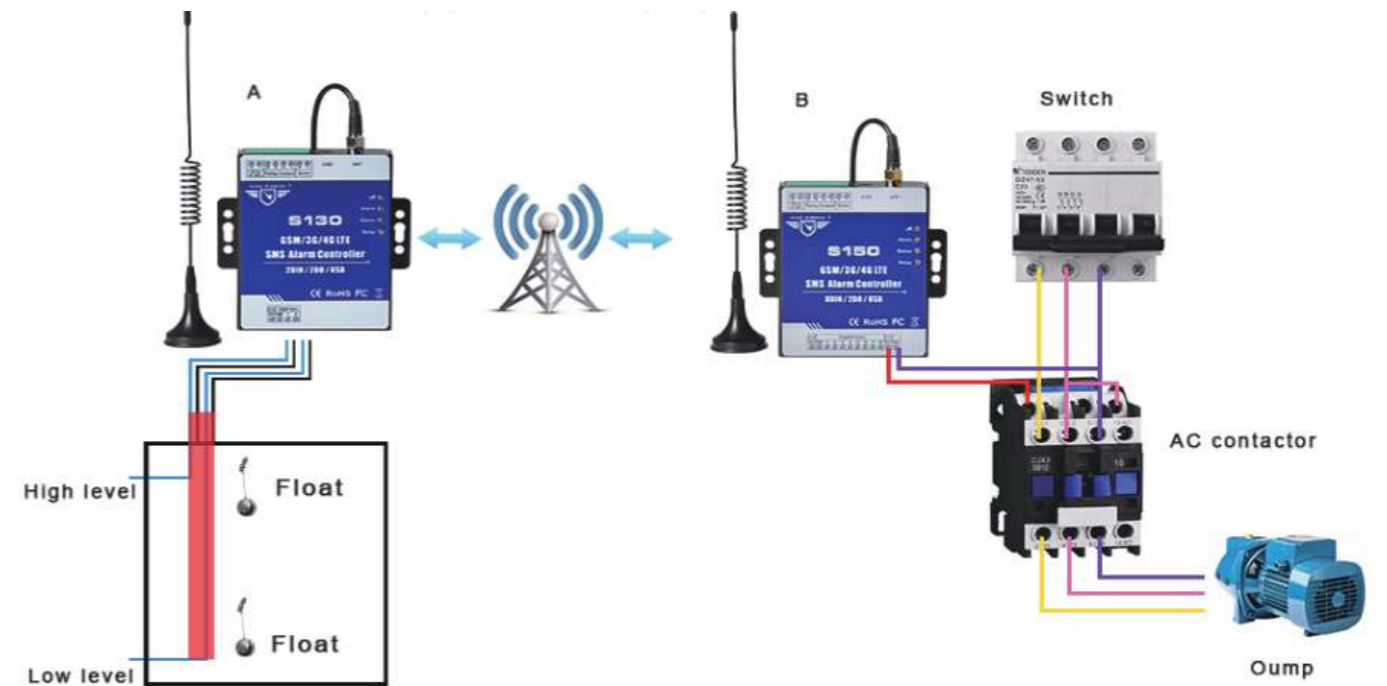
## SELECTION TABLE

Model	2G/3G/4G	DI	DO	SMS Alarm Numbers	Call Alarm Numbers
S130	✓	2	2	3	5
S150	✓	8	2	3	5

## APPLICATION



**APPLICATION**  
 Unattended computer rooms, field base stations, equipment security, anti-theft, drip irrigation technology, temperature monitoring alarm, water level alarm control, etc.



# 4G REMOTE RELAY SWITCH

Model: RTU5022

The 4G wireless remote relay controller RTU5022 is the most cost-effective remote SMS controller. It provides 8 relay outputs to control the switch or start and stop of the equipment. It is widely used in industrial sites, agriculture, water pumps, computer rooms, etc.

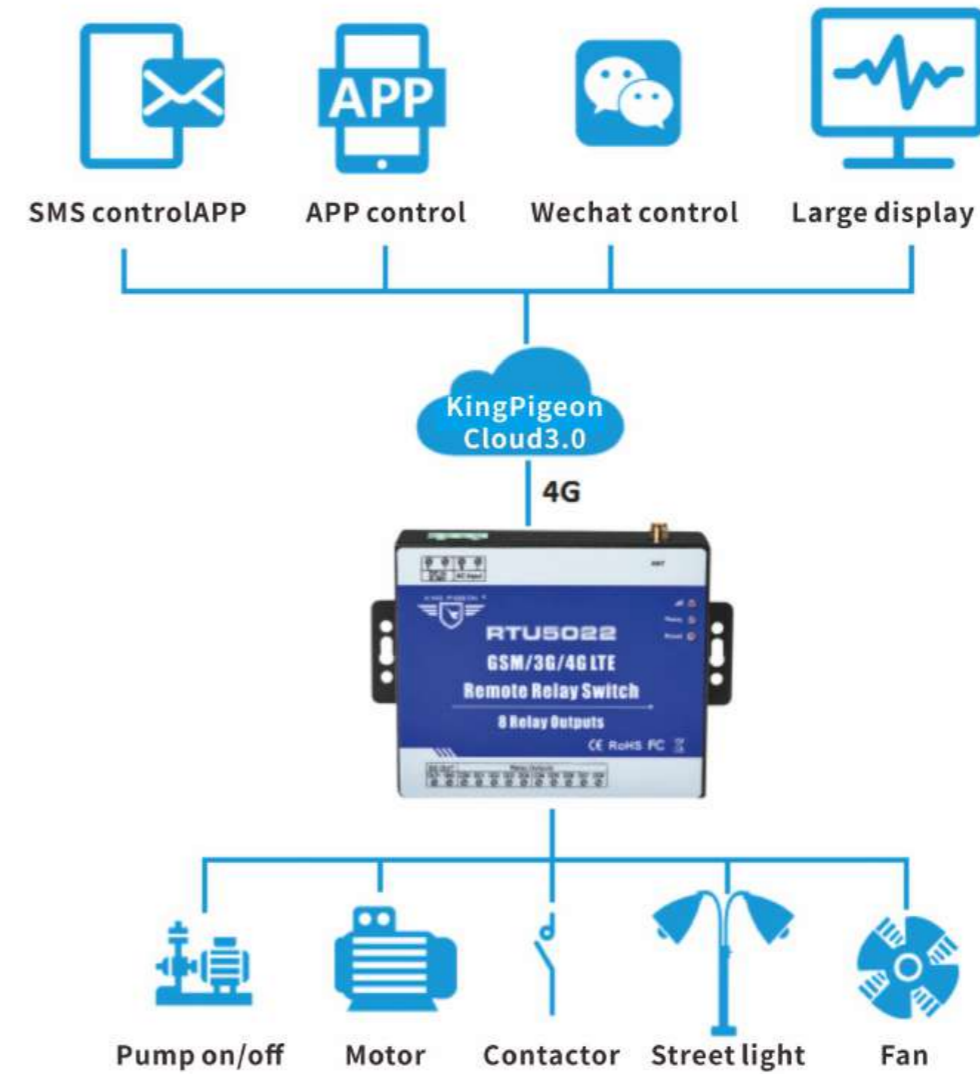


## MAIN FEATURES

- 8 relay outputs, Rated 7A/125VAC, 20A/14VDC, Support timer auto-automatic open and close or remote control via SMS;
- Support simultaneous control one or more relay outputs;
- Support NO,NC output and pulse output;
- Support timer report, timer restart, timer automatic turn on/off device;
- 10 user numbers to receive daily reports and data communication failure message;
- Support state memory function, when the external power is restored, the relay maintains the state before the power failure;
- Supports KingPigeon IoT Cloud Platform Web, APP, WeChat real-time control

PARAMETER	DESCRIPTION
DO	8 relay output, rated 7A/125VAC, 20A/14VDC
SMS function	SMS configuration, timer automatic report, timer restart, timer automatic trun on/off, SMS control device function
Protocol	Modbus RTU,King Pigeon IOT
Setting	SMS or SMS APP remote set parameters , easy to operate
Battery	3.7V/900mA
Power consumption	Standby: 12V/20mA; max (8 relays are closed at the same time) : 12V/400mA
Power supply	Wide range power supply 9~36VDC
Specification	Size: 105mm*88mm*30mm; Metal; Weight: 320g; Wall-mounted, rail-mounted installation
Working environment	Temp: -10°C~60°C, Relative humidity 95% (condensation free)

## APPLICATION



**APPLICATION**  
 Remote and automatic control of agricultural production equipment; remote and automatic control of intelligent aquaculture equipment; remote and automatic control of water pumps and gates; remote and automatic control of industrial computer rooms, transformer cabinets and other equipment

## SELECTION TABLE

Model	2G/3G/4G	DO	SMS APP
RTU5020	✓	2	✓
RTU5022	✓	8	✓

# GSM 3G 4G GATE OPENER

Model: RTU5024

The GSM 3G 4G Gate Opener RTU5024 is an powerful wireless Relay, it is a very simple device which can be used for authorized door access, controlling gates, switching of remote equipment, car parking systems.

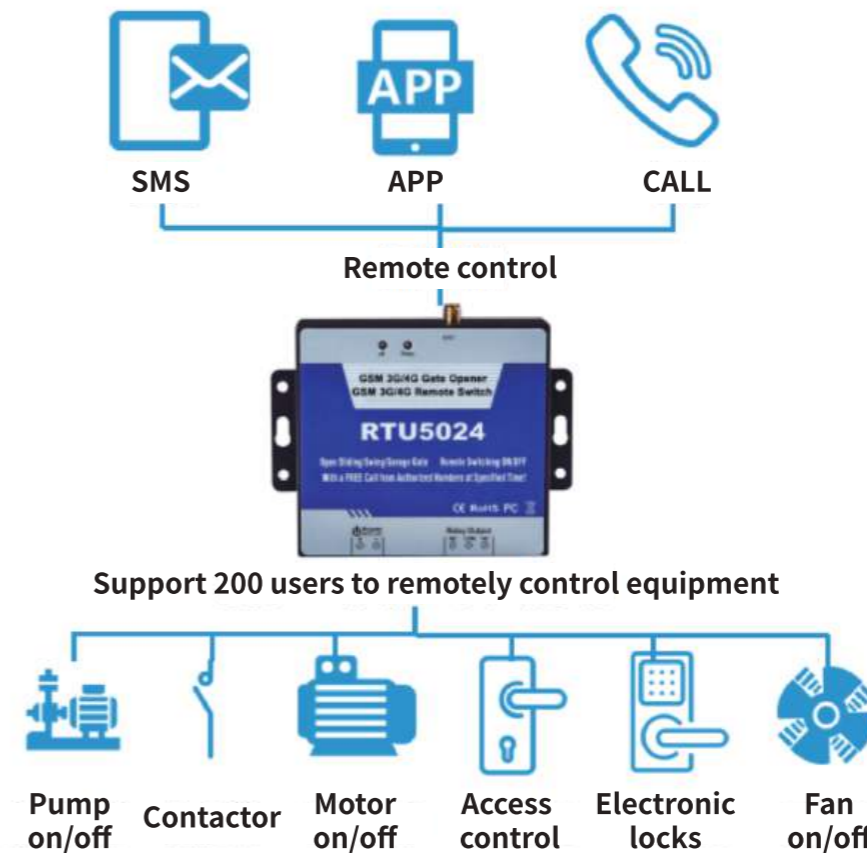
## MAIN FEATURES



- Up to 200 authorized phone numbers can be configured at the specified time;
- One output with relay rating 3A/240VAC for connecting the switch of the door or machines;
- The relay action will return a SMS confirmation to the owner or authorized call in number;
- 0~999s times for relay keep close(ON) after phone call in;
- SMS commands inquiry device current status(relay status and GSM signal value);
- No need to provide a remote control or keys for different users;
- No call charges. the GSM GPRS Relay Switch rejects the call from authorized number then carries out the turn ON/OFF action on the first 'ring';

PARAMETER	DESCRIPTION
DO	1 relay output, Rated 3A/220VAC
Phone numbers	200
Power consumption	12V input Max. 50mA
Power supply	Wide range power supply 9~36VDC
Specification	Size:130mm*74mm*27mm; Metal; Weight:220g; Wall-mounted, rail-mounted installation
Working environment	Temp&humi:-20~60°C, 10~90%RH

## APPLICATION



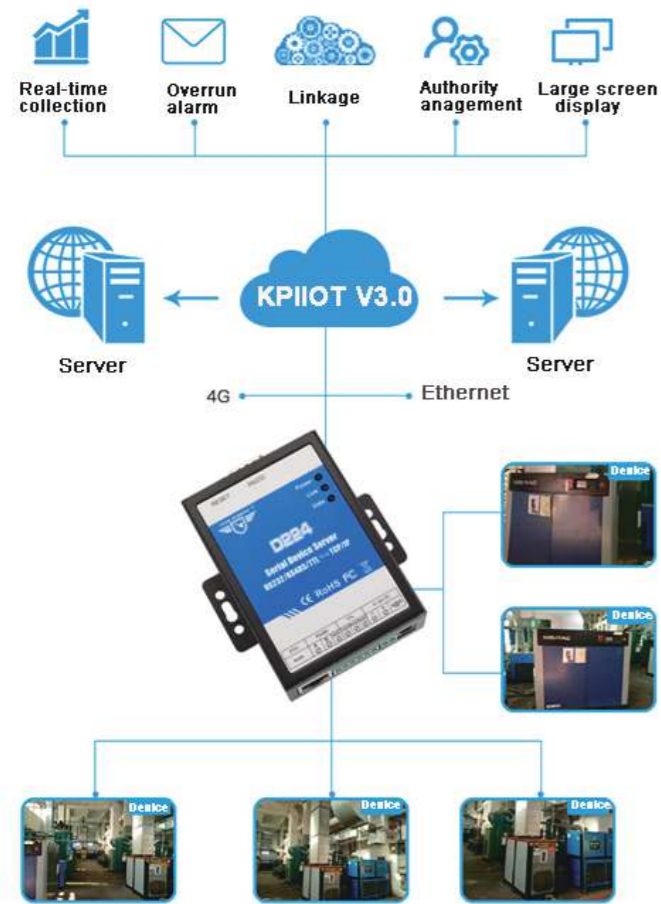
APPLICATION  
Control water pumps, street lights, motors, motors, electronic locks, access control machines, etc.

## SELECTION TABLE

Model	DI	DO	Phone number	historical data	Specified time access	USB	GPRS	2G/3G/4G
RTU5024	×	1	200	×	√	×	×	√
RTU5034	×	1	200	×	√	×	×	√
RTU5025	2	1	3000	1000	√	√	√	√

## AIR COMPRESSOR SOLUTION

SYSTEM TOPOLOGY DIAGRAM

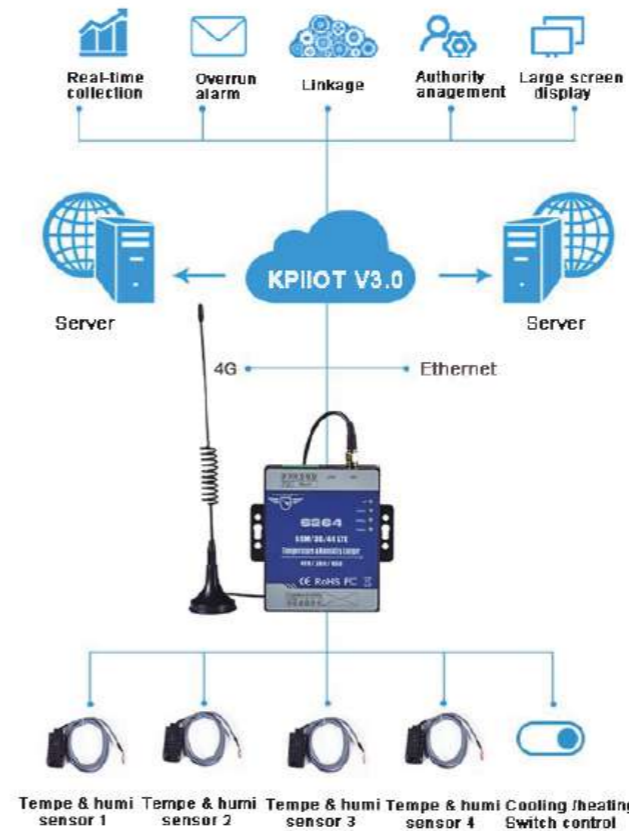


Air compressor is a kind of gas compression and conveying equipment, which is widely used in mining, machinery, electronics and other industries. In the long-term operation of the air compressor, various failures cannot be avoided. The gateway is connected to the communication interface (RS485/RS232) of the air compressor, and the data is uploaded to the cloud platform through 4G and Ethernet. The user can use the PC, APP, WeChat and other methods remotely view the operation and fault status of air compressor equipment in real time, trun on/off each equipment, and collect air compressor data such as exhaust temperature, exhaust pressure, operating time, etc.! Keep abreast of the air compressor status at any time to avoid downtime due to malfunctions

## SELECTION TABLE

Model	Parameter	Communication	Features
IOT100	Single 485 serial port used to collect air compressor data	2G/3G/4G	Small size and low cost
D223	Single 485/232/TTL used to collect air compressor data	2G/3G/4G	Multiple serial port type
S175	Dual 485 serial port used to collect air compressor data	2G/3G/4G	Dual-SIM card,Dual-RS485
D224	Single 485/232/TTL used to collect air compressor data	RJ45	High-speed and reliable network cable transmission, RS485, RS232, TTL can be used at the same time, support 5 Socket links

## TEMPERATURE AND HUMIDITY MONITORING SOLUTION



In order to maintain the good quality of the goods in the warehouse and create an environment suitable for the storage of goods, when the temperature and humidity in the warehouse are suitable for the storage of goods, we must try to prevent the adverse effects of the climate outside the warehouse on the warehouse; when the temperature and humidity in the warehouse are not suitable for the goods. When storing, take effective measures to adjust the temperature and humidity in the warehouse in time. Therefore, the establishment of a real-time temperature and humidity monitoring system and the preservation of complete historical temperature data have entered the industry standard.

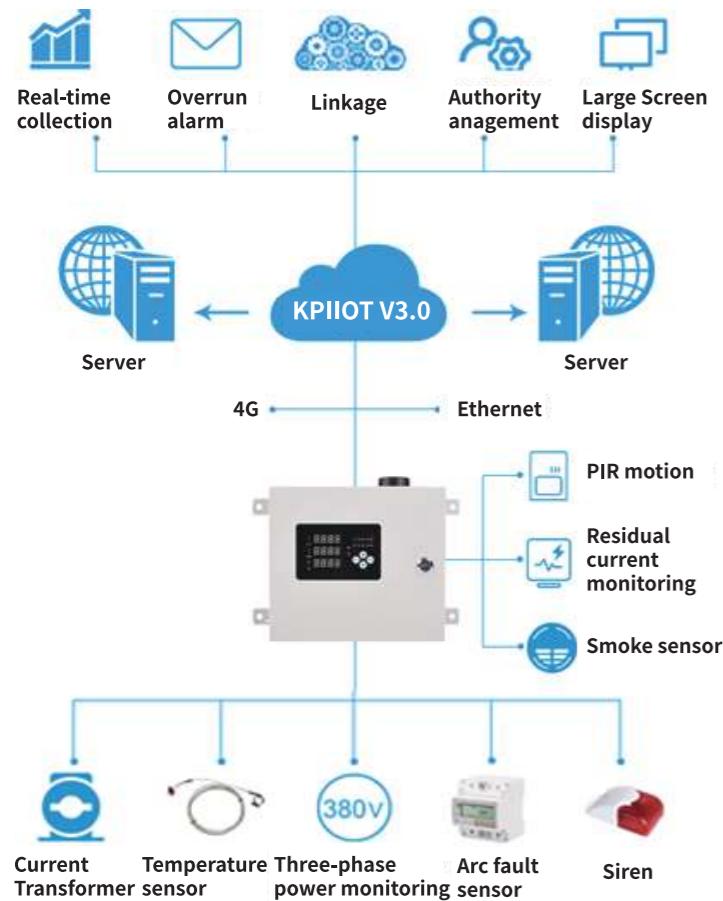
King Pigeon temperature & humidity monitoring solution, the gateway uploads the data collected by the temperature and humidity probe to the cloud server via 4G or Ethernet, and the user can view the temperature and humidity of the monitoring point in real time through APP and PC. When an abnormal alarm occurs, the cloud platform will notify the user to deal with it in real-time by SMS, phone, WeChat, etc. The gateway's own relay output can also control the cooling/heating equipment to restore the temperature and humidity to normal, it is especially suitable for factories, warehouses, computer rooms,

## SELECTION TABLE

Model	Parameter	Communication	Features
S272	8 digital input,6 analog input (4-20mA/0-20mA/0-5V), 4 relay output, 1 temp&humi,1 RS485.	2G/3G/4G	Can measure temperature, humidity, pressure and other digital, analog sensor, and remote control switch
RTU5023	1 temp&humi, power failuer monitoring	2G/3G/4G	1 temp&humi, power failuer monitoring
S264	4 temp&humi, 2 relay output	2G/3G/4G	4 temp&humi
S281+WT104	LoRa gateway, can collect the temperature and humidity of 100 points within 2KM, and the node is battery-powered without wiring	2G/3G/4G,RJ45	Supports 100 temperature and humidity nodes, suitable for many distribution points and scattered scenes

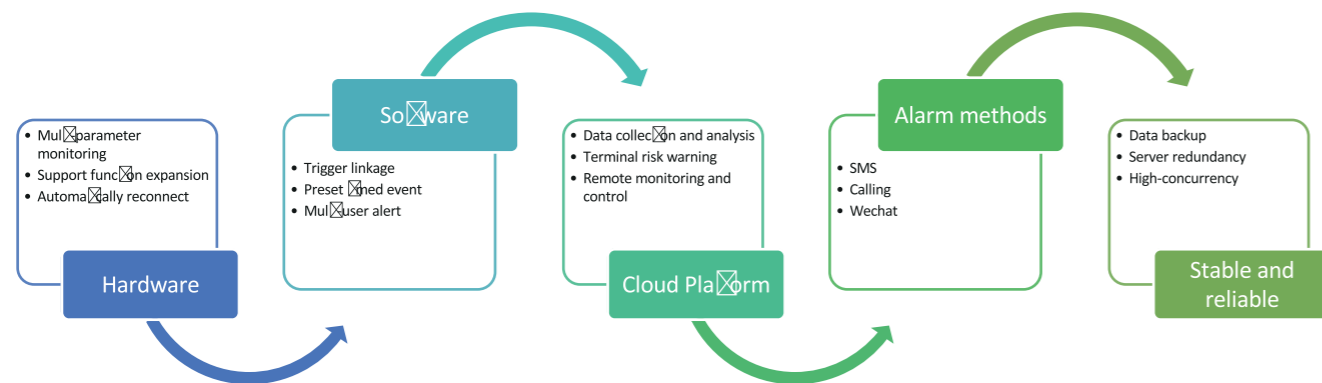


# ELECTRICAL FIRE MONITORING SOLUTION



Industrialization makes life rich and convenient, and it also brings disasters and accidents of all sizes. This solution introduces an electrical fire monitoring system and IoT monitoring device to realize remote centralized monitoring and transparent management of electrical fires. Using IoT technology to realize remote monitoring of electrical fires, strengthening electrical fire prevention and control management and daily inspections are important methods to prevent and reduce electrical fires.

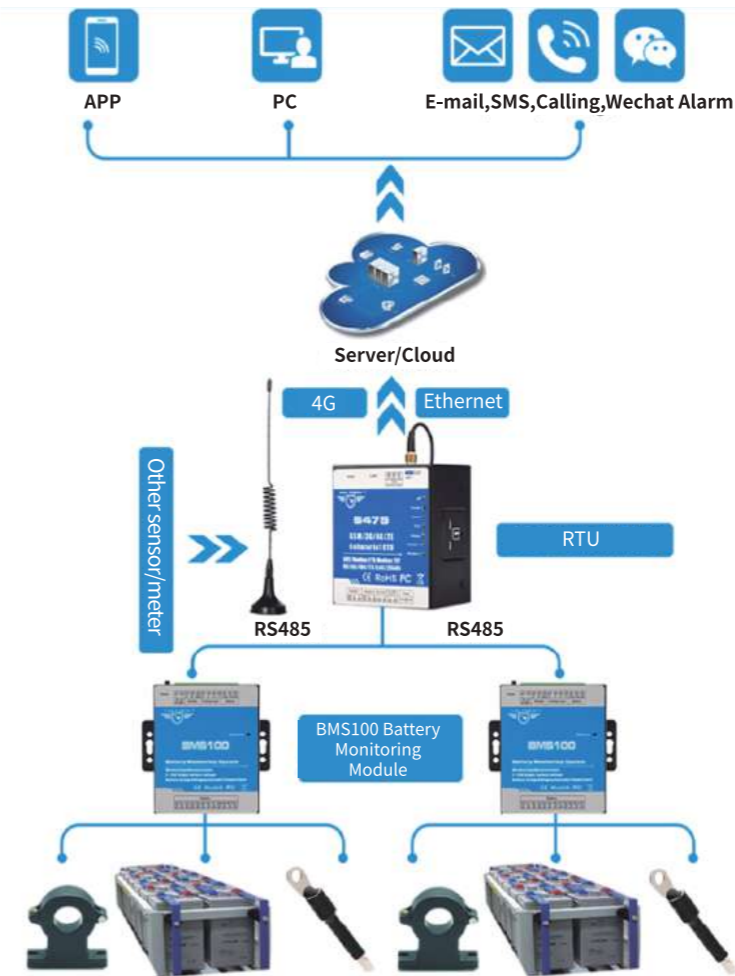
KingPigeon electrical fire monitoring system has functions such as current over-limit monitoring, voltage abnormality monitoring, over-temperature monitoring, fault arc monitoring, residual leakage current monitoring, smoke detection monitoring and other functions. Users can check on-site conditions in real time through mobile phones and computers. The equipment has its own control and alarm functions. When an abnormal situation occurs, the system can automatically or manually shut down the running power equipment according to the situation, and notify the administrator of the alarm information through SMS, phone, WeChat, email, APP, etc.



## SELECTION TABLE

Model	Parameter	Communication	Features
S257	Supports 32 main power parameters collection, 2 digital input, 2 relay output 1 temperature and humidity, 1 RS485, 1 RJ45	2G/3G/4G,RS485	Current over-limit, voltage abnormal, over-temperature, fault arc, residual leakage current, smoke detection monitoring

# BATTERY REAL-TIME MONITORING SOLUTION



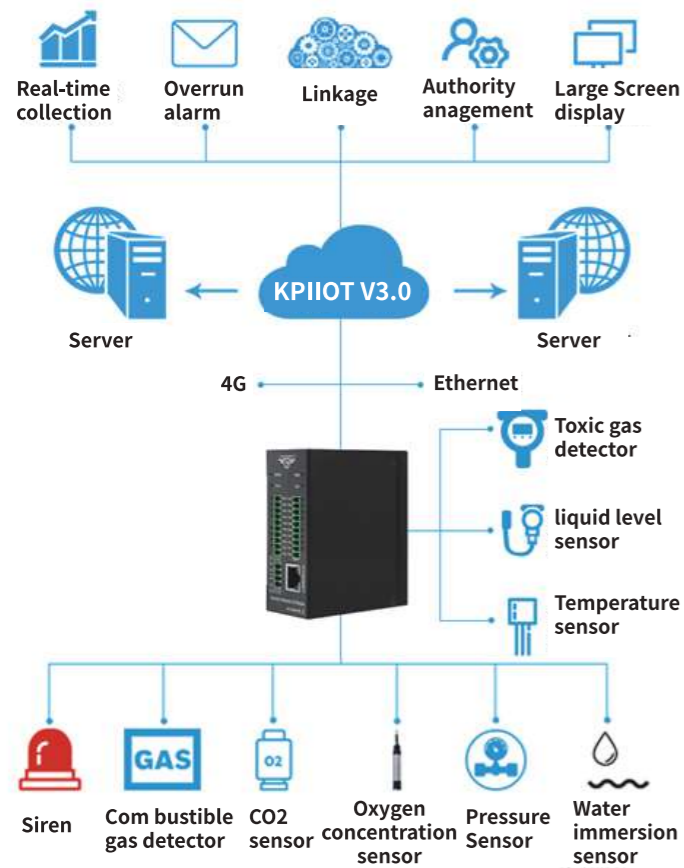
At present, battery explosion and fire accidents occur frequently in the data room because the batteries are connected in series or cascade. Generally, one of the batteries fails and is not found in time, which will affect other batteries and cause the entire battery pack to be scrapped and caught on fire. The battery is the backbone of a UPS system. Without a battery, UPS is equal to an ordinary mains power supply. However, the current UPS system can only monitor the status of the battery bus, and cannot monitor the status of a single battery. When the battery fails, it will lose its significance.

BMS100 can measure the voltage of 12 single cells, the voltage of 6 battery packs, and the total voltage  $\leq 300VDC$ . BMS100 has 2 analog input support 4-20mA/0-5V, which can be used to monitor battery temperature, current and other elements.

## SELECTION TABLE

Model	Parameter	Communication	Features
BMS100	12 signal battery voltage monitoring; 6 battery pack voltage monitoring; 1 channel 300VDC total voltage monitoring; 2 analog acquisition (4-20mA, 0-5V)	RS485	RS485 to HMI, SCADA
BMS100+S475	S475 multiple IO interface 8 digital input, 6 analog input, 4 relay output, 1 temperature and humidity, 2 RS485, 1 RJ45 Ethernet	2G/3G/4G,RS485,RJ45	S475 can upload multiple BMS100 data to the platform, while providing a rich IO interface, which can be used to collect other required parameters and upload to the cloud platform

# CHEMICAL PLANTS SAFETY REMOTE MONITORING SOLUTION



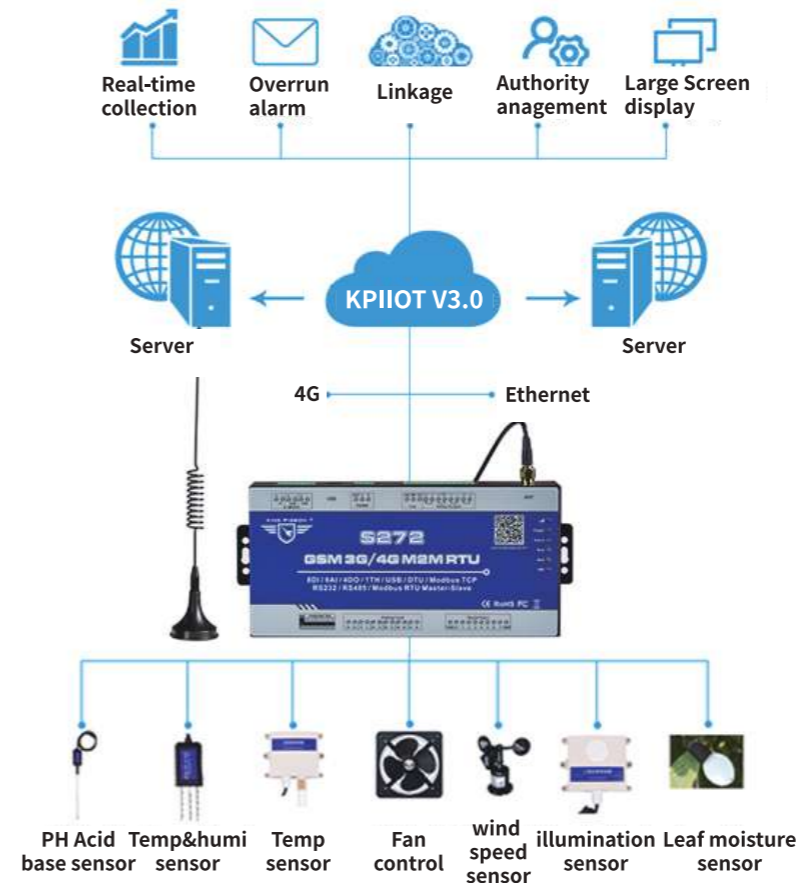
Most chemical products are toxic and flammable or corrosive properties, production, storage, transportation and use of the process, a security incident of fire and explosion, poisoning, suffocation, burnings and other corrosion of a business is a heavy blow, is an irreparable disaster for a family.

King Pigeon chemical plant safety monitoring solution, comprehensive monitoring of chemical plant pressure, temperature, liquid level, flow, power, frequency, various combustible gases, toxic and harmful gases, oxygen concentration and other parameters, upload the parameters through gateway to the cloud platform, users can view relevant data in real time through APP, PC, WeChat, and the current value can be displayed on the LED display on site. When an abnormal situation occurs, the on-site siren alarm, and alarm via SMS, WeChat, phone, email. also can manual or automatic turn off the equipment.

## SELECTION TABLE

Model	Parameter	Communication	Features
MXXXT	MXXXT series Ethernet IO module provides a variety of IO interface analog input, analog output, digital input, digital output, PT100 thermal resistance acquisition, 1 RS485	RS485, RJ45	Ethernet transmission, also can add 4G module to convert to 4G transmission
S475	S475 multiple IO interface 8 digital input, 6 analog input, 4 relay output, 1 temperature and humidity, 2 RS485, 1 RJ45 Ethernet	2G/3G/4G, RS485, RJ45	S475 can upload multiple serial device data to the platform, while providing a rich IO interface, which can be used to collect other required parameters and upload to the cloud platform

# SMART AGRICULTURE SOLUTION

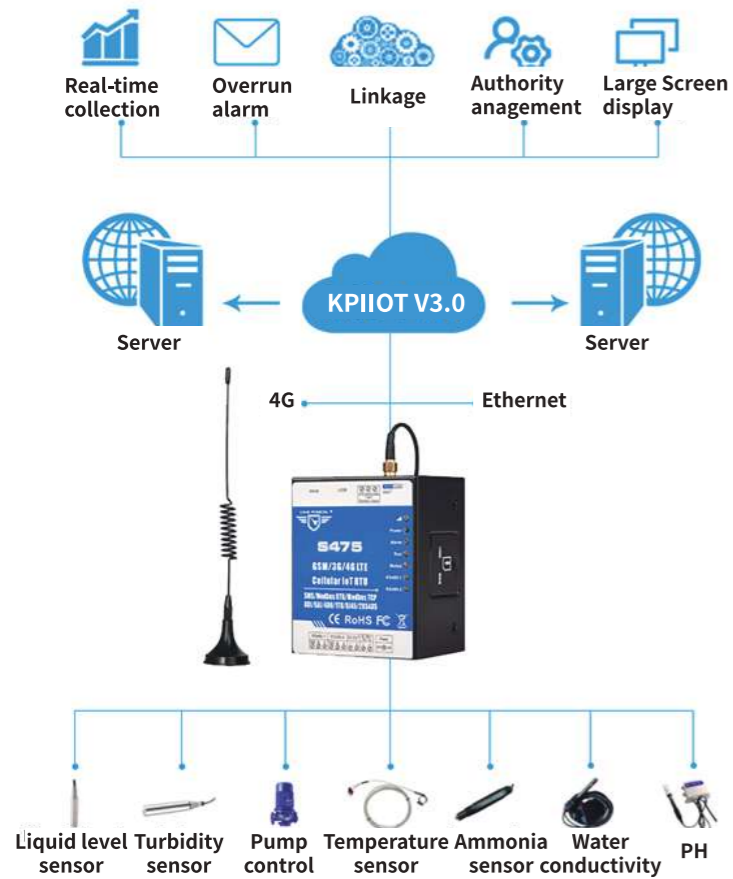


Various types of sensors can collect soil moisture, soil temperature, air temperature, air humidity, light intensity, plant nutrient content, PH, electrical conductivity and other parameters. Through S272 information collection, receive data from wireless sensor convergence nodes, and store, Display and data management, upload to the cloud platform to realize the acquisition, management, dynamic display, analysis and processing of all base test point information. It is displayed to users in the form of intuitive graphs and curves, and the agricultural park is carried out based on the feedback of the above various types of information. Automatic irrigation, automatic cooling, automatic mold rolling, automatic liquid fertilizer fertilization, automatic spraying and other automatic control.

## SELECTION TABLE

Model	Parameter	Communication	Features
S272	8 digital input, 6 analog input, 4 relay output; 1 temperature and humidity, 1 RS485	2G/3G/4G, RS485	Analog collects temperature, humidity, conductivity, etc., DO performs a remote control, DI feedback signal
S281+slave+IO module	LoRa self-organizing network gateway, can collect 200 nodes within 2KM without wiring	2G/3G/4G, RJ45	No wiring, convenient for transmission, and can be flexibly matched with the slave, any sensor can be connected within 2 kilometers
S475	S475 multiple IO interface 8 digital input, 6 analog input, 4 relay output, 1 temperature and humidity, 2 RS485, 1 RJ45 Ethernet	2G/3G/4G, RS485, RJ45	2 RS485 is convenient to collect data, DI/DO can be used for control, IO port can be expanded
MxxxT	MXXXT series Ethernet IO module provides a variety of IO interface analog input, analog output, digital input, digital output, PT100 thermal resistance acquisition, 1 RS485	RS485, RJ45	Ethernet transmission, also can add 4G module to convert to 4G transmission

## WATER QUALITY MONITORING SOLUTION



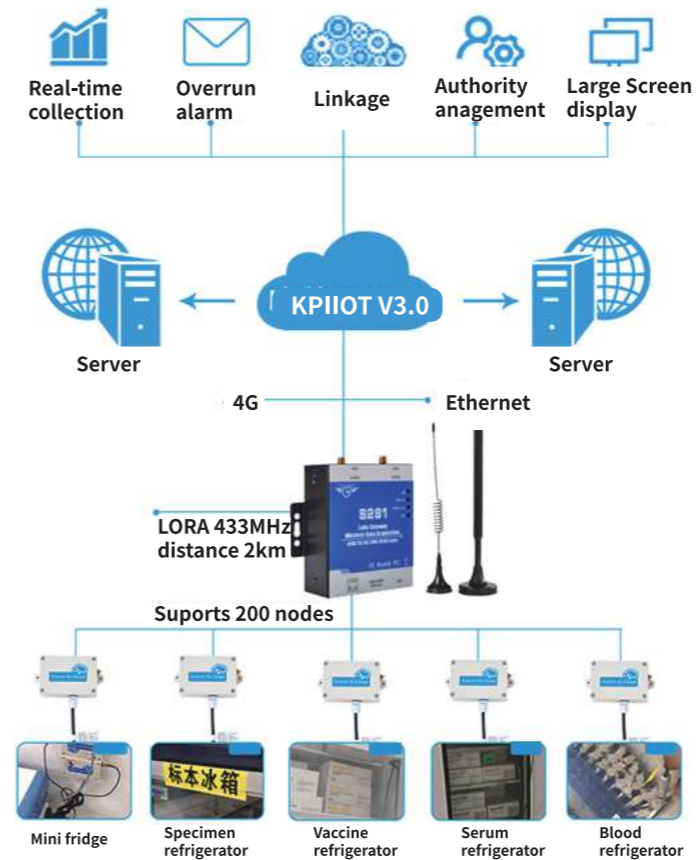
At present, water resources are in short supply and water pollution is serious. Water quality monitoring is an important foundation for water resources management and protection. Water quality monitoring can help solve existing or potential water environmental problems, and play a pivotal role in improving the living environment and ecological environment, and ultimately realizing the sustainable development of mankind.

This solution can monitor the turbidity, PH, temperature, ORP, conductivity and other parameters of the sewage outlet or sewage treatment plant in real time, as well as the measurement of various other water quality parameters. It can meet the requirements of different customers for water quality monitoring.

### SELECTION TABLE

Model	Parameter	Communication	Features
S272	8 digital input, 6 analog input, 4 relay output; 1 temperature and humidity, 1 RS485	2G/3G/4G, RS485	Collect temperature and humidity, sewage turbidity, PH, temperature, ORP, conductivity and other parameters, remotely control the pump
S475	S475 multiple IO interface 8 digital input, 6 analog input, 4 relay output, 1 temperature and humidity, 2 RS485, 1 RJ45 Ethernet	2G/3G/4G, RS485, RJ45	2485 is convenient to collect data, DI/DO can be used for control, IO port can be expanded
MxxxT	MXXXT series Ethernet IO module provides a variety of IO interface analog input, analog output, digital input, digital output, PT100 thermal resistance acquisition, 1 RS485	RS485, RJ45	Ethernet transmission, also can add 4G module to convert to 4G transmission

## HOSPITAL BLOOD BANK TEMPERATURE MONITORING SOLUTION



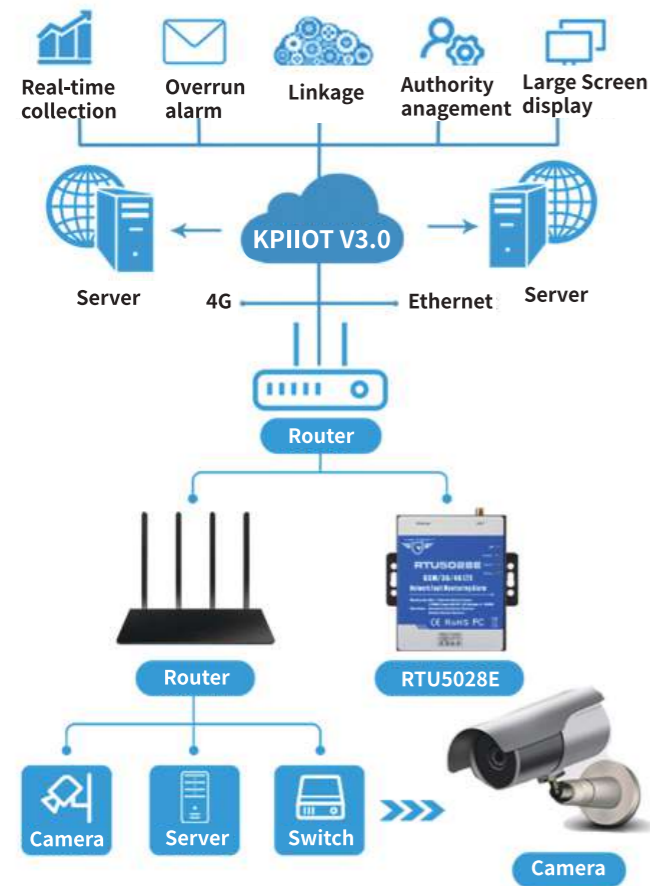
The storage conditions of the drug label are required to be stored in a cold storage (2-10°C), a cool warehouse (below 20°C) or a room temperature warehouse (0-30°C). The relative humidity of each warehouse should be maintained at 45%-75% between. The storage temperature of the vaccine needs to be between 2-8 degrees Celsius, protected from light. After leaving the refrigeration at the current room temperature, the vaccine will expire within half an hour. The main component of blood is protein, which is degenerated and necrotic at room temperature, especially the various cells in the blood are active.

The hospital blood bank temperature monitoring solution uses automatic temperature measurement and control technology and data communication technology to realize 24-hour uninterrupted detection, alarm, recording, data storage and query of the temperature of the refrigerator; on-site alarm and remote alarm according to the set temperature parameters, Directional alarms, etc.; management personnel of CDCs at all levels can query the historical and real temperature conditions of the areas they are responsible for; finally achieve centralized control of refrigerators and realize real-time online monitoring of refrigerator temperature

### SELECTION TABLE

Model	Parameter	Communication	Features
S266	8 temperature acquisition (-55-125°C), 2 relay output control	2G/3G/4G	Collect relatively concentrated refrigerator temperature, max distance < 30m
S281	LoRa self-organizing network gateway, can collect 200 nodes within 2KM without wiring	2G/3G/4G, RJ45	Collect temperature and humidity, suitable for medium and long distances, refrigerators are scattered, wireless transmission, no wiring, convenient and easy to use

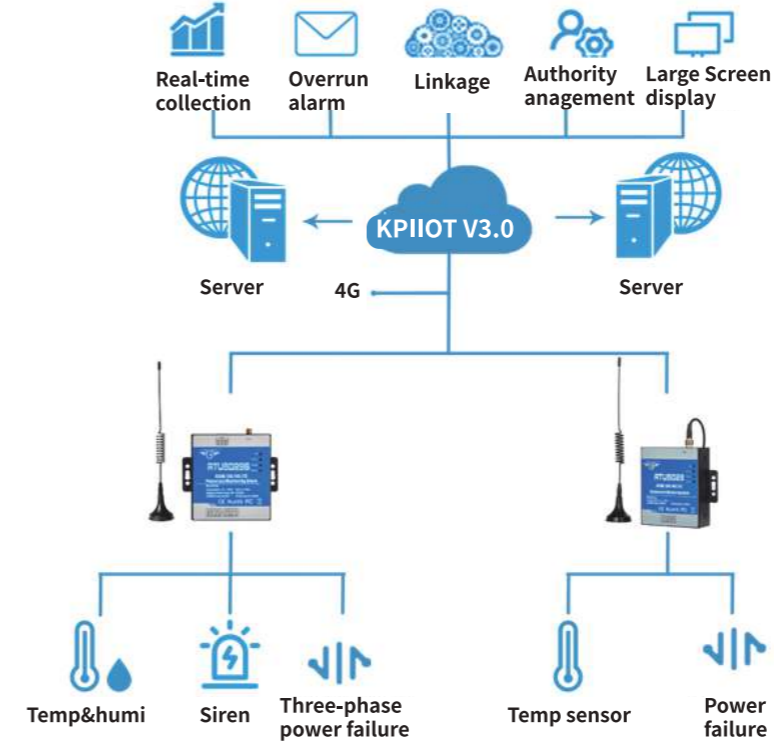
## NETWORK FAULT MONITORING SOLUTION



The network fault monitoring solution mainly monitors the equipment in the local area network, whether the router is disconnected or not, and real-time monitoring of local equipment. RTU5028E can realize 24-hour unattended monitoring. The disconnection information can be uploaded to the cloud platform through mobile networks such as 2G/4G, and multiple terminals such as APP, phone, SMS can be alarmed at the same time; RTU5028E can hard restart after power failure and remotely restart network equipment, Solve the malfunction caused by equipment crash! Significantly reduce labor costs and operating costs.

Mainly used in smart transportation, unattended computer rooms, ATM machines, communication base stations, dedicated network lines, gas stations, etc.

## POWER FAILURE ALARM SOLUTION



The power failure monitoring solution is mainly used for real-time monitoring of local equipment, electrical boxes, and voltage to achieve 24-hour unattended monitoring. The power failure situation is uploaded to the cloud platform through the 2G/4G network, and APP, phone, SMS, etc. Multi-terminal alarms reduce labor costs and operating costs. In addition to timely knowing the equipment voltage and lack of phase in the monitoring area, it is convenient for operation and maintenance personnel to remotely judge on-site problems.

Mainly used in user-side small computer rooms, smart transportation, unattended computer rooms, ATM machines, communication base stations, dedicated network lines, gas stations, etc.

## SELECTION TABLE

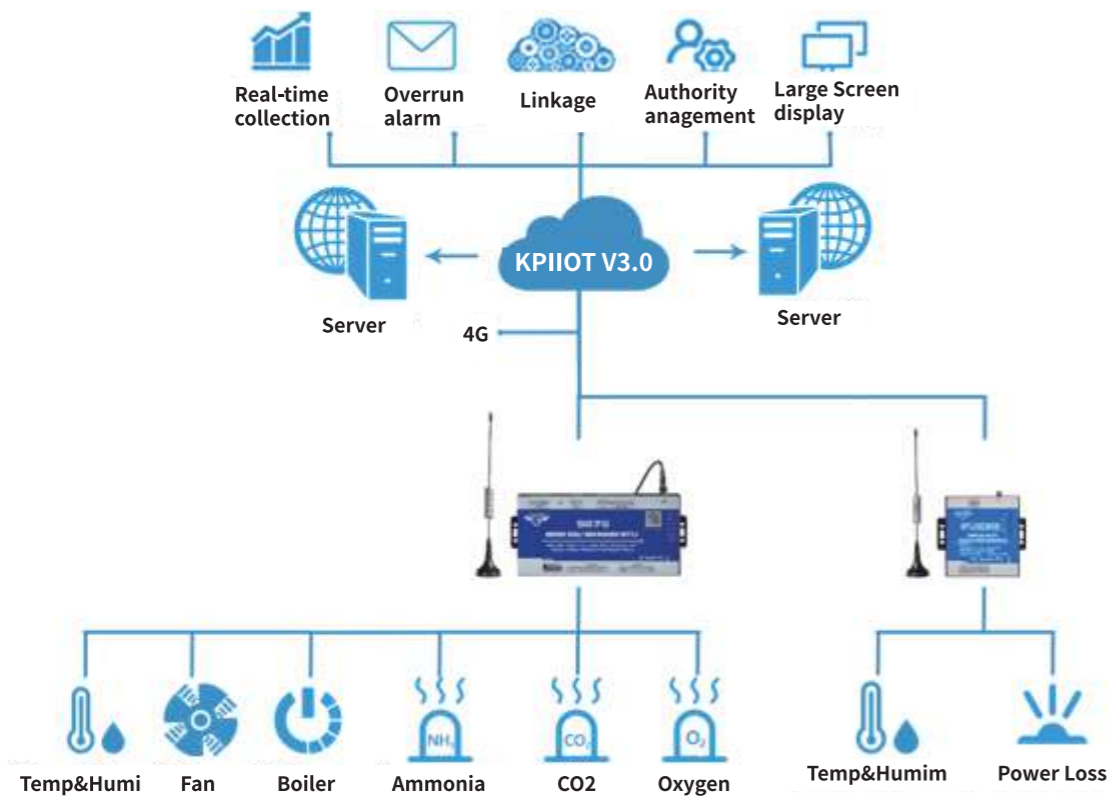
Model	Parameter	Communication	Features
RTU5028E	Monitor 7 LAN IP, 2 Public IP, 1 power status	2G/3G/4G,RJ45	Network fault monitoring, can remotely control and restart the router;Accurately distinguish whether equipment failure is due to power failure or network failure

## SELECTION TABLE

Model	Parameter	Communication	Features
RTU5029S	1 temp&humi,1Three-phase power loss,1 power supply failure, 1 siren alarm	2G/3G/4G	3 phase loss and power failure alarm
RTU5023	1 temp&humi , 1 power supply failure alarm	2G/3G/4G	Temp&humi range:-40°C~80°C, 0-99RH%
RTU5026	1 temp , 1 power supply failure alarm	2G/3G/4G	Temp range:-55°C~125°C
RTU5028	1 power supply failure, 1 siren alarm	2G/3G/4G	Power failure alarm, Can power supply for other device

## FARM REMOTE MONITORING SOLUTION

King Pigeon Smart Farm Environment Monitoring System is based on King Pigeon Cloud platform to realize global monitoring without distance limitation. The system includes temperature, humidity, ammonia, carbon dioxide concentration, light intensity, oxygen concentration monitoring and power failure alarm. To know the environment of animal growth and development. In emergencies, farmers can be notified via APP, WeChat, web page, SMS, and calling in time. The trigger function can linkage control the equipment, such as turning on the fan to cool down when the temperature in the shed is too high, or turning on the heating equipment when the temperature in the shed is too low. Realize remote control for animal husbandry enterprises and upgrade of breeding data.



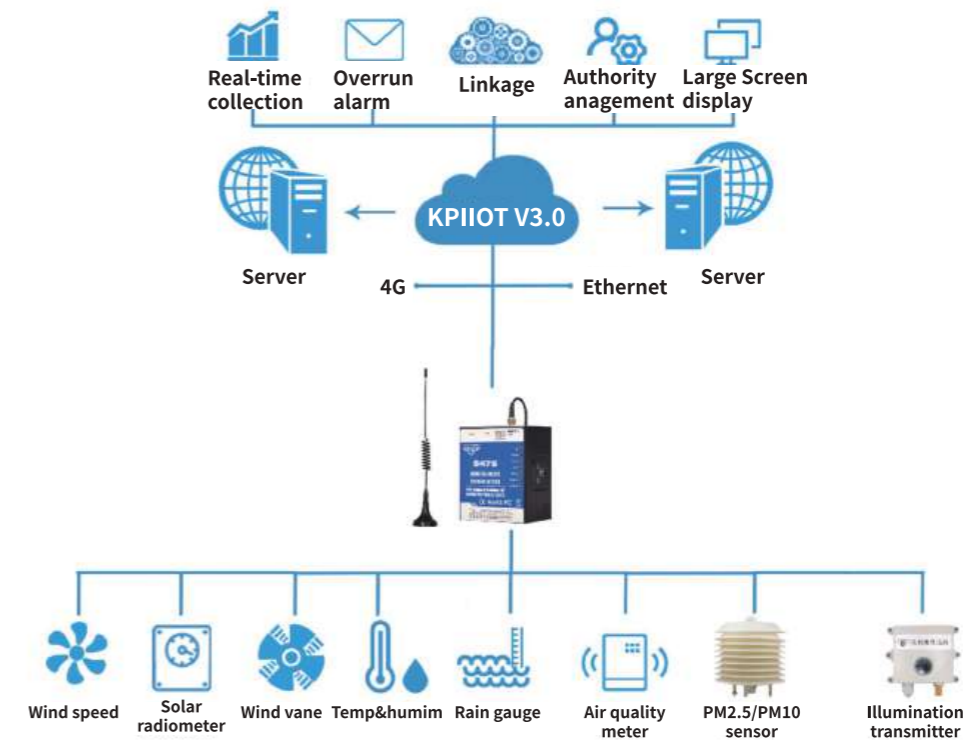
## SELECTION TABLE

Model	Parameter	Communication	Features
S275	8 digital input, 6 analog input, 4 relay output, 1 Temp&humi, 1 RS485	2G/3G/4G, RS485	Supports 320 mapping registers, 8G storage capacity
S266	8 Temperature, 2 relay output	2G/3G/4G	8 Temperature input
RTU5029S	1 temp&humi, 1 three-phase power loss monitoring, 1 power failure, 1 siren	2G/3G/4G	3 phase loss and power failure alarm

## ENVIRONMENTAL WEATHER MONITORING SOLUTION

Ambient air monitoring system can be used for: airport, campus air, urban environment online monitoring; construction site dust and noise, office buildings, fitness sports venues, garbage disposal stations, underground garages, tunnel traffic environment monitoring, etc.

This solution can realize multi-monitoring items and high-precision ambient air quality monitoring. Support the measurement of various indicators of the atmospheric environment, such as particulate matter (PM2.5/PM10/TSP), temperature and humidity, formaldehyde, volatile organic compounds (VOC), CO2, NO2, CO, SO2, ozone, hydrogen sulfide, etc. At the same time, it is connected with the LED screen to remotely set the content of the LED screen.



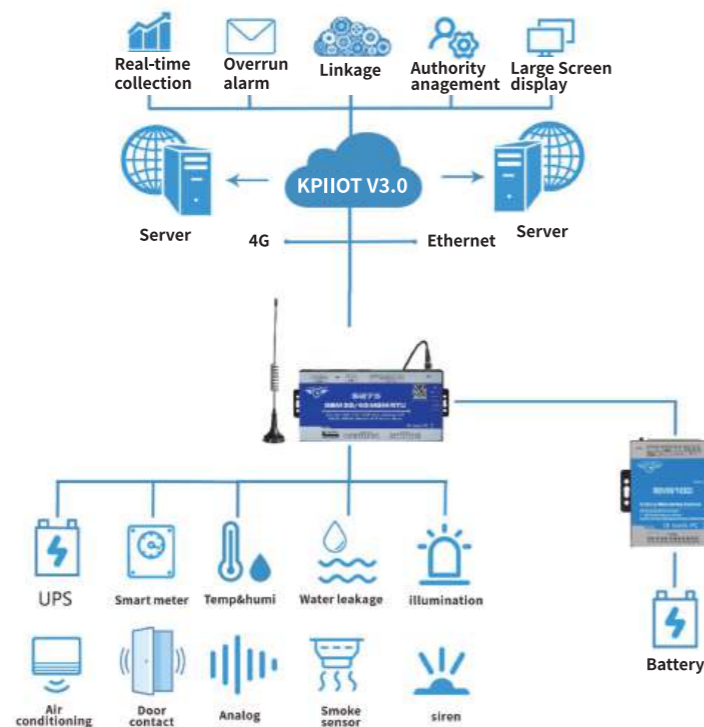
## SELECTION TABLE

Model	Parameter	Communication	Features
S475	S475 multiple IO interface 8 digital input, 6 analog input, 4 relay output, 1 temperature and humidity, 2 RS485, 1 RJ45 Ethernet	2G/3G/4G, RS485, RJ45	Multi-channel input and output control integration, flexible wireless network deployment
S258	6 analog input, 2 digital input, 2 relay output, 1 temp&humi, 2 RS485, LED display interface	2G/3G/4G, RS485, RJ45	Remote set LED screen, real-time collection data and monitoring, and control fog cannon
S281	LoRa self-organizing network gateway, can collect 200 nodes within 2KM without wiring	2G/3G/4G, RJ45	Not limited by base station signals, flexible layout, no wiring, wide collection range

# MACHINE ROOM DYNAMIC ENVIRONMENT MONITORING SOLUTION

The hazards of the computer room mainly come from four hidden dangers. 1) Electrical safety hazards: abnormal power supply current, unstable mains environment, UPS power failure, high cable temperature, etc.; 2) security hazards: lax access control to the computer room, information leakage, and computer room Monitoring consumes manpower and material resources, wiring is unplugged, reconnected or damaged, etc.; 3) Environmental abnormalities: The ambient temperature exceeds the carrying temperature of the equipment, causing open flame accidents, environmental leakage/water leakage, circuit short circuits, abnormal air humidity and safety risks, etc.; 4) The hidden danger of alarm delay: lack of early warning in the room, difficulty in real-time control of abnormalities, low frequency of inspections in ordinary computer rooms, difficulty in discovering problems, and difficulty in detecting abnormalities in time by human supervision.

This solution can provide you with functions such as utility power parameter monitoring, UPS parameter monitoring, and real-time monitoring and centralized management and control of power equipment in the computer room, and comprehensively guarantee the safety and stability of the power system of the computer room; it can also achieve smoke monitoring in the computer room, precision air conditioning monitoring, temperature and humidity Monitoring, water leakage monitoring and other functions, once the monitoring data exceeds the safe range, the system will send an alarm at the first time



## SELECTION TABLE

Model	Parameter	Communication	Features
S270	2 digital input, 2 analog input, 2 relay output, 1 temp&humi	2G/3G/4G	Detect a variety of analog and digital environmental factors such as temperature, humidity, voltage, etc., while supporting control switches
S275	8 digital input, 6 analog input, 4 relay output, 1 Temp&humi, 1 RS485	2G/3G/4G, RS485	Supports 320 mapping registers, 8G storage capacity
S475E	8 digital input, 6 analog input, 4 relay output, 1 temp&humi, 2 RS485 (Modbus master/slave, Transparent transmission) 1 RJ45.	RS485, RJ45	Cost-effective. Integration of multiple inputs and control outputs.
BMS100	12 signal battery voltage monitoring; 6 battery pack voltage monitoring; 1 channel 300VDC total voltage monitoring; 2 analog acquisition (4-20mA, 0-5V)	RS485	Battery voltage monitoring, analog monitoring



PARTNER



## STATEMENT

All rights reserved, the company reserves the right of final interpretation. The appearance and color of the product pictures in this manual are different due to printing, and the actual product shall prevail; subsequent pictures and specifications are subject to change without notice.