USR-IO808-GR
Application:IoT
Working voltage:12V~36V
Working temperature:-20℃~+70℃
Storage temperature:-40℃~+85℃
Working humidity:5%~95%
Storage humidity:1%~95%
Dimension:200*122*29mm
Wireless network type:GSM/GPRS
ESD:IEC61000-4-2, Level 4
Surge:IEC61000-4-5, Level 3
Group pulse:IEC61000-4-4, Level 3

Product Description
it is network IO product which supports 8-way input/output and Modbus RTU/TCP protocol. Take 'Remote control' as core function and have high usability. User can easily and quickly integrate USR-IO808-GR into own system to realize remote control which based on GPRS network.
2G GSM GPRS network
Be adaptive to Modbus TCP/RTU protocol
8 DI input and 8 DO output

## Network IO series comparison table

| Product model | USR-IO808-GR | USR-IO808-EWR | USR-IO424T-GR | USR-IO424T-EWR |
|---|---|---|---|---|
| Input interface | 8 | 8 | 4 | 4 |
| Output interface | 8 | 8 | 4 | 4 |
| Output interface | 0 | 0 | 2 | 2 |
| Temperature acquisition | -- | -- | ✓ | ✓ |
| RS485 | ✓ | ✓ | ✓ | ✓ |
| GPRS | ✓ | -- | ✓ | -- |
| WIFI | -- | ✓ | -- | ✓ |
| Ethernet | -- | ✓ | -- | ✓ |
| Routing function | -- | ✓ | -- | ✓ |

**Detailed Images**

## Interfaces

### USR-IO808-GR

Reload button  Terminal power supply interface  Output interface  Antenna interface

Input interface (default is dry contact)  RS485  Power supply interface  SIM card slot

### USR-IO808-EWR

Reload button  Terminal power supply interface  LAN  Output interface  Antenna interface

Input interface (default is dry contact)  WAN/LAN  RS485  Power supply interface
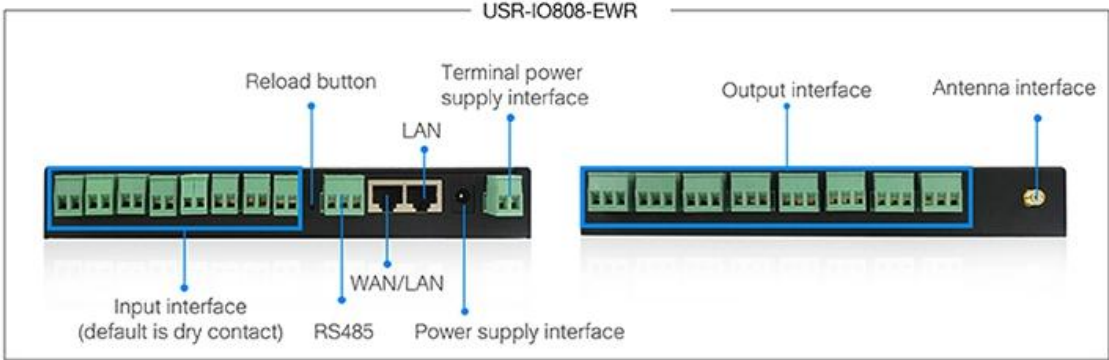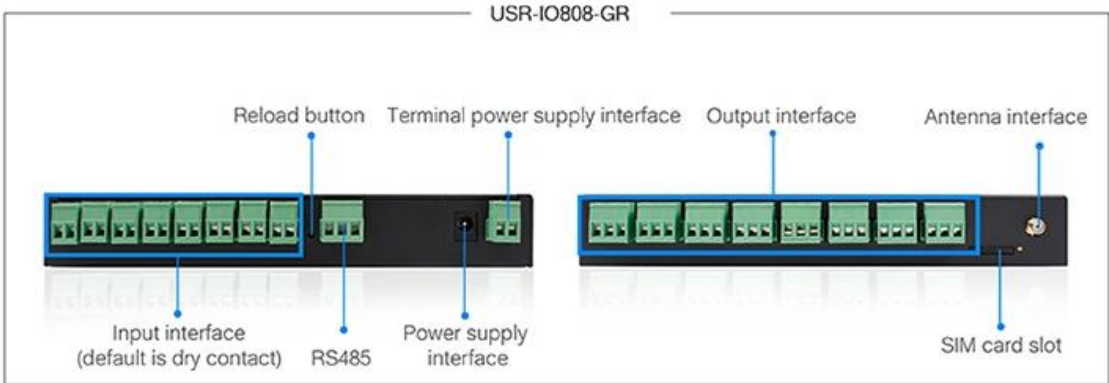
Feature

Support 8-way Relay output

Support 8-way input, default is dry contact

Support 8 conditional control command

Support various function code: 0x01, 0x02, 0x03, 0x04, 0x05, 0x06, 0x0F, 0x10

Support socket to connect to remote server and TCP Client

Support two work modes: Master mode and Slave mode. Master mode supports connecting to multiple         Modbus RTU devices by RS485 cascading connection.

Adopt Modbus RTU protocol data processing. Support Modbus TCP/RTU protocol adaptation.

Support connecting to USR Cloud.

Support FTP remote upgrade.

Support upgrading by RS485.

Support hardware watchdog.

Support various LED to indicate work status.

Support power supply over-current, over-voltage, anti-reverse connection protection.
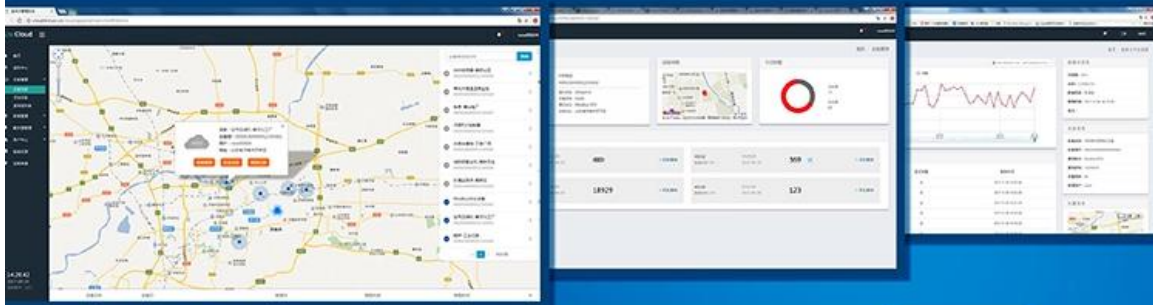
Specifications

| Parameter | | Value |
|---|---|---|
| **Wireless parameters** | Wireless standard | GSM/GPRS |
| | Standard frequency band | 850/900/1800/1900MHz |
| | Transmitting power | GSM900 class4(2W) |
| | | DCS1800 class1(1W) |
| | GPRS Terminal Device Class | Class B |
| | GPRS Multi-slot Class | GPRS Class 10 |
| | GPRS Coding Schemes | CS1~CS4 |
| **Hardware parameters** | Data interface | Serial port: Support RS485. Baud rate: 300bps~230400bps |
| | Working voltage | 12V~36V |
| | Working temperature | -20℃ ~ +70℃ |
| | Storage temperature | -40℃ ~ +85℃ |
| | Working humidity | 5%~95% |
| | Storage humidity | 1%~95% |
| | Dimension | 200*122*29mm |
| **Software parameters** | Wireless network type | GSM/GPRS |
| | Work mode | Master mode, slave mode |
| | Configuration command | Modbus RTU |
| | Network protocol | Modbus TCP, Modbus RTU |
| | Application software | Support configuration software |
| **Software function** | DNS | Support |
| | Data transmission mode | Support TCP Client |
| **EMC level** | ESD | IEC61000-4-2, Level 4 |
| | Surge | IEC61000-4-5, Level 3 |
| | Group pulse | IEC61000-4-4, Level 3 |

# USR-IO808 supports USR Cloud



**IoT Cloud configuration**

Remote monitoring without programming

cloud.usr.cn
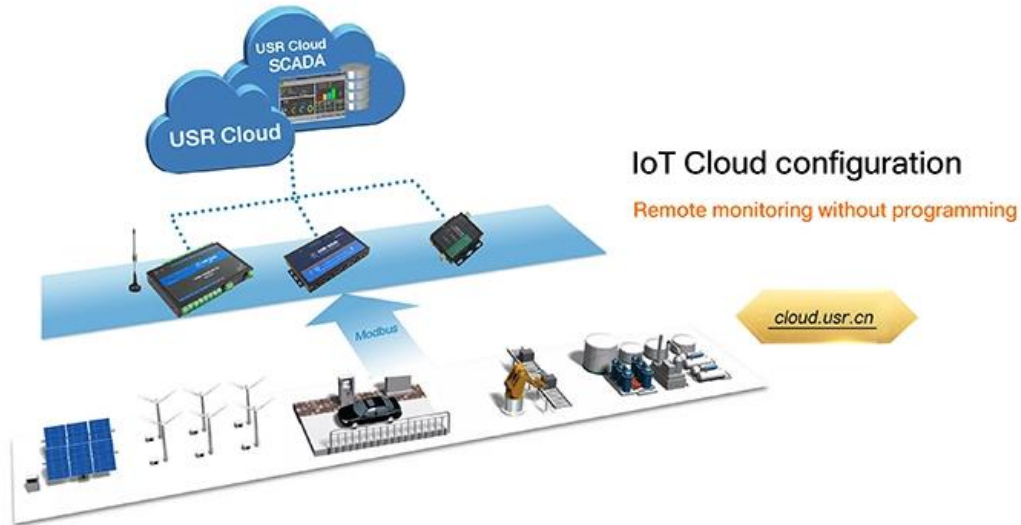


# USR Cloud® function

1. Industrial agreement: Modbus protocol devices can quickly access to USR Cloud
2. Historical data: curve and report forms.
3. Alarm push: WeChat, e-mail and message.
4. Open API: provide SDK and Demo source code.

# Smart lamp control

User can connect to USR Cloud by USR-IO808 to realize remote street lamp monitoring and it is convenient to control in Cloud side and record the devices status. Whole solution can ensure overall rate of lighting of street lamp, help management and bring the benefit of environmental protection.
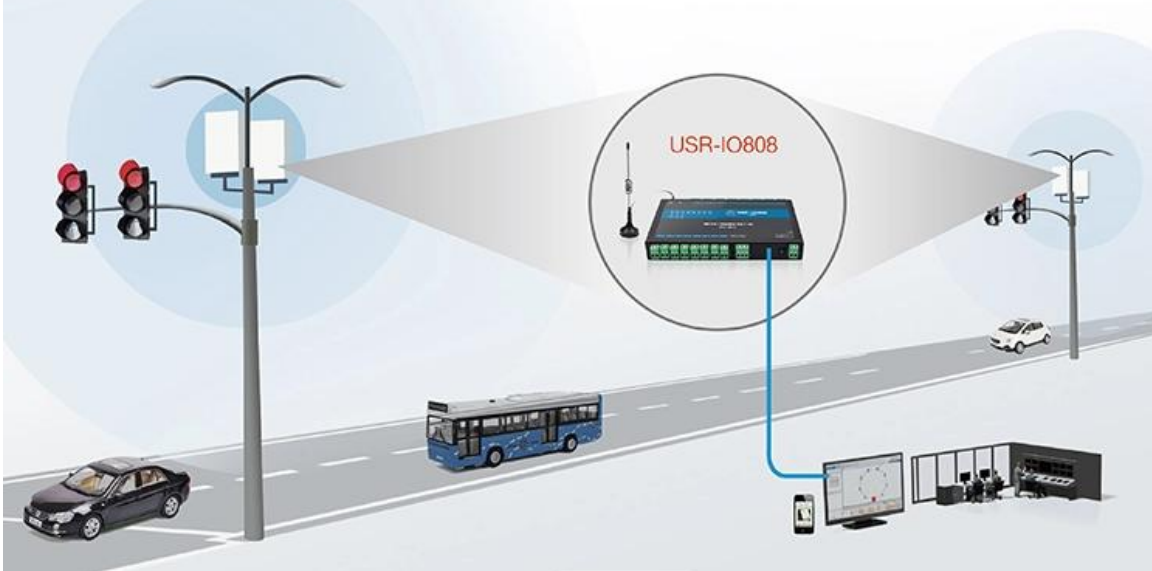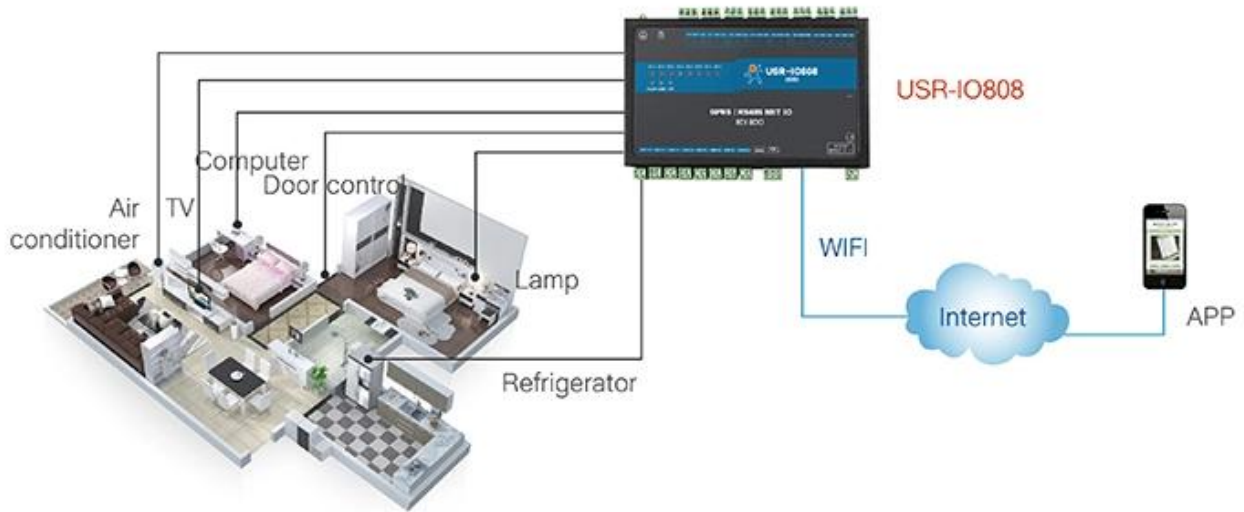
USR-IO808

# Industrial automation solution

In production-line item of industrial automation, it can realize production line monitoring and control by USR-IO808. For example, user can monitor production line quantity by infrared radiation switch or connect output interface to motor to control start and stop.

Motor
Terminal device

Results of count

Infrared radiation switch

USR-IO808

Data center
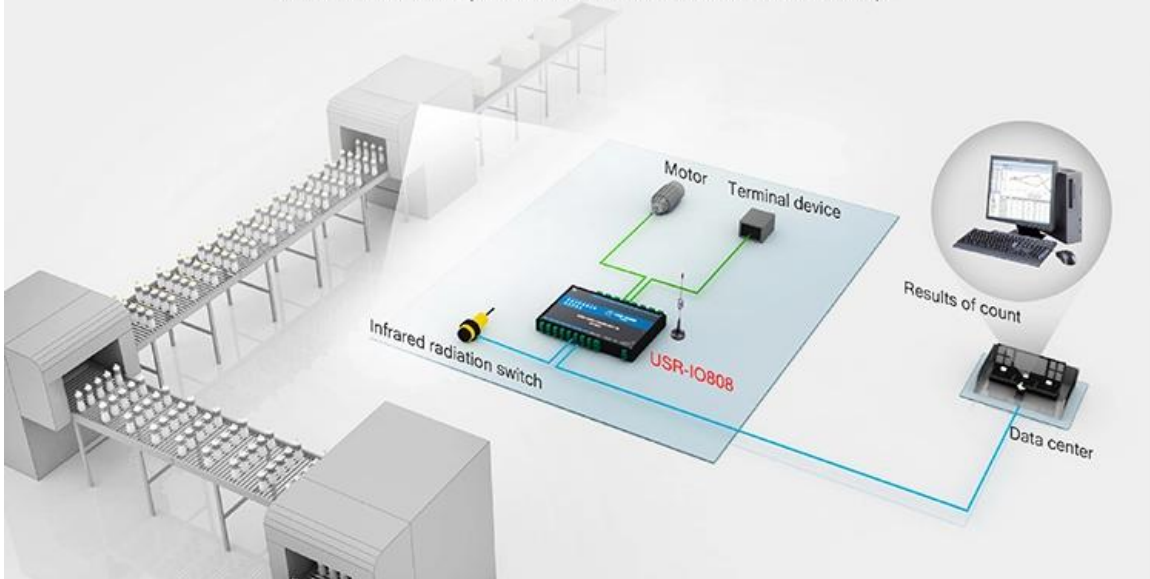
# Smart hotel management

In smart hotel management project, user can connect USR-IO808 to TV, computer, refrigerator, air conditioner, door control system, etc. Then user can realize remote monitoring by mobile terminal. This solution is usually realized through local WiFi connection and it can also use USR Cloud to realize remote monitoring.

USR-IO808

Computer
Door control
Air
conditioner   TV
Lamp
WIFI
Internet
APP
Refrigerator

# Self-service terminals solution

Based on remote monitoring function of USR-IO808, user can connect output interface to multiple Relays and connect input interface to switching value, then connect USR-IO808 to Cloud platform to realize monitoring running condition of self-service terminals, adjusting supply chain at any time or handling failure timely.

Converter
Input
Switching value
Internet
USR-IO808
APP
Output
Relays
Control room
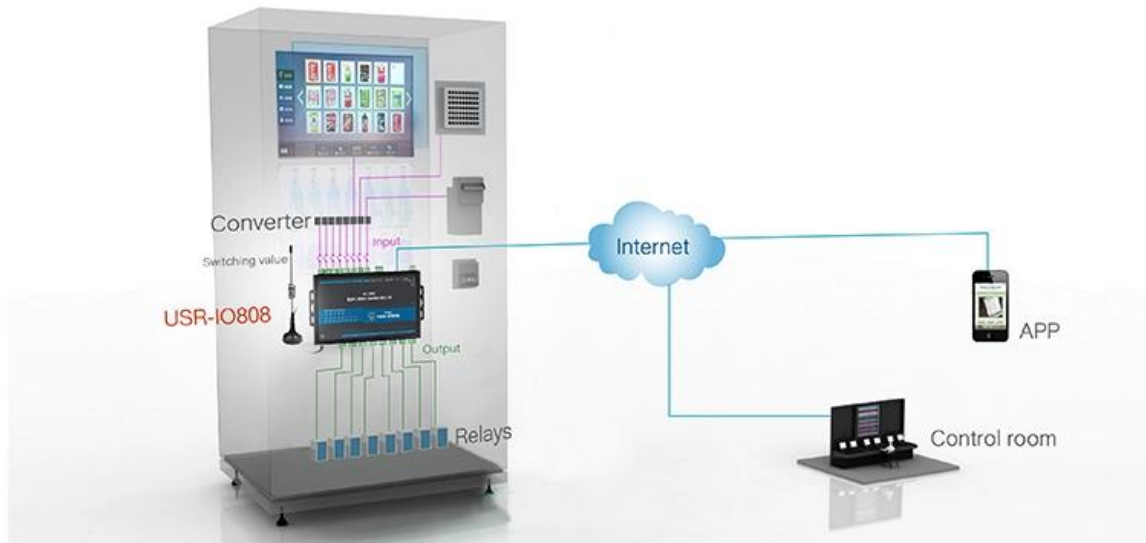
# Distribution box solution

Control AC contactor or breaker by USR-IO808's output Relays to realize remote control of powering on/off.

USR-IO808's RS485 interface can connect to RS485 electricity meter to realize remote charging, remote control, etc.