

PUSR IOT

Be Honest, Do Best



PUSR

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Your Trustworthy Industrial IoT Partner

Your Trustworthy Industrial IoT Partner

A trusted partner of industrial IoT hardware and software solutions

With 600 employees, owns a self-built factory

High quality with ISO9001:2015, RoHS, CE, FCC certification

11 years expertise in IoT communication devices/modules, cloud and solutions

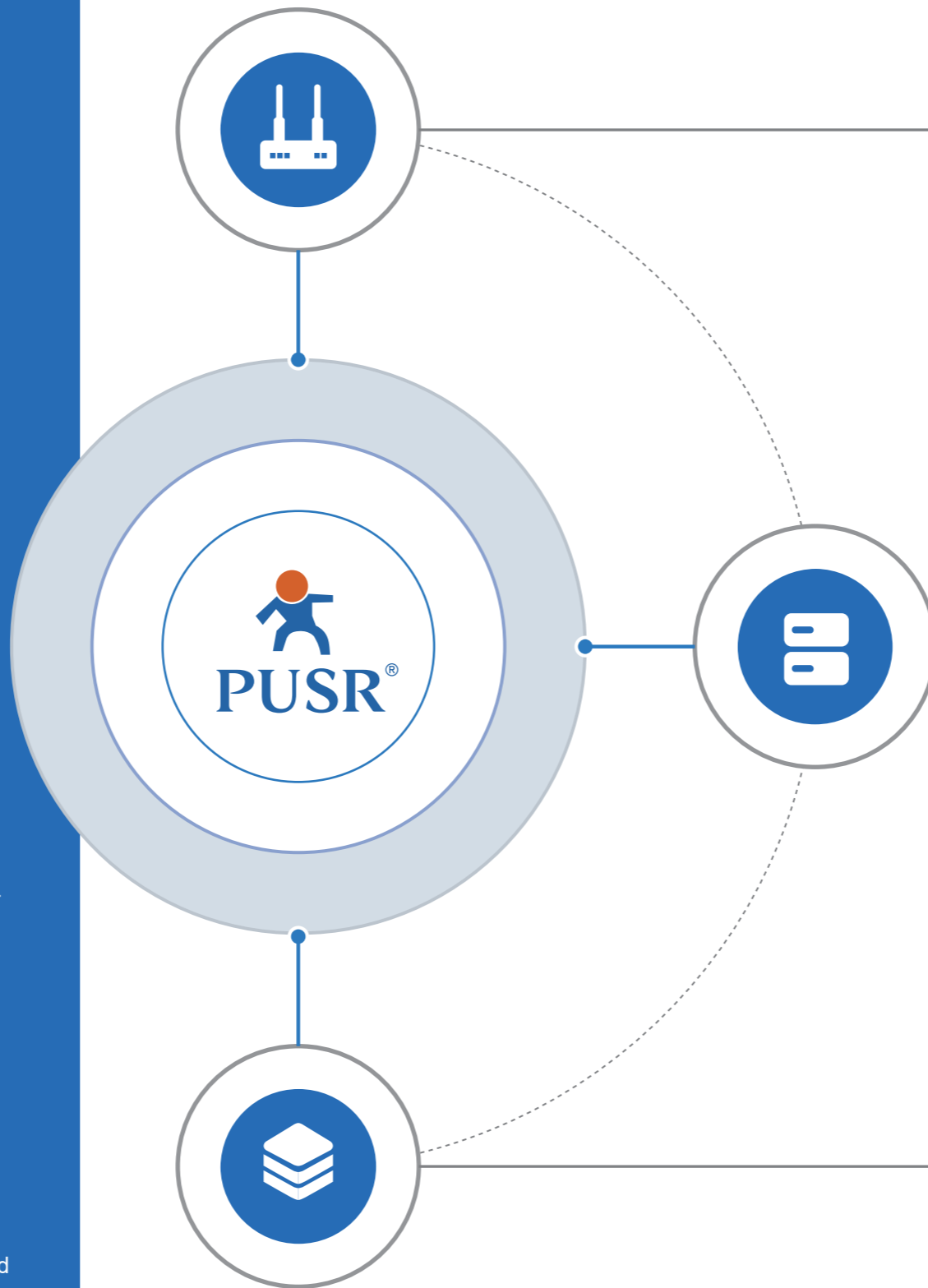
Corporate culture
Be Honest, Do Best

Vision
Ecology-oriented IIoT enterprise

Positioning
Trustworthy smart IIoT partner

Mission
Connecting Value, Valuable Connection

Value Integrity
Customer first, Trust and responsibility, Diligent study and persistent thinking, Earnestness and innovation



PUSR IoT IoT Networks

Cellular Routers, Gateways, Modems, Serial Connectivity, Modules, Switches, IoT Platform

PUSR Intelligence Software Solutions

Smart Agriculture, Smart Factory, Smart Water Utilities, Smart Husbandry, Smart Environmental Monitoring

PUSR EMS Electronics Manufacturing & Product Design Services

Multi-layer Layout & RF Development, Integration Testing, PCBA OEM, Materials Purchasing Agent, Full Product ODM

Total \$28M USD

In financing (A+B+C round)

Hundreds of millions USD

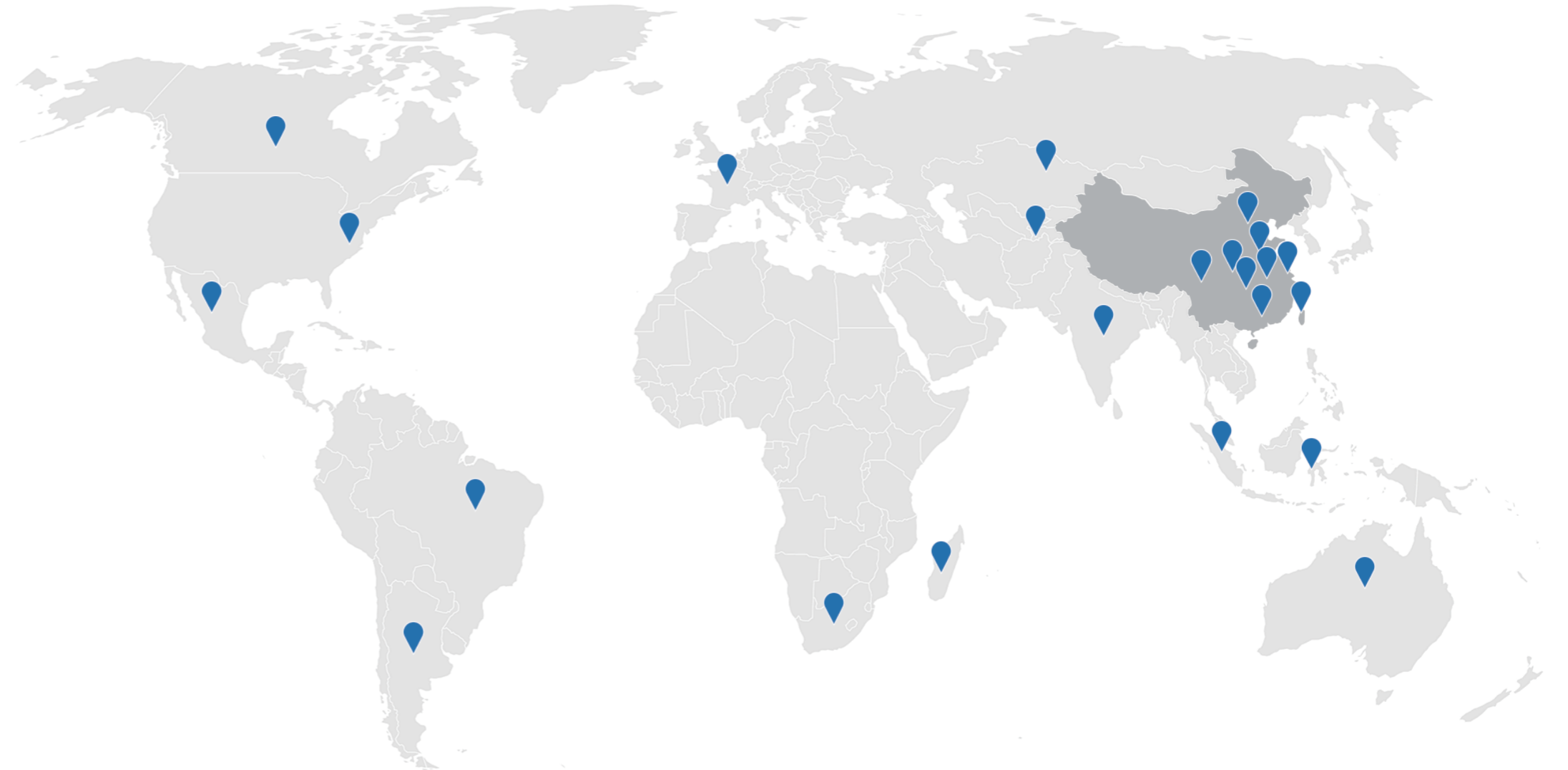
For annual turnover of our company

More than 150,000

Customers we have serviced

More than 15 million

Cumulative global shipments



Data as of November 2022

5 offices

Shanghai, Beijing, Wuhan
Shenzhen and Chengdu

Over 600⁺ staffs

More than 40% of R&D personnel
More than 20% of employees with shareholding

3 main services












PUSR IoT
PUSR Intelligence
PUSR Intelligent Manufacturing

2 self-built factory

Jinan / Suzhou

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DIN Rail Series—Serial Converter

Bi-directional transmission between RS232 or RS485 and Ethernet / WiFi

- **USR-DR404**
RS485 to Wi-Fi/Ethernet
- **USR-DR302**
RS485 to Ethernet
- **USR-DR301**
RS232 to Ethernet

DIN-Rail Mounting
PC+ABS Shell, V0 Flame-retarded
Industrial Grade & Small Volume
Modbus Gateway

DIN Rail Series

DIN-Rail Mounting — Compact Size

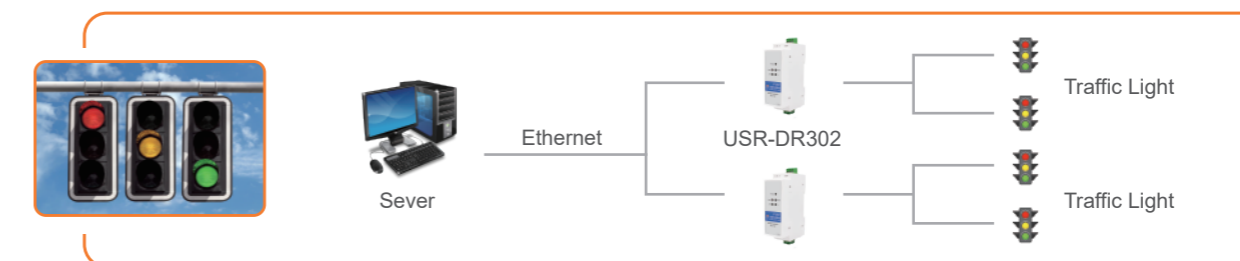
The Din Rail Series is based on the PUSR accumulation of networking communication technology for many years, combined with customer project implementation scenarios, and creatively redefines the specifications of networking equipment.

The products include different types such as Serial Converter/Industrial Cellular Modems/Industrial 4G Routers. One same shape can be multiple communication methods. Din Rail series support Ethernet, Wi-Fi, 4G networking. It comes with standard 35mm rail buckle, which is suitable for all rail-type scenarios.

Application

Traffic light data acquisition and transmission

DIN-rail serial converters connect to the traffic lights, and then transfer the traffic conditions to control center by Internet. It helps staff to deal with the situation quickly.



Specifications

Model	USR-DR302	USR-DR301	USR-DR404
Serial Port	RS485*1	RS232*1	RS485*1
Network Spec	RJ45*1, 10/100Mbps, Cross-direct Adaptation		RJ45*1, 10/100Mbps, WiFi AP+STA Mode
Network Protocol	IP、TCP、UDP、ARP、ICMP、IPV4		
IP Address Mode	Static IP or DHCP		
Working Mode	TCP Sever / TCP Client / UDP Sever / UDP Client / HTTP Client		
Modbus Gateway Function	Supported		
Dimensions (mm)	64.67mm*28mm*109.66mm(L*W*H), Standard DIN Rail		

DIN Rail Series—LTE CAT4 IP Modem

Two-way transparent transmission between RS485 and 4G LTE network.



USR-DR504-G

- RS485 to 4G CAT4 Modem
- Global frequency band
- TCP Client/Server,UDP, SMS
- Modbus RTU to TCP, Polling

Application

Distribution box data acquisition network transmission

It convenient to use in narrow spaces as compact-size. It can quickly convert the electricity consumption data to control room in real time, and effectively reduce costs.



Specifications

Model	USR-DR504-G
Serial Port	RS485*1
Network Spec	FDD-LTE, TDD-LTE, GSM/GPRS/EDGE, WCDMA, TD-SCDMA
Work Mode	Transparent Mode, HTTPD Client Mode, SMS Mode
Modbus Gateway Function	Supported
Power Supply	DC: 9-36V
EMC Performance	ESD IEC 61000-4-2 Level 3 / Surge IEC 61000-4-5 Level 3 / EFT IEC 61000-4-4 Level 3
Dimensions	64.67mm*28mm*109.66mm(L*W*H), Standard DIN Rail

DIN Rail Series—LTE CAT1 IP Modem

Cost-effective RS485 to 4G solution. Fastly realize two-way transparent transmission of data.



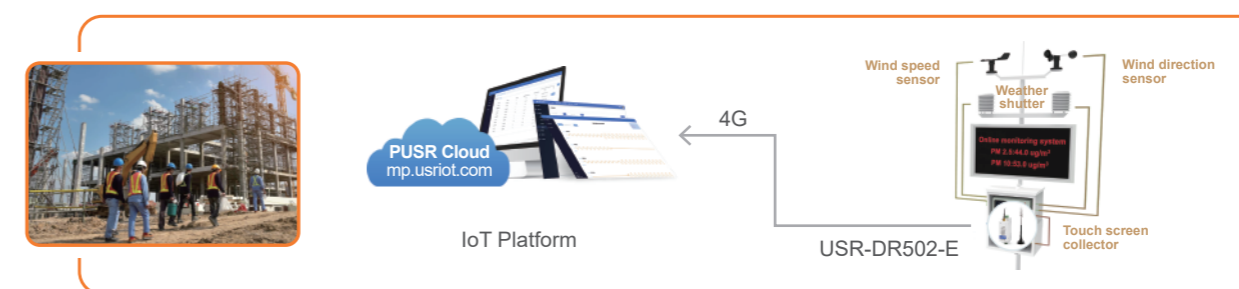
USR-DR502-E

- LET CAT-1 Cost-effective Modem
- Hardware Watchdog
- TCP /UDP/IPV4/HTTP//DNS/
- MQTT/SSL/TLS

Application

Dust and noise online monitoring network transmission

It can upload the particulate matter and noise generated by construction activities to the comprehensive management platform in real time by 4G network, helping managers understand site dynamics and formulate production plans.



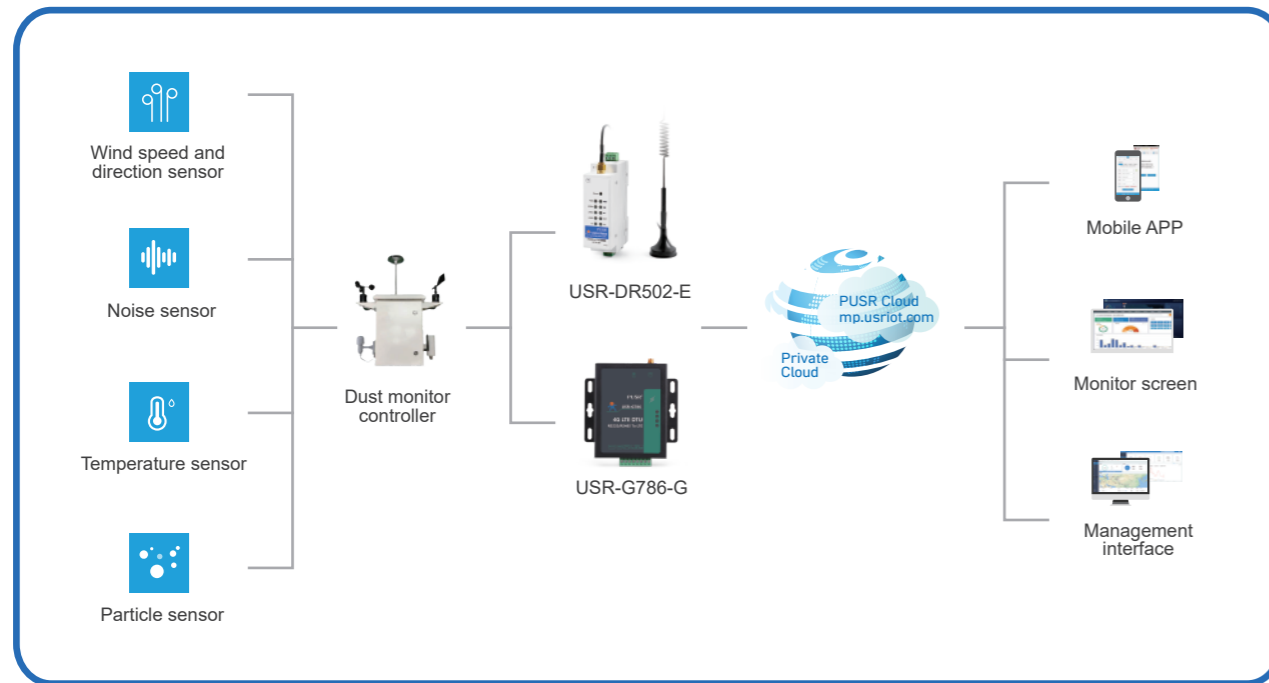
Specifications

Model	USR-DR502-E
Serial Port	RS485*1
Network Spec	FDD-LTE, TDD-LTE, GSM/GPRS/EDGE, WCDMA, TD-SCDMA
Work Mode	Transparent Mode, HTTPD Client Mode, SMS Mode
Modbus Gateway Function	Supported
Power Supply	DC: 9-36V
EMC Performance	ESD IEC 61000-4-2 Level 3 / Surge IEC 61000-4-5 Level 3 / EFT IEC 61000-4-4 Level 3
Dimensions	64.67mm*28mm*109.66mm(L*W*H), Standard DIN Rail

Industrial Cellular Modems

Environmental Monitoring Solution

PUSR IOT uses wireless communication technology to build a new online air quality monitoring system. It allow staff to monitor the air quality in real time.



PUSR IOT Industrial Cellular Modems is a device to collect data from PLC, sensors, meters, etc. and transfer the data over 2G/3G/4G/LTE-CAT1/ CAT M/CAT 4 to the remote server.

Difficulties You May Encounter & Our Advantages

Difficulties: The external environment is changeable- unstable signal transmission, ineffective remote monitoring, delayed data collection

- Wireless transmission eliminates wiring troubles
- 4G high-speed networking
- Watchdog protection avoid downtime.

USR-G771-E	USR-G786-G
<ul style="list-style-type: none"> • CAT-1 Serial Modem • MQTT/SSL • TCP Client/UDP 	<ul style="list-style-type: none"> • CAT-4 Serial Modem • TCP Server/Client, UDP • Modbus RTU to TCP,polling



Smart Grid
Power Conservation
Management



Charging Pile
FTP function facilitates equip-
ment upgrade



Agricultural Monitoring
Remote monitoring in real-time
Data remote transmission quickly

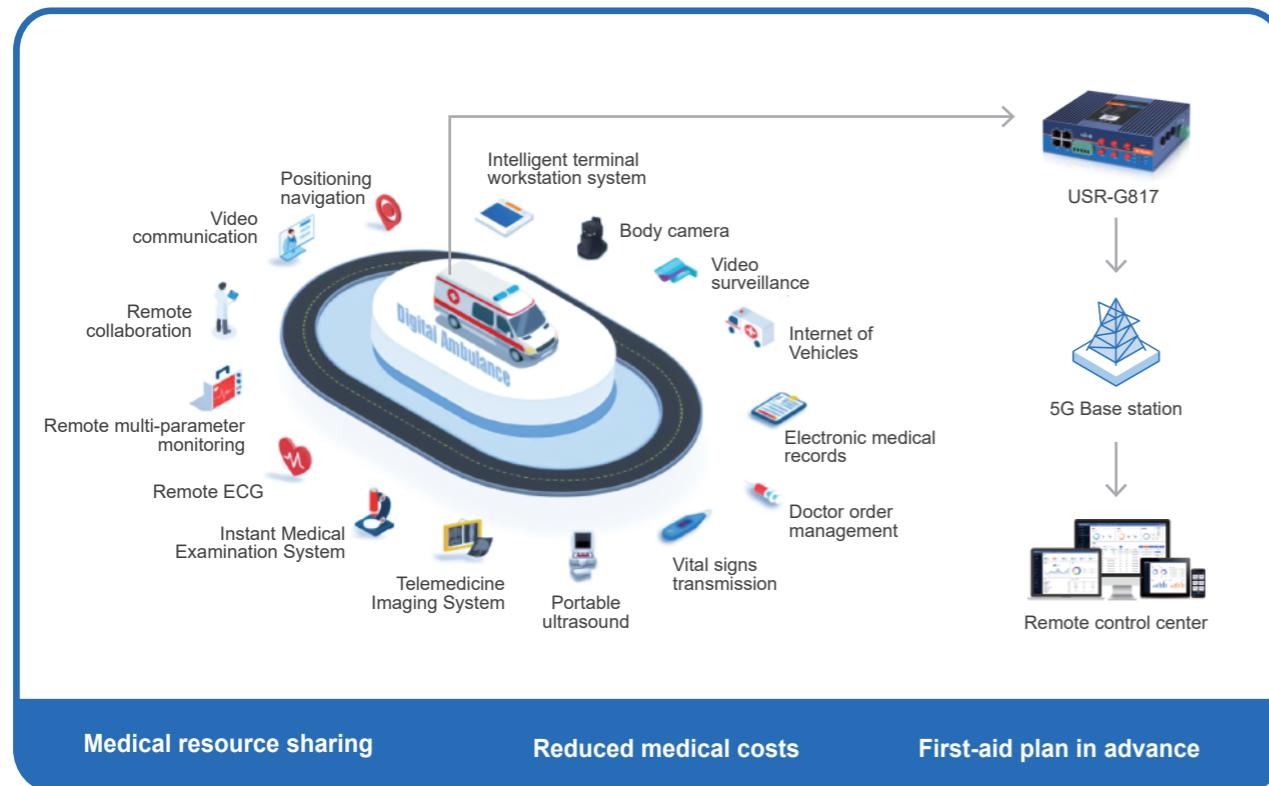


Intelligent transportation
Real-time transmission of bus
information

5G / WiFi6 Wireless Router

5G Smart Medical Emergency Solution

"5G Smart Medical Emergency Solution" is based on emergency vehicles, combined with 5G communication technology, equipped with artificial intelligence, AR, VR to create a comprehensive medical emergency system. It can greatly shorten the rescue response time and provide patients with more chances of survival.



Difficulties You May Encounter & Our Advantages

Difficulties: Featuring complex and professional devices, high maintenance costs and time constraint on medical treatment.

- Improve the accuracy of diagnosis and guidance efficiency
- Remotely monitor equipment and respond more promptly to existing device problems.



PUSR 5G industrial router supports SA and NSA networking. The measured 5G speed and WiFi6 speed reached 700Mbps. Routers are widely used in various scenarios that require high speed, low latency or wide connection, such as AGV cars, inspection robots, automatic driving, smart transportation, drones, etc.

USR-G817	U200
<ul style="list-style-type: none"> • 5G SA/NSA • Dual SIM, eSIM optional • MQTT & VLAN supported • Qualcomm dual-band WiFi6 • 4* Gigabit Ethernet port + Serial port 	<ul style="list-style-type: none"> • 1*LAN • 5G Full netcom, SA+NSA • Wirelessly access up to 32 devices • Dual-band WiFi6, Gigabit Ethernet port



Factory AGV transportation

Low latency, instant perception



Automated Factory

VPN private network protocol
A variety of networking



Emergency Rescue

High-speed network access to improve rescue efficiency



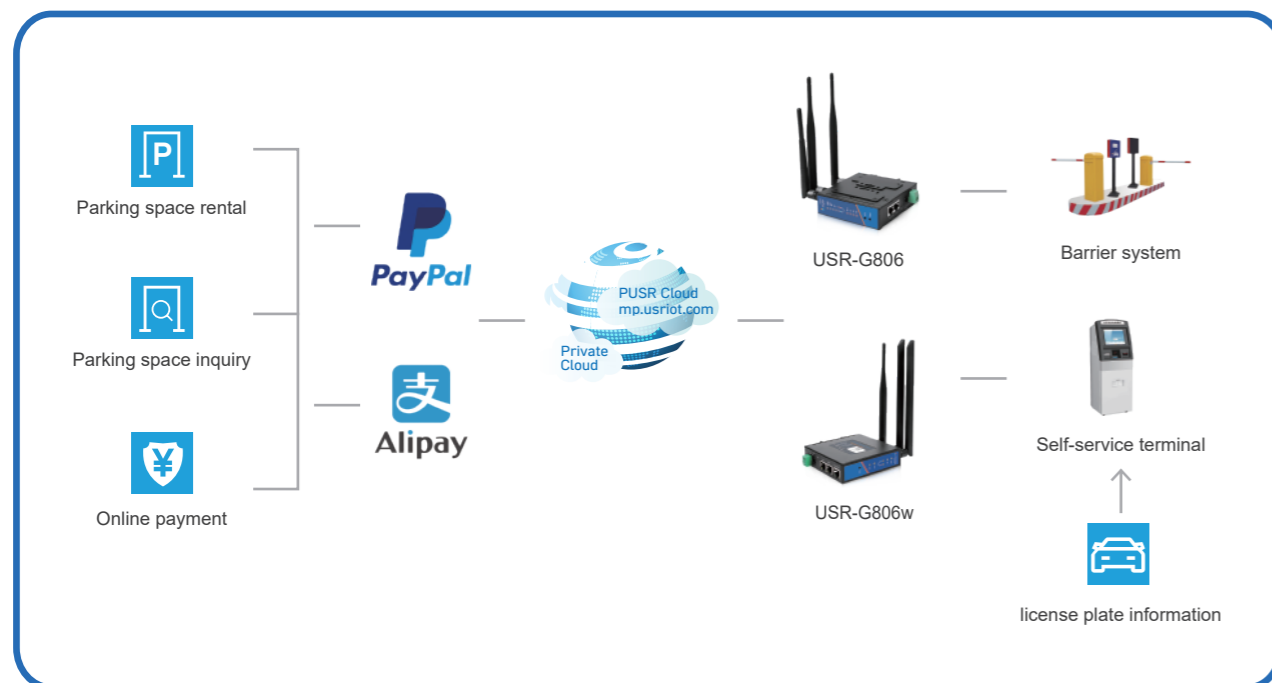
Intelligent Port Gantry Crane

7*24 hours stable networking
Improve port operation efficiency

Industrial 4G Routers

Smart Parking Solution

USR-G806 series 4G router to provide 4G networking of the barrier gate system to keep a reliable connectivity in places where it is inconvenient to lay network cables, so as to realize the vehicle guidance, parking space inquiry and help the construction of the smart city.



Difficulties You May Encounter & Our Advantages

Difficulties: Low efficiency of manual charging, unclear records, and lack of remote monitoring in real time which lead to ineffective guidance and management.

- Wiring-free, achieving the parking space timely and accurate release
- Remote control in real time, reducing labor and management costs.

1. USR-G806w
Qualcomm WiFi Industrial 4G Router
2. USR-G805
Single Ethernet Port Industrial 4G Router
3. USR-G806
Dual Ethernet Port 4G Router
4. USR-G808
Dual SIM Industrial 4G Router
5. USR-G809
I/O 4G Router Gateway
6. USR-G806s
Serial Port Wi-Fi 4G Router
7. USR-G781
RS232/485 4G Router



PUSR industrial 4G wireless router adopts high-performance industrial-grade processor, offers features such as Ethernet, Wi-Fi, serial ports, VPN client and failover, providing reliable connectivity for complex and harsh working environments. Pusr routers are suitable for projects of energy, industrial control, oil&water, retail, smart grid, etc.

USR-G806w	USR-G806s
 <ul style="list-style-type: none"> • CPU: Qualcomm chipset • 1WAN/LAN+2LAN • VLAN/SNMP • Wi-Fi: 802.11b/g/n, AP/STA/Relay 	 <ul style="list-style-type: none"> • Dual Ethernet port • 1WAN/LAN+1LAN • RS485 supports Modbus RTU to TCP • 802.11b/g/n WiFi • VPN Client: Ipsec, Openvpn, L2TP, PPTP, GRE

Self-service terminal
Video monitoring in real time

Intelligent industrial control
Remote management to reduce downtime

Smart transportation
Remote traffic monitoring and efficiency on the road

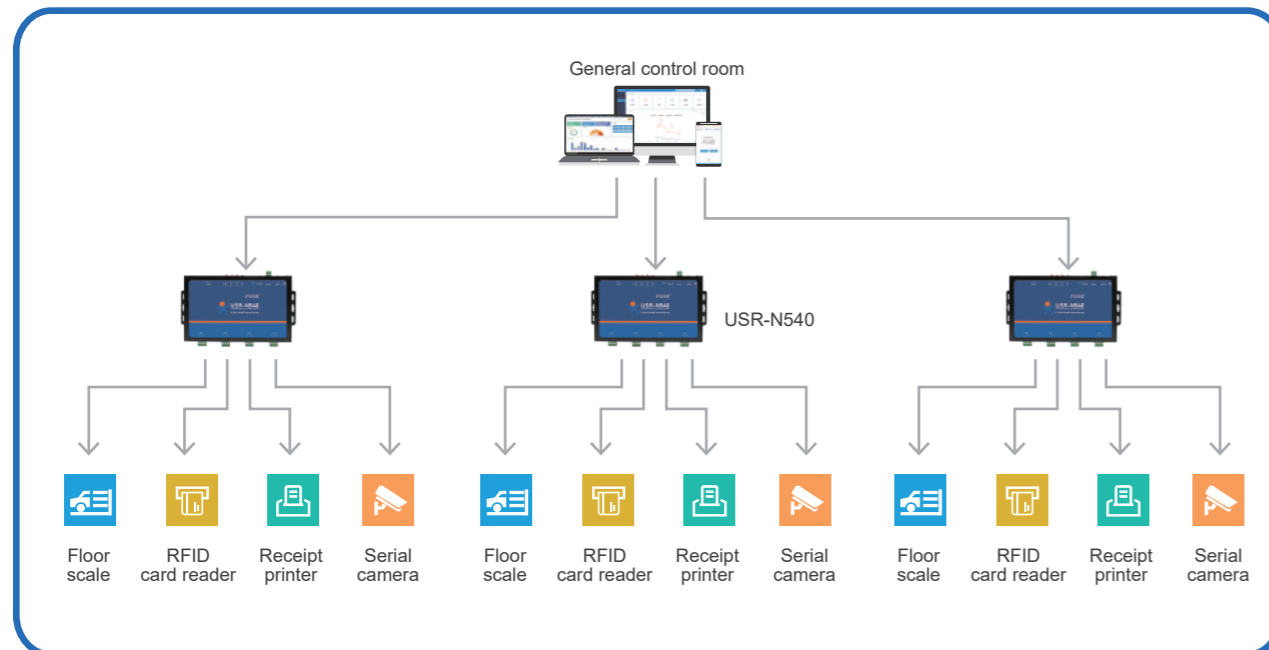
Smart Energy
Capture real-time data to manage energy usage

Serial Converter

Industrial Weighing Solutions

In the industrial weighing system, in addition to reading the obtained weight through the display instrument on site, the electronic scale also needs transmit the data to the server center through its own serial port.

So the solution is composed of Serial Converters, which is convenient for the remote management host to directly read the on-site electronic scale data through the TCP/IP protocol, and manage the production status in real time.



Difficulties You May Encounter & Our Advantages

Difficulties: The on-site data of industrial projects cannot be centrally and effectively managed, and the traditional networking method is clumsy and single, and the wiring is cumbersome.

- Avoid wiring to realize the fast connection of devices to Ethernet/Wi-Fi
- Reduce user development cycle and management costs.



Medical Health

Reduce operating cost pressure
Improve the efficiency of medical staff



Industrial automation

Quick connection to factory equipment
Automatic collection of industrial data



Security Monitoring

Monitor for security breaches
Reduce enterprise management costs



Energy Data Collection

Reduce costs and save resources
Control your device remotely

1. **USR-TCP232-410s**
RS232/RS485 Serial Converter
2. **USR-TCP232-302**
RS232 Serial Converter
3. **USR-TCP232-304**
RS485 Serial Converter
4. **USR-CANET200**
CAN to Ethernet Converter
5. **USR-W610**
Single Ethernet Port WiFi Serial Converter
6. **USR-W630**
Dual Ethernet Port WiFi Serial Converter
7. **USR-N668**
8 Serial Port Converter
8. **USR-N510**
Single Serial Port Converter (Edge Acquisition)
9. **USR-N520**
Dual Serial Port Converter (Edge Acquisition)
10. **USR-N540**
4 Serial Port Converter (Edge Acquisition)



PUSR Serial Ethernet converters can easily realize data transparent transmission between serial port (RS-232/485/422) and Ethernet without development.

USR-N5X0 series offers features of modbus rtu to tcp/json, MQTT/SSL, edge acquisition etc, providing solution for PLCs, meters, and sensors to the network, avoiding the hassle of running a cables.

USR-TCP232-410s

- Bi-directional transmission between RS232/RS485 and Ethernet
- Industrial grade, Cortex-M7 core
- Modbus RTU to TCP, Modbus Polling
- Dual watchdog, keep-alive mechanisms, virtual com

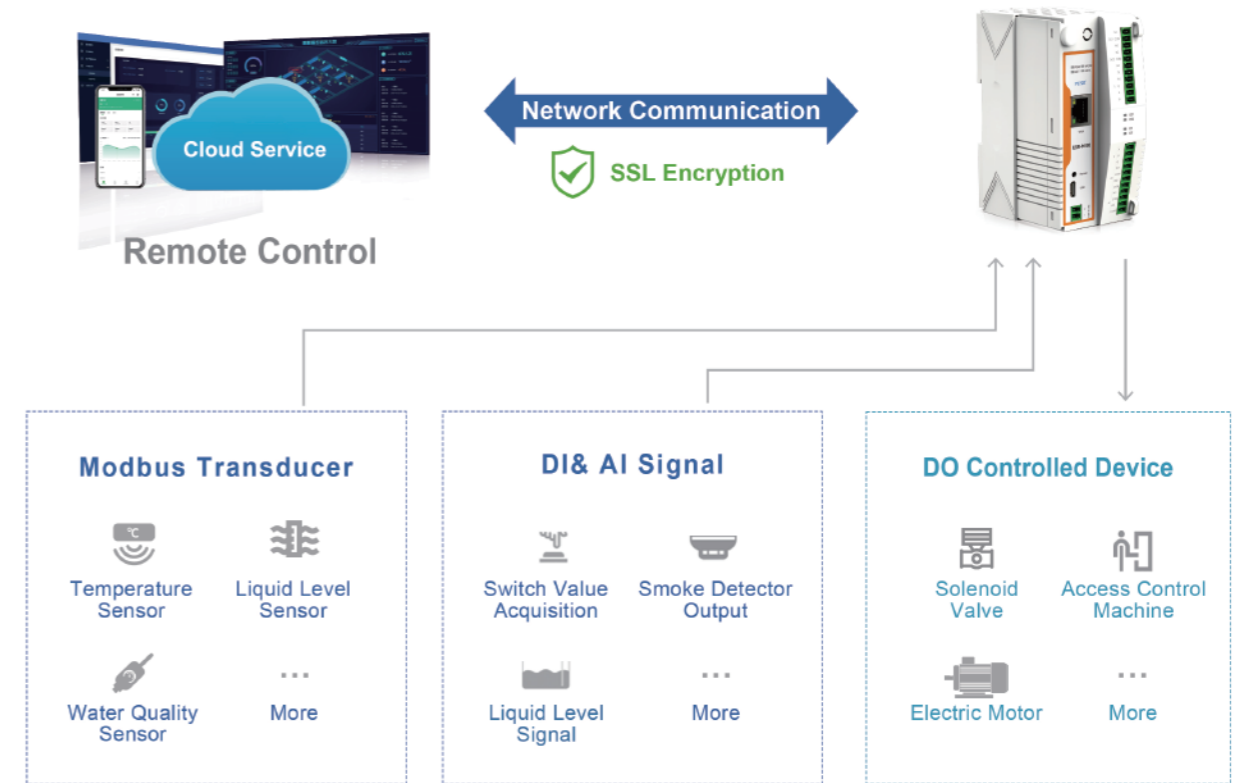
USR-W630

- Dual-port network port + Wi-Fi application
- Multiple bridging methods, wireless + wired
- Built-in routing function, firewall, QOS
- Anti-surge, anti-static, watchdog

Remote I/O Edge Gateway



Data & Signal Linkage Control



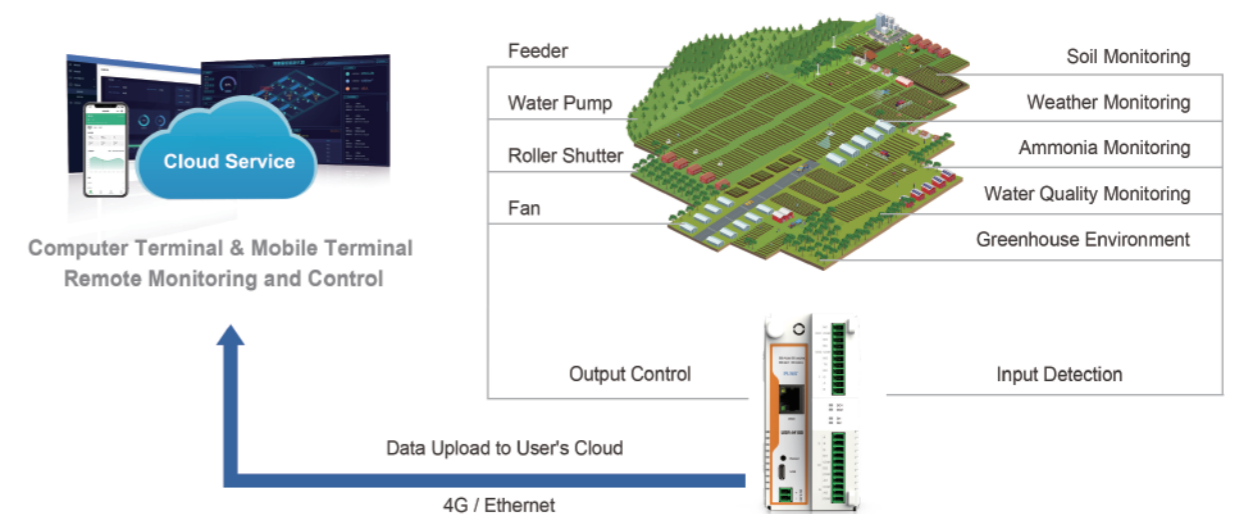
Key Features

- Edge Computing**
Edge acquisition, computing, control
Change reporting & Regular reporting
- Linkage Control**
Value trigger & IO trigger
Linkage DO output
- Transparent Transmission**
TCP, UDP, HTTP, MQTT
Heartbeat pack, SSL
- 4G+Ethernet Port**
CAT4 LTE Network
Wired & Wireless

- MQTT**
Custom topic
Custom Json
- Modbus Gateway**
Modbus RTU to TCP
Modbus RTU to Json
- IO Controller**
2DO, 2DI, 2AI
Extensible.
- IoT Platform**
AWS, MQTT private server
PUSR Cloud, AliCloud

Digital Agriculture/Livestock Solutions

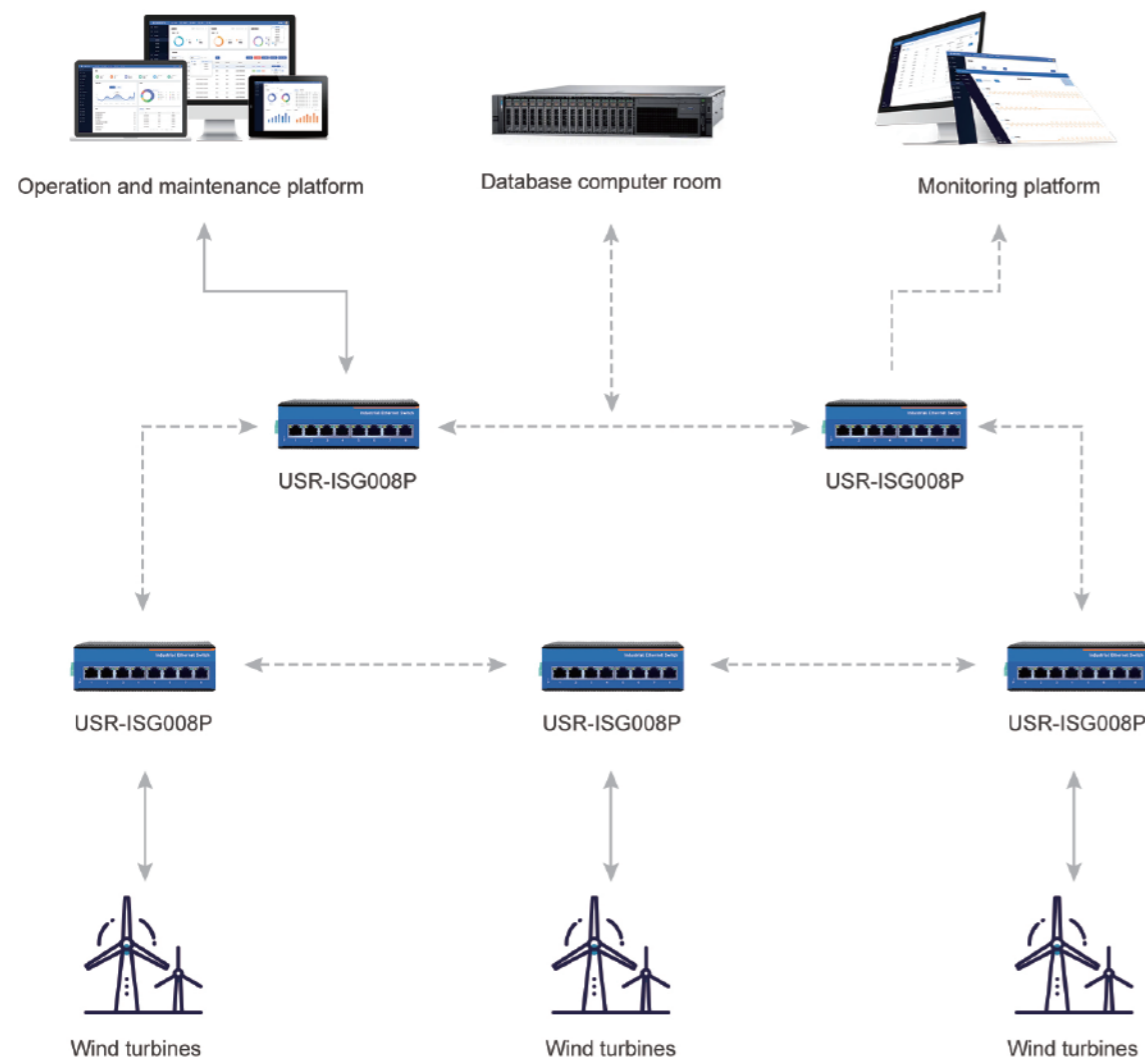
USR-M100 is connected to sensors such as temperature and humidity, water quality to monitor environmental data in real time. Meanwhile, it can automatically control irrigation equipment, blowers, etc based on these data, and can also be viewed and controlled on a PC and mobile phone




Industrial Gigabit Ethernet Switch

New Energy Power Networking Transmission Solution

Industrial Ethernet switches that feature enhanced security, industrial-grade reliability, easy management and network redundancy. Energy project construction and maintenance require industrial switches to realize network interoperability and signal transmission to meet the needs of uninterrupted production.



Industrial Gigabit Ethernet Switch USR-ISG Series

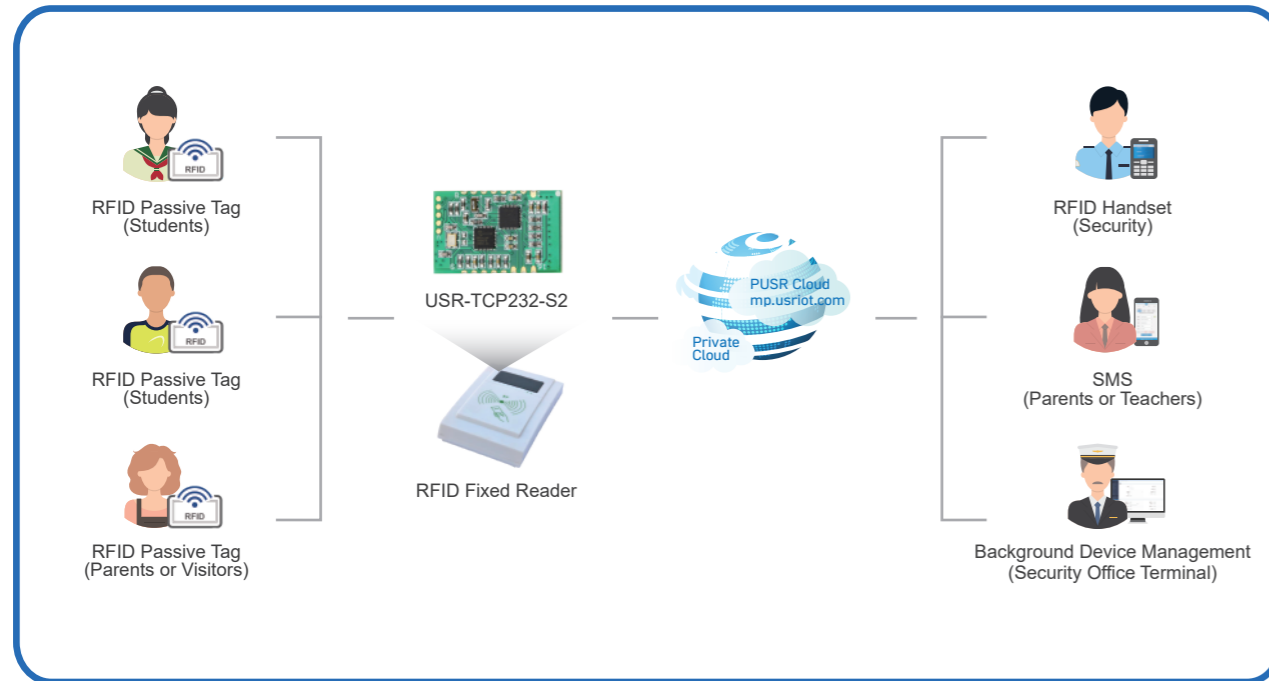


- Plug and play, multi-protocol support
- Full gigabit interface, large bandwidth
- 5 ports, 8 ports, 16 ports optional
- IP40 protection, FCC, CE, ROHS multiple certifications
- DC12~52V wide voltage (PoE optional, voltage DC48~57V)
- Ultra-low delay, up to 3us
- Optical port optional (SPF socket reserved)

Ethernet Module

RFID Reader Solutions

PUSR IOT provides Ethernet modules and embeds them into RFID solutions, which can help schools and parents know the time of arrival and departure of each student. The intelligent RFID system has not only strengthened internal security management, but also provided guarantee for education work.



Difficulties You May Encounter & Our Advantages

RFID chips generally only have a UART serial port, which is not convenient for long-distance data transmission. Information feedback is not timely.

- Cost-effective, to meet the needs of most families
- Keep-alive mechanism, and the abnormal disconnection of the network can be detected in real time

PLC Control and Management
 Various ways of networking
 Remote transparent transmission, high stability

Building Automation
 Improve operational efficiency
 Save energy and manpower

Medical Health
 Higher safety performance
 Convenient data collection and transmission

Smart Home
 Ultra-low power consumption
 Strong anti-interference

USR-TCP232-T2
 Single UART
 PIN Ethernet Module

USR-TCP232-ED2
 Triple UART
 PIN Ethernet Module

USR-TCP232-E2
 Dual UART
 PIN Ethernet Module

USR-K7
 Industrial Type Kport

USR-K6
 Cost-effective Kport

USR-TCP232-S2
 Single UART SMT
 Ethernet Module

Ethernet module can easily realize data transparent transmission between TTL and Ethernet to save manpower, material resources and development time. Modules are widely used for computer room monitoring, medical equipment, instruments and meters, and PLC industrial equipment

USR-K7



- Bi-directional data transparent transmission
- Industrial design, TI, M4 processor
- Optimized TCP/IP protocol stack
- Modbus RTU to TCP, Modbus Polling

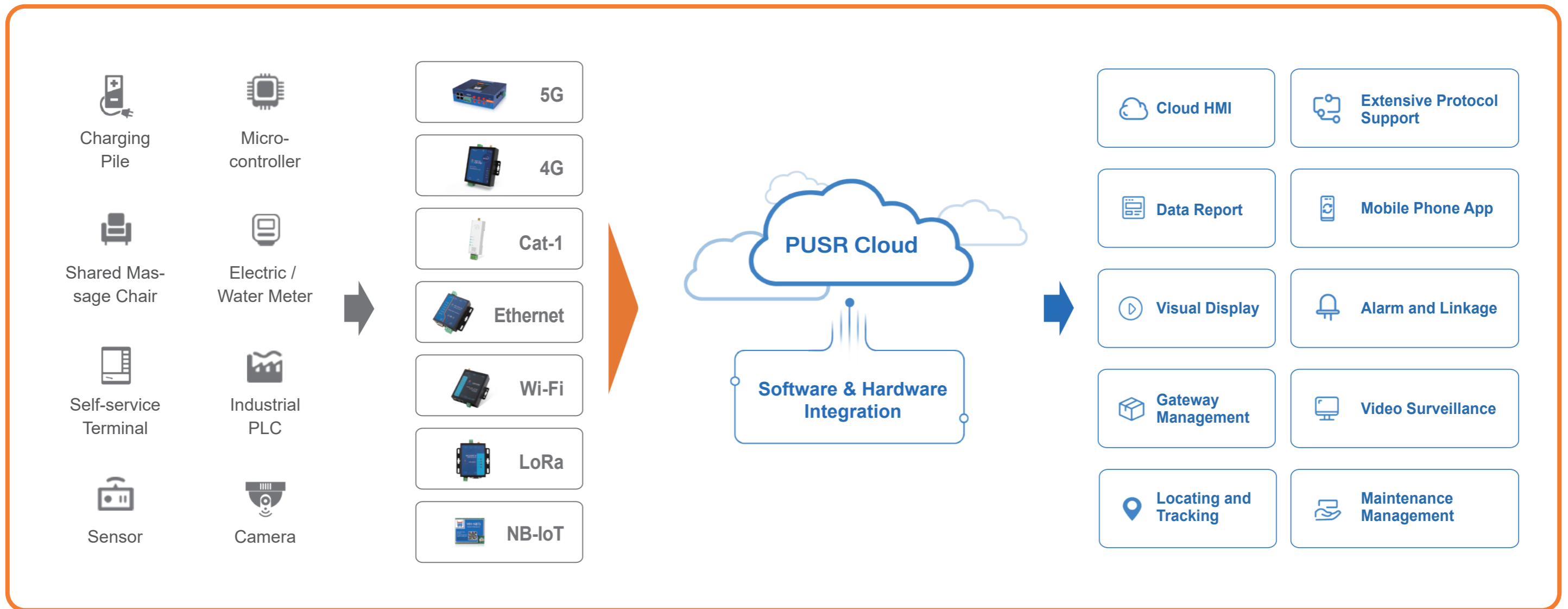
USR-TCP232-ED2



- Websocket web page
- Hardware watchdog design
- Flow control, modbus rtu to tcp
- Two-way data transparent transmission
- Three serial ports work independently

IoT Platform (Software & Hardware Integration Service)

mp.usriot.com



Core Advantages



Software & Hardware Integration

PUSR covers integrated services from hardware to software.



Full Device Connected

All PUSR Devices can access to PUSR Cloud.



Public Cloud Already 500+VIP Users

80% of the functions are free
VIP can enjoy the service of custom brand



Private Cloud 600+ Private Cloud Projects

- Device data localization
- Personalized Customization

Cooperation Method

Production Strength



- **Professional**

Multi-layer board hardware and various RF development capabilities.
Equipped with a professional SMT production chain.

- **Quality**

ISO9001:2015 certification. Upervising and controlling the process to ensure the quality of products.

- **Delivery Time**

Dual factory supporting, efficient supply chain.

**10⁺ Thousand
Square Meter**

Suzhou Factory: 7755 m²
Jinan Factory: 3400 m²



**10⁺ Million
Pcs Materials**

Daily SMT over 10 million pcs materials
Monthly SMT over 100 million pcs materials

Qualification & Certification

R & D Strength

200+

R & D personnel accounted for more than 40%

15+

Authorized Invention Patents

61

Valid Authorized Patents

67

Software Copyrights

125

Domestic Registered Trademarks

2

International Registered Trademarks

