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www.pusr.com

Your Trustworthy Industrial IoT Partner



Industrial Gateways Ranked First in China by Online Sales for Seven Consecutive Years (2019-2025)

* Source: Frost & Sullivan; Based on the "2026 China Online Channel Industrial Gateways Market Independent Market Research Report"

USR IOT

· Official Shop: https://shop.usriot.com/

· Inquiry Email: inquiry@usriot.com

· For Strategic Partnership: ceo@usr.cn

· Floor 12 and 13, CEIBS of Maolingshan, Lixia District, Jinan, Shandong, China

· Wechat/Whatsapp: +86 13405313834

YouTube

Facebook

2026.9

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Industrial Gateways Ranked First in China by Online Sales for Seven Consecutive Years (2019-2025)

* Source: Frost & Sullivan; Based on the "2026 China Online Channel Industrial Gateways Market Independent Market Research Report"

National "little giant" Firms

National High-Tech Enterprise



28M$ Funding
28 Million Dollars
Series A B C Rounds Total

97+ Countries
97+ Countries using our products

25 M+
25 M+ Devices deployed worldwide

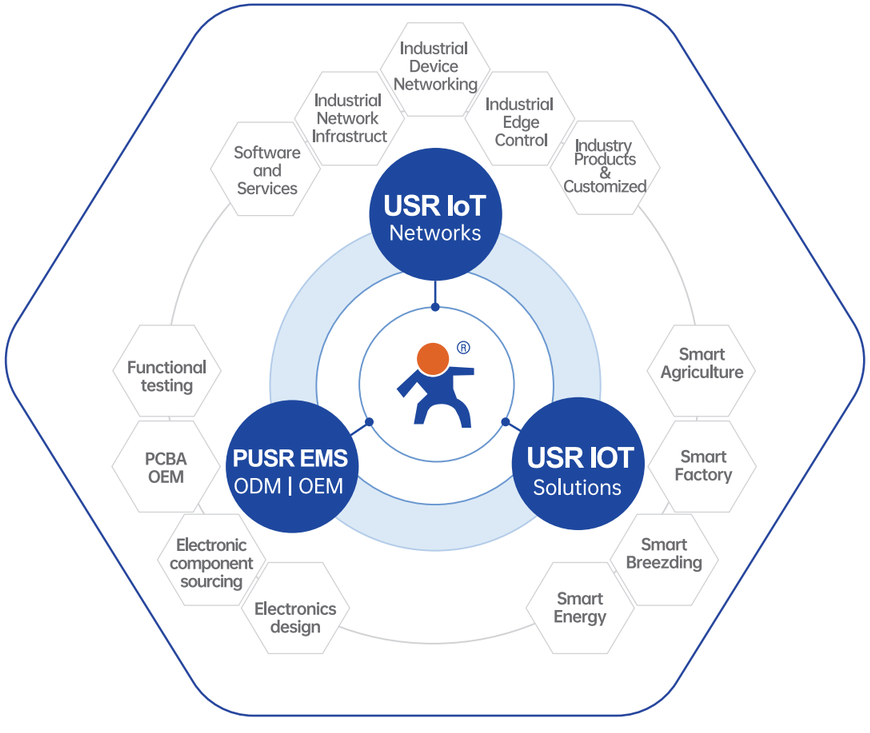
3 Business
USR IOT networks,
USR IIOT solutions, PUSR EMS

2 Factories
Jinan/Suzhou

Your Trustworthy Industrial IoT Partner

Leading industrial IoT software and hardware solutions provider
Shandong USR IOT Company Limited
With more than 600 employees and nearly $28 million in financing
Has own factory with full industry chain service capabilities from chips to cloud.
Provides customers with communication gateways, networking modules,cloud platforms and IoT solutions

Corporate Video



FACTORY OVERVIEW

10000

Suzhou: 7755 Square Meters(m²)
Jinan: 3400 Square Meters(m²)

1000

Component placements per Day:
10 Million pcs
Capacity/Month:
More than hundreds of million

40%

R&D staff

11

SMT lines

Factory Video











Professional

Multi-layer PCB board design and various RF tuning capabilities

Quality

ISO9001:2015 certification
IATF16949:2016 certification

Delivery Time

Two factories,Professional supply chain management.

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PUSR CLOUD

PUSR CLOUD-An automated system dedicated to IoT system deployment P49-51

IoT Platform | Remote Networking | Gateway Management | SIM Card Management



PV Energy | Smart Factory | Smart Water Conservancy | Warehousing AGV Robotics | HVAC Water Utilities | Data-Driven Retail Ecosystem | Livestock Farming

P9-20

IOT GATEWAYS

Network Infrastructure P21-28



Industrial Router
5G / 4G / WiFi7



Industrial Switch
Managed / PoE / Fiber Optic Ring Network



Industrial Local Wireless
AP / Client / Bridge

Industrial Connectivity P29-36



4G Gateway
Edge DataAcquisition / Transparent Transmission



Serial Device Server
Ethernet / WiFi to Serial



Industial LPWAN
LoRa / SparkLink / Swarm / Satellite



CAN / Field Bus
CAN / Profinet / EthCAT /...



IoT Modules
Ethernet / Cellular / LoRa / WiFi

Intelligent sensing device

Edge Computing P37-44



IoT Edge Gateway
PLC / IO Data Acquisition



Embedded Industrial PC
ARM / X86 Architectures; AI Computing Power



Industrial ARM SBC
Full Range of RK Solutions Available



Industrial Touch Panel PC
ARM / X86 Architectures; ESOP



HMI & IO
HMI / Smart HMI / I/O

Smart Sensing P45-48



IoT Sensors
Sensing + Power Supply + Transmission + Cloud



Industry Gateway
PV Data Stick / RTU



Customized Product
Custom Development; PCBA Contract Manufacturing

COMPANY HISTORY



2012-2014

Jinan USR IOT was established and obtained the trademark
Alibaba online
Launch integrated solutions from embedded modules to gateway products.

2011

Business startup

2015-2017

Launch 4G products;
Employee stock ownership platform formation;
Start the PUSR cloud project.





2018-2020

Secure series A and B funding;
Set up Beijing, Wuhan, Chengdu offices;
Build own factory;
Launch Cat.1 series products;
SIM card service launched.



2021-2023

Named National little giant Firms
Secure series C funding
Establish Suzhou factory
Launch 5G, WiFi6, IOT gateway products.



2024-Present

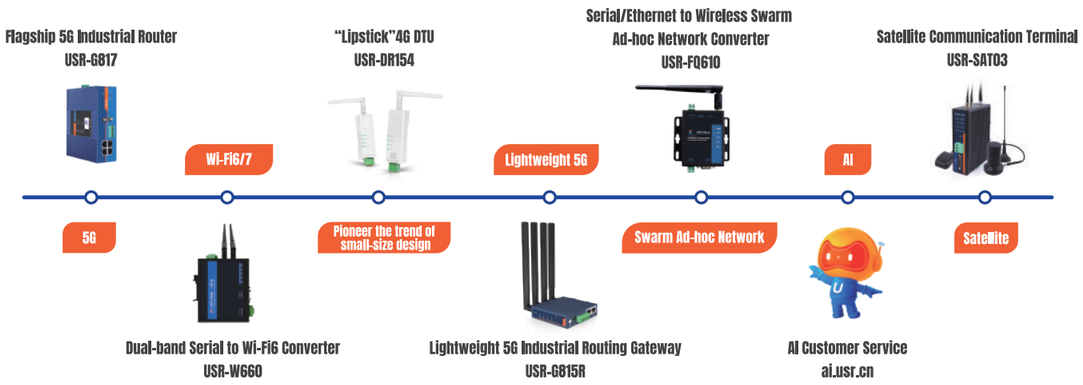
Expansion into sensing and industrial control
Introduction of AI applications
Newly opened Southeast Asia office

Among the top four RMB funds in China three have become shareholders of USR IOT

PUSR®
www.pusr.com

TECHNOLOGICAL FRONTIER

Once new technologies are introduced,
related products are quickly implemented.



CONTINUOUS COOPERATIONS FROM SMALL QUANTITY TO LARGE QUANTITY

Rapid validation in the early stage

Large sales volume and complete product categories

- Ranked first in sales of network infrastructure, edge control, connectivity devices, and industrial communication gateways.
- Integrated products for sensing, configuration, traffic management and networking in specific scenarios, aimed at cost reduction.

R&D frontiers and mass production

- ODM services: MCU + module, R&D frontiers
- PCBA Contract Manufacturing: Providing PCBA contract manufacturing services, with the largest factory scale in the industry.

Large-scale cost reduction in the later stage

Solar Energy System

PUSR Cloud
POWER IOT Platform

Wind Turbine Wireless Communication

Blade
Nacelle
ST208E
Blade-Nacelle Wireless bridge
ST208E
Energy storage cabinet

Energy Storage Monitoring (microgrid)

Solar
Wind
Water
Fire
Industrial Swith
EG628
Energy EMS gateway
School
Hospital
Oil&gast
Charging station
Battery、BMS、PCS、environment

Power and Environment Monitoring System (PEMS)

Electric power IOT gateway
M100-HM
Air conditioning fan, water immersion, UPS, door magnet, human infrared, temperature and humidity

Remote Meter Reading

Electrical protocol gateway
N720
DIN Rail
Current Transformer
Electric Meter
IR-485
Infrared meter reader
Infrared meter

Grid-connected Cabinet Monitoring

G809s
IoT Router with IO
EMC 3 Level,9-60V ,
1G DDR + 8G EMMC
Substation

Charging Pile Networking/settlement

G771
or
DR154
IOT gateway
OEM/ODM for PCBA

PV Generation Data Collecting

WiFi Data Logger
S100
Inverter
Power energy meters

Solutions without 4G Signal Coverage 4G

Wireless convetres FQ610
16-level relay
Covering dozens of kilometers
LG206
A few kilometers
LG206
LoRa communication
Wireless bridge
ST515N
Hundreds of meters
ST515N
SAT03
Satellite IoT Terminal



Residential/Distributed Photovoltaic (PV)



Utility-scale PV plants

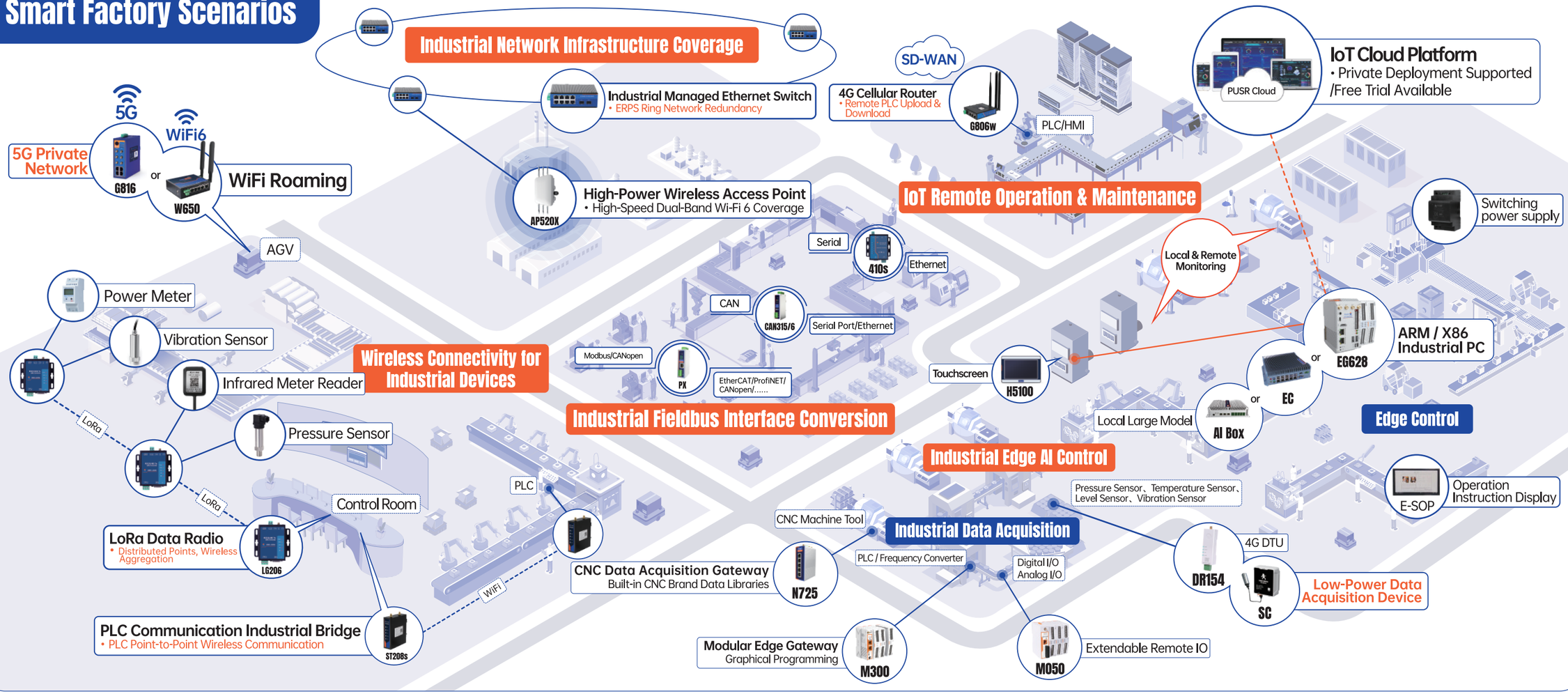


Energy Storage Power Station



EV Charging Pile Network

Smart Factory Scenarios





- Tipping Bucket Rain Gauge
- Radar Level Gauge
- Camera
- Telemetry Terminal



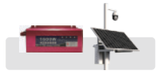
- MCU
- Vibrating Wire Piezometer
- Vibrating Wire Strain Gauge
- GNSS
- LORA DTU



- Sluice Gate
- Gate Controller
- Flow Box
- Gate Positioner
- Solar Power System



- Automatic Water Level & Rainfall Integrated Station
- BeiDou Telemetry Terminal
- Flood Warning Broadcast
- Outdoor LED Warning Display



- PV Module
- Energy Storage Battery
- Inverter Module
- Solar Charge/Discharge Controller



- Hydrological Telemetry Terminal
- Rain Gauge • Level Gauge
- Flow meter • Evaporation
- Camera



- Secondary Water Supply Quality Monitoring Micro-system
- Pump
- PLC Control Cabinet
- M100

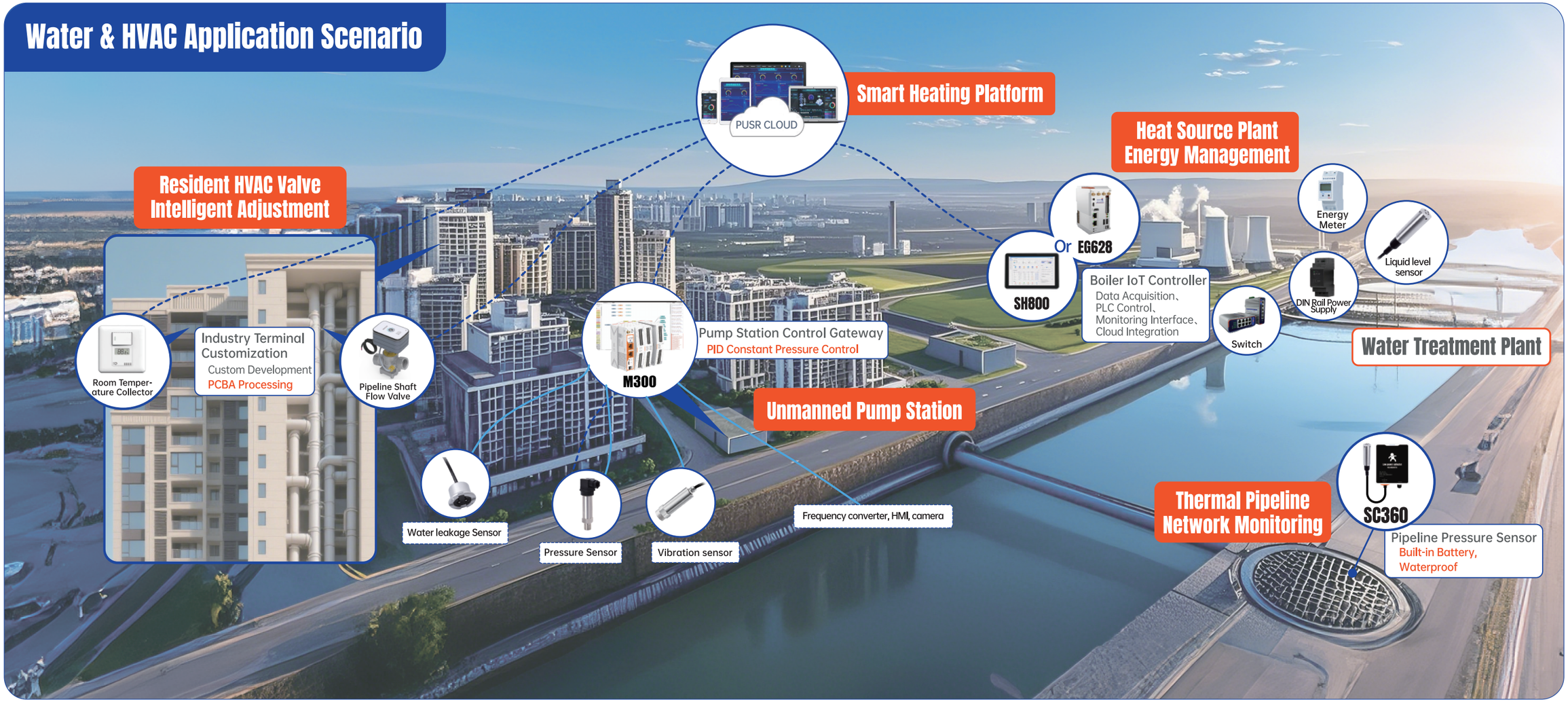


- M300 Pump
- Valve • Pressure Transmitter
- Flow meter • Level Gauge
- Water Quality Analyzer • Electric Meter



- Radar Level Gauge
- Pressure Transmitter
- Telemetry Terminal
- Water Quality Analyzer

Water & HVAC Application Scenario

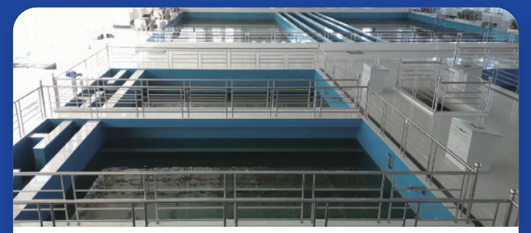




Community Water Supply/Heating



Unmanned Pump House

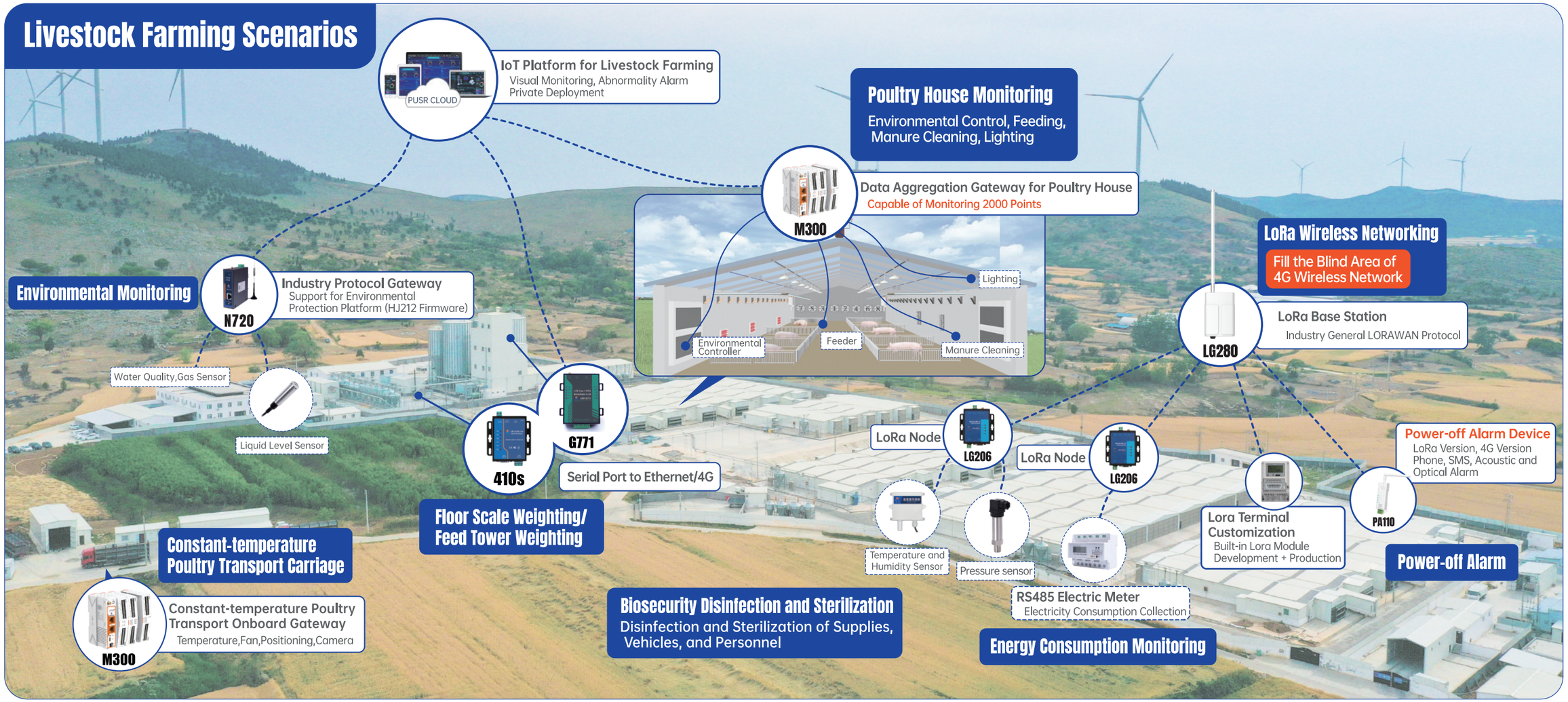


Water Plant Energy Saving



Water Supply Network Monitoring

Livestock Farming Scenarios

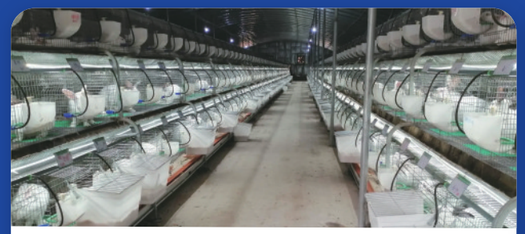




muyuan牧原 Muyuan(002714)



Wens (300498)



Rabbit Farming Base



Poultry House

Warehousing/Industrial Robots

Solution Video

Warehouse WiFi Coverage Solutions

Outdoor IP67 WiFi6 5G AP — NR520X

M6030 Solar power supply

Industrial switch — ISGX424-SFP

AC1000 Access controller

AP530X Tri-bands Ourdoor WiFi6 AP

Elevator

Wireless Networking of vertical warehouse Shelves

Shuttle car

ST508E

ST508E

ST508E

Wireless bridge

Elevator

ST508E

AGV Automatic Elevator Ride

W630s Dual bands serial to WiFi converters

Wireless controller DI/DO/AI/AO linkage — M050

Rolling door

Rolling Door Automatic Control

Robot Remote Debugging

PUSR CLOUD
DM network management system

G806W Golbal 4G Routers
DM network remote momitoring

Unmanned Forklift

Robots Automation

WiFi roaming with low latency

ISG1005 W660 EG628

Robot Networking Kit

AGV

Dual-band WiFi anti-interference

G815 Dual SIM 5G Industrial Routers

AGV

AGV

Charging Station

W630s WiFi conveters for charging piles

Din rail power supply



AGV Moving robot



Service robot in hotel

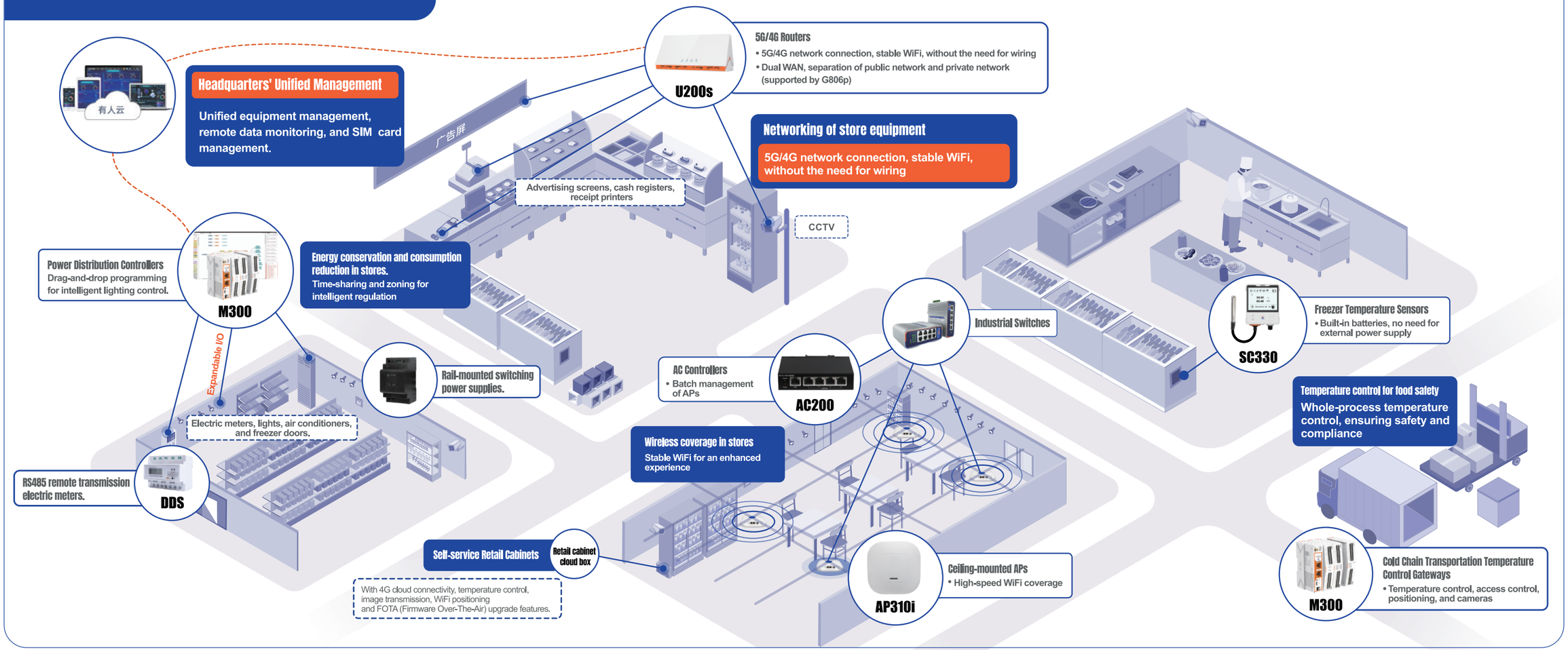


Low-speed unmanned vehicle



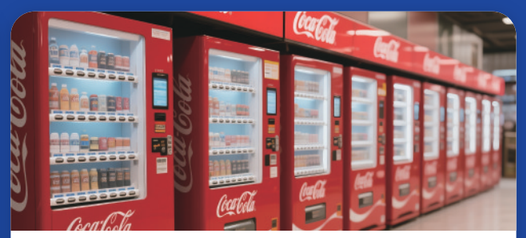
Power inspection robot

New Retail Chain Store Scenarios





Chain Catering



Self-service Retail Cabinets



Chain Pharmacies



Chain Retail Stores



Network Infrastructure

High-Speed and Reliable Network Connections



Industrial Routers | **Industrial Switches** | **Wireless AP/Client** | **Wireless Bridges**



Smart Unmanned Cabinets

Delivery Lockers | Battery Swap Cabinets
Food Delivery Lockers Networking

Yunda (002120) · Hello Ride · Ele.me



Chain Stores

Store Facilities Networking and Centralized Management

zhengxin



Robots / AGV / Elevators

Service robots, Warehouse robots, Elevators...

YUNJI TECHNOLOGY · YUNGTAY · BlueSword (688557)



Ports, Oil Fields, Solar Power Plants

5G + Powered Ports, Oil Fields, Mines, and Power Plants

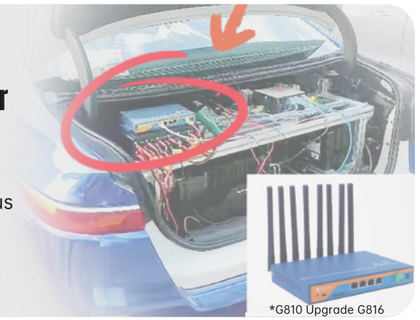
Rizhao Port (600017) · Shengli Oil Field · JILIN ELECTRIC POWER (000875)



Classic 5G Industrial Router

USR-G816

Selected for Xiaomi's Autonomous Driving Road Tests





Dual WiFi 4G Industrial Router

USR-G806W

WAN Failover | VPN Feature



Industrial Grade ISG Ethernet Switch

-40°C to 85°C
6000V Lightning Protection



Industrial Wireless Roaming Client

USR-W660

Qualcomm WiFi 6 Roaming





Wireless Bridge

ST208E

Qualcomm Chip
Enhanced WiFi
Wide coverage 1000meters

APPLICATION CASE VIDEO

5G CELLULAR ROUTER







Model/Function		Lightweight 5G Industrial Router		High-Speed 5G Industrial Router		
		G806R	G807R/G809R	G816	G816h	G817
Cellular	Frequency Band	5G NR:n1/3/5/8/28/41/78/79; LTE：B1/3/5/8/34/38/39/40/41;	5G NR:n1/3/5/8/28/41/78/79; LTE：B1/3/5/8/34/38/39/40/41;	G816G: 5G,NR:n1/n2/n3/n5/n7/n8/n12/n13/n14/n18/n20/n25/n26/n28/n29/n30/n38/n40/n41/n48/n66/n70/n71/n75/n76/n77/n78/n79; LTE:B1/B2/B3/B4/B5/B7/B8/B12/B13/B14/B17/B18/B19/B20/B25/B26/B28/B29/B30/B32/B66/B71/B34/B38/B39/B40/B41/B42/B43/B46(LAA)/B48; WCDMA：B1/B2/B4/B5/B8/B19; G816R: 5G NR:n1/3/5/8/28/41/78/79; LTE：B1/3/5/8/34/38/39/40/41;	5G NR:n1、n28、n41、n78、n79; LTE:B1、B2、B3、B5、B7、B8、B34、B38、B39、B40、B41; WCDMA：B1、B2、B5、B8;	5G NR:n1、n28、n41、n78、n79; LTE:B1、B2、B3、B5、B7、B8、B34、B38、B39、B40、B41; WCDMA：B1、B2、B5、B8;
Key Peripheral Interfaces	Dual SIM	×	√	√	√	Selectable between Built-in/external
	100M Ethernet Port	1WAN/LAN+2LAN	—	—	—	—
	Gigabit Ethernet Port	—	10 Ports: 2WAN/LAN+7LAN（2 Optical, 8 Electrical） 5 Ports version: 2WAN/LAN+3LAN	1WAN/LAN+3LAN	3LAN	1WAN/LAN+3LAN
	Gigabit Optical Port	×	2*SFP	×	×	×
	I/O Interface	×	1DI+1DO	×	×	×
	Serial Port	×	1*RS232+1*RS485	1*RS232/RS485	—	1*RS232/RS485
	TF Card	×	√	×	×	×
	USB	×	√	×	×	×
	Power Supply	DC 9-36V	DC 9-60V	DC 9-36V	DC 9-36V	DC 9-36V
Key Internal Hardware	RTC	×	√	×	×	×
	Built-in Card	Customizable	√	Customizable	Customizable	Customizable
Physical Parameter	Work Temperature	-20℃~70℃	-40℃~75℃	-35℃~75℃	-35℃~75℃	-35℃~75℃
	Dimensions	104*102*28	118*96*49	125.0*103.0*45.0	195.0*195.0*78.3	161.5*138.5*49.0
	Housing Material /Protection	Sheet metal / IP30	Aluminum alloy / IP40	Sheet metal / IP30	Waterproof / IP65	Aluminum alloy / IP30
Cloud Service	Remote Networking	√	√	×	×	×
	Cloud Configuration	—	√	√	×	×
	Access to Built-in Webpage	√	√	√	√	√
WiFi	2.4G WiFi	√	√	√	√	√
	5G WiFi	√	√	√	√	√
	Number of WiFi client	30	60+	32	32	60+
	STA	×	√	√	√	√
VPN	PPTP	√	√	√	√	√
	L2TP	√	√	√	√	√
	IPSec	√	√	√	√	√
	OpenVPN	√	√	√	√	√
	GRE	√	√	√	√	√
	VXLAN	×	√	√	√	√
	DMVPN	×	√	×	×	×
	Wireguard	×	√	×	×	×
Service	SNMP	√	√	√	√	√
	DDNS	√	√	√	√	√
	SMS	×	√	×	×	×
	Alarm	×	√	×	×	×
Modem Related Functions	Edge Computing	—	√	—	—	—
	NET Transparent Transmission	—	√	√	×	√
	MQTT Transparent	—	√	×	×	√
	Modbus Gateway	—	√	√	×	√
More Features	GNSS	×	√	×	×	×
	IPv6	√	√	√	√	√
	Dynamic Routing	×	√	×	×	×
	Policy-Based Routing	×	√	×	×	×
	Secondary	×	√	×	×	×
	Edge Data Acquisition	×	√	×	×	×
	VLAN Management	√	√	×	×	√

4G CELLULAR ROUTER








Model/Funcations		Economic 4G Industrial Router		Industrial 4G Industrial Router		Flagship 4G Industrial Router		Outdoor 4G Router
		G805s	DR185s-G	G806w	G806p	G807s	G809s	AP510-G
Cellular	Frequency Band	`-G: LTE-FDD: B1/2/3/4/5/7/8/12/13/18/19/20/25/26/28/66; LTE-TDD: B34/38/39/40/41; WCDMA：B1/2/4/5/6/8/19; GSM/EDGE:B2/3/5/8;	TDD-LTE: B34/38/39/40/41 FDD-LTE: B1/2/3/4/5/7/8/12/13/14/17/18/19/20/25/26/28/66/71	`-G: TDD-LTE:B34/38/39/40/41; FDD-LTE: B1/2/3/4/5/7/8/12/13/18/19/20/25/26/28/66; WCDMA：B1/2/4/5/6/8/19; GSM/EDGE:B2/3/5/8; -AU: TDD-LTE:B40; FDD-LTE：B1/2/3/5/7/8/28; WCDMA：B1/2/4/5/8; GSM/EDGE:B2/3/5/8; -E: TDD-LTE:B38/40/41 FDD-LTE：B1/3/7/8/20/28A WCDMA：B1/8; GSM/EDGE:B3/8;	`-G: TDD-LTE:Band 34/38/39/40/41 FDD-LTE：Band 1/2/3/4/5/7/8/12/13/18/19/20/25/26/28/66 WCDMA:B1/2/4/5/6/8/19 GSM: B2/3/5/8	`-G: TDD-LTE:Band 34/38/39/40/41 FDD-LTE：Band 1/2/3/4/5/7/8/12/13/18/19/20/25/26/28/66 WCDMA:B1/2/4/5/6/8/19 GSM：B2/3/5/8	`-G: TDD-LTE:Band 34/38/39/40/41 FDD-LTE：Band 1/2/3/4/5/7/8/12/13/18/19/20/25/26/28/66 WCDMA:B1/2/4/5/6/8/19 GSM：B2/3/5/8	TDD-LTE: B34/38/39/40/41 FDD-LTE: B1/2/3/4/5/7/8/12/13/18/19/20/25/26/28/66 WCDMA: B1/2/4/5/6/8/19 GSM/GPRS/EDGE: B2/3/5/8
Key Peripheral Interfaces	Dual SIM	√	√	Selectable between Built-in/external	√	√	√	√
	100M Ethernet Port	1WAN+1WAN/ LAN+3LAN	1 WAN/LAN +1 LAN	1WAN/LAN+2LAN	1WAN+1WAN	—	—	1 WAN/LAN +1 LAN
	Gigabit Ethernet Port	×	×	×	×	2WAN/LAN+3LAN	2WAN/LAN+7LAN(2 Optical, 8 Electrical)	×
	Gigabit Optical Port	×	×	×	×	×	2*SFP	×
	I/O Interface	×	×	×	×	1DI+1DO	1DI+1DO	×
	Serial Port	×	×	×	1RS232+1RS485	1RS232+1RS485	1RS232+1RS485	×
	TF Card	×	×	×	×	√	√	×
	USB	×	√ (Type-C debug)	×	×	√	√	×
	Power Supply	DC 9-36V	DC 5V/2A	DC 9-36V	DC 9-48V	DC 9-60V	DC 9-60V	DC 9-36V
	POE	×		×	×	Customizable	Customizable	
Key Internal Hardware	RTC	×	×	×	×	√	√	×
Physical Parameter	Work Temperature	-20℃~70℃	-25℃~75℃	-20℃~70℃	-40℃~75℃	-40℃~75℃	-40℃~75℃	-40℃~70℃
	EMC	GB 2B		GB 3B	GB 3B	GB 3B	GB 3B	
	Dimensions	127.0*84.0*27.0	79*66*22	102*104*28	110*85*30	118*96*49	118*96*49	172.06*89.94*57.06
	Housing Material /Protection	Sheet metal / IP30	Metal housing / IP30	Sheet metal / IP30	Sheet metal / IP30	Aluminum alloy / IP40	Aluminum alloy / IP40	ABS / IP65
Cloud Service	Remote Networking	√	√	√	√	√	√	√
	Cloud Configuration	—	√	×	√	√	√	√
WiFi	2.4GWiFi	√	×	√	√	√ WiFi6	√ WiFi6	√
	5GWiFi	×	×	×	×	√ WiFi6	√ WiFi6	×
	Number of WiFi client connections	20	—	20	20	60+	60+	8
VPN	PPTP	√	√	√	√	√	√	√
	L2TP	√	√	√	√	√	√	√
	IPSec	√	√	√	√	√	√	√
	OpenVPN	√	√	√	√	√	√	√
	GRE	√	√	√	√	√	√	√
	VXLAN	×	×	√	×	√	√	×
	DMVPN	×	×	×	×	√	√	×
	Wireguard	×	×	×	×	√	√	×
Service	SNMP	√	√	√	√	√	√	√
	DDNS	√	√	√	√	√	√	√
	SMS	√	×	√	√	√	√	×
	Alarm	×	×	×	×	√	√	×
Modem Related Functions	Edge Computing	—	×	—	—	√	√	×
	NET Transparent Transmission	—	×	×	√	√	√	×
	MQTT Transparent Transmission	—	×	×	√	√	√	×
	Modbus Gateway	—	×	×	√	√	√	×
More Features	GNSS	×	×	×	√	√	√	×
	IPv6	√	√	√	√	√	√	√
	Dynamic Routing	×	×	×	×	√	√	×
	Policy-Based Routing	×	×	×	×	√	√	×
	Secondary	×	√	×	×	√	√	×
	Edge Data Acquisition	×	×	×	×	√	√	×
	VLAN Management	√	×	√	√	√	√	√

Industrial Ethernet switch

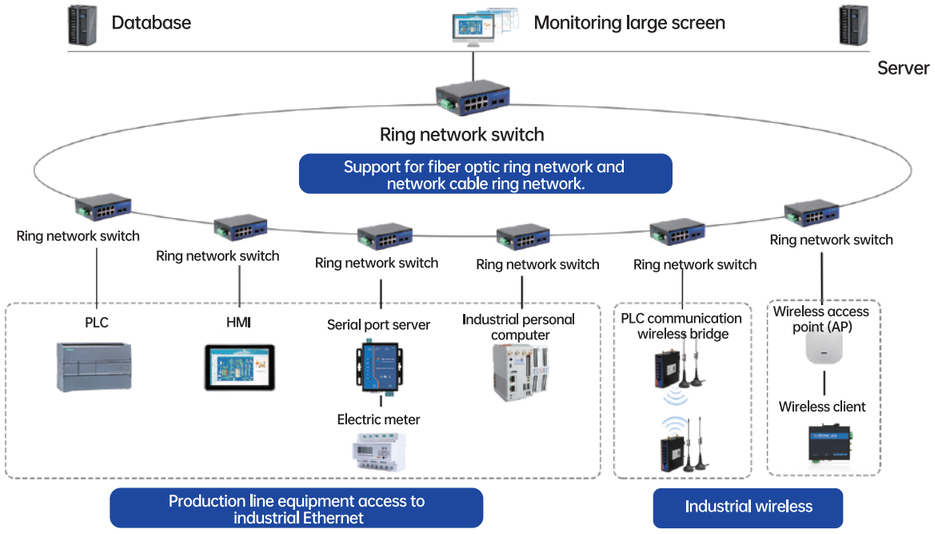
Series	Model	Description
Commercial grade Housing Material: Aluminum Alloy Power Supply Range: Normal: DC 12-48V EMC Protection:GB Standard 2B Operating Temperature: -40℃~75℃	SF1005	5-port 100Mbps
	ISF2005	5-port 100Mbps (Wide Voltage Power Supply)
	SG1005	5-port 1000Mbps
	SF1008	8-port 100Mbps
	SG1008	8-port 1000Mbps
	S1210P	1x1000 Mbps SFP+1x1000 Mbps uplink ports + 8x1000 Mbps PoE ports (RJ45)
	ISF2008	8-port 100Mbps
	ISG2005	5-port 1000Mbp
	ISG2008	8-port 1000Mbps
Platinum Series (Industrial Grade) Housing Material: Aluminum Alloy Power Supply Range:DC 9.6-60V EMC Protection:GB Standard 3B Operating Temperature:-40℃-85℃	ISF1005	5-port 100Mbps
	ISG1005	5-port 1000Mbps
	ISF1008	8-port 100Mbps
	ISG1008	8-port 1000Mbps
	ISF1216-SFP	2FO+16CU，Gigabit optical, 100Mbps electrical ports
	ISG1204S-SFP	2FO+4CU，Gigabit，Managed Type
	ISG1208-SFP	2FO+8CU，Gigabit
	ISG1208P-SFP	2FO+8CU，Gigabit POE
	ISG1408-SFP	4FO+8CU，Gigabit
	ISG1224-SFP-1U	2FO+24CU，Gigabit Rack-Mount Type
Black Gold Series (Industrial Grade) Power Supply Range: Normal: DC 12-52V POE: DC 48-57V POE: DC 48-57V EMC Protection: GB Standard 4B Operating Temperature: -40℃~85℃	SDR050-L	5-port 100Mbps
	ISF005P	5-port 100Mbps POE
	ISG005	5-port 1000Mbps
	ISG005P	5-port 1000Mbps POE
	ISF008P	8-port 100Mbps POE
	ISG008	8-port 1000Mbps
	ISG008P	8-port 1000Mbps POE
	ISF016	16-port 100Mbps
	ISF016P	16-port 100Mbps POE
	ISG016	16-port 1000Mbps
	ISG016P	16-port 1000Mbps POE
	ISF024	24-port 100Mbps
	ISG024	24-port 1000Mbps
	ISG104-SFP	1FO + 4CU , Gigabit
	ISG105-SFP	1FO + 5CU , Gigabit
	ISG108-SFP	1FO + 8CU , Gigabit
	ISG108P-SFP	1FO + 8CU , Gigabit POE
	ISF206-SFP	2FO+6CU, Gigabit for FO and 100 Mbps for CU,Managed Type
	ISG208S-SFP	2FO+8CU,Gigabit Managed Type
	ISF216-SFP	2FO+16CU 100Mbps Managed Type
	ISG216-SFP	2FO+16CU Gigabit
	ISG216S-SFP	2FO + 16CU Gigabit Managed Type
	ISG216P-SFP	2FO + 16CU Gigabit POE Managed Type
	ISG2024P-SFP	2FO + 24CU Gigabit POE Managed Rack-Mount Type
	ISG406-SFP	4FO + 6CU Gigabit
	ISG408-SFP	4FO + 8CU Gigabit
	ISG408S-SFP	4FO + 8CU Gigabit Managed Type
	ISG412S-SFP	4FO + 12CU Gigabit Layer 3 Managed
	ISG416-SFP	4FO + 16CU Gigabit Managed Type
	ISG416P-SFP	4FO + 16CU Gigabit POE Managed Type
	ISGX404-SFP	4FO 10Gigabit + 4CU Gigabit Layer 3 Managed
	ISGX408-SFP	4FO 10Gigabit+ 8CU Gigabit Layer 3 Managed
	ISGX424-SFP	4FO 10Gigabit+ 24CU Gigabit Layer 3 Managed Rack-Mount Type
	ISG802-SFP	8FO + 2CU Gigabit
	ISG808S-SFP	8FO + 8CU Gigabit Managed Type
	ISG816S-SFP	8FO + 16CU Gigabit Managed Type
	ISG2224S-SFP-1U	2FO + 24CU Gigabit Managed Rack-Mount Type
	ISGX2424RP-SFP-1U	4FO 10Gigabit+ 24CU Gigabit Layer 3 POE Managed Rack-Mount Type
	ISGX2448R-SFP-1U	4FO 10Gigabit+ 48CU Layer 3 Managed Rack-Mount Type (Single Power Supply)
	ISGX2448R-SFP-1U-DS	4FO 10Gigabit+ 48CU Gigabit Layer 3 Managed Rack-Mount Type (Dual Power Supply)



Series	Model	Description
SFP Module	SFP-GE-SX-MM850-500M	Multi-mode dual-fiber with LC interface, Gigabit, SM850, 500M
	SFP-GE-LX-SM1310-20KM	Single-mode dual-fiber with LC interface, Gigabit, SM1310, 20KM
	SFP-GE-LX-SM1310-40KM	Single-mode dual-fiber with LC interface, Gigabit, SM1310, 40KM
	SFP-GE-LX-SM1310-20KM-LC	Single-mode single-fiber with LC interface, Gigabit, SM1310, 20KM
	SFP-GE-LX-SM1310-20KM-SC	Single-mode single-fiber with SC interface, Gigabit, SM1310, 20KM
	SFP-GE-LX-SM1550-20KM-LC	Single-mode single-fiber with LC interface, Gigabit, SM1550, 20KM
	SFP-GE-LX-SM1550-20KM-SC	Single-mode single-fiber with SC interface, Gigabit, SM1550, 20KM
	SFP-10G-LR-SM1310-20KM	Single-mode dual-fiber with LC interface, 10 Gigabit, SM1310, 20KM
Fiber Optic Transceiver	USR-6311G-SC20/A	1 optical port and 1 electrical port, Gigabit, single-mode single-fiber, optical fiber transceiver
	USR-6311G-SC20/B	1 optical port and 1 electrical port, Gigabit, single-mode single-fiber, optical fiber transceiver
	USR-6311G-SC20	1 optical port and 1 electrical port, Gigabit, single-mode dual-fiber with SC interface, optical fiber
	USR-6211GP-SFP	1 optical port and 1 electrical port, Gigabit, SFP interface, optical fiber transceiver with POE
	USR-6311G-SFP	1 optical port and 1 electrical port, Gigabit, SFP interface, optical fiber transceiver with POE
	USR-6312G-SFP	1 optical port and 2 electrical ports, Gigabit, SFP interface, optical fiber transceiver
	USR-6312G-SC20/A	1 optical port and 2 electrical ports, Gigabit, single-mode single-fiber, optical fiber transceiver
	USR-6312G-SC20/B	1 optical port and 2 electrical ports, Gigabit, single-mode single-fiber, optical fiber transceiver
Vehicle-mounted Switch	USR-ISF005-M12-BG	Wall-mounted Plug-in 100Mbps 5-port Switch
	USR-ISG005-M12-BG	Wall-mounted Plug-in Gigabit 5-port Switch
	USR-ISF008-M12-BG	Wall-mounted Plug-in 100Mbps 8-port Switch
	USR-ISG008-M12-BG	Wall-mounted Plug-in Gigabit 8-port Switch
	USR-ISF005-M12-CZ	Vehicle-mounted Bent-pin 100Mbps 5-port Switch

Ring network redundancy, ensuring uninterrupted communication.

Based on the ERPS protocol, it enables carrier-class rapid self-healing in case of link failures, meeting the requirements for service redundancy protection.



Wireless AP



Function	Model	Indoor Ceiling-mounted AP	Outdoor Waterproof AP (Dual-band)					Outdoor Waterproof AP (Tri-band)
		AP310i/NR310i	AP520X/NR520X	AP520X-SE	AP520X-SG	AP530X-SE	AP530X-SG	AP530X/NR530X
RAM		512MB	512MB	512MB	512MB	512MB	512MB	512MB
FLASH		128MB+8MB	128MB+8MB	128MB + 32MB	128MB + 32MB	128MB+8MB	128MB+8MB	128MB+8MB
5G Cellular		√	√	×	×	×	×	√
SIM Card Slot		1	1	×	×	×	×	1
Cellular Antenna		4 (Built-in)	4 (Built-in)	×	×	×	×	4 (Built-in)
Wireless Technology		WIFI 6 AX3000	WIFI 6 AX3000	WiFi 6 AX3000	WiFi 6 AX3000	WiFi 6 AX5400	WiFi 6 AX5400	WIFI 6 AX7800
MIMO		2×2+2×2	2×2+2×2	2×2 + 2×2	2×2 + 2×2	2×2 + 4×4	2×2 + 4×4	2×2+2×2+4×4
WiFi Antenna		4 (Built-in)	4 (External)	4 (External)	4 (External)	4 (External)	4 (External)	6 (External)
Client Load Capacity		128（2.4G）+128（5G）	128（2.4G）+128（5G）	128（2.4G）+128（5G）	128（2.4G）+128（5G）	128（2.4G）+128（5G）	128（2.4G）+128（5G）	128（2.4G）+128（5G）
Bandwidth		160/80/40/20 MHz	160/80/40/20 MHz	160/80/40/20 MHz	160/80/40/20 MHz	160/80/40/20 MHz	160/80/40/20 MHz	160/80/40/20 MHz
Maximum Transmit Power		25dBm	27dBm	27dBm	27dBm	27dBm	27dBm	27dBm
Network Port		1×2.5Gbps WAN（PoE IN）+1× 1Gbps LAN	1×1Gbps WAN/LAN（PoE IN）	1×1Gbps WAN/LAN (PoE IN)	1×1Gbps WAN/LAN (PoE IN)	1×2.5Gbps WAN/LAN (PoE IN)	1×2.5Gbps WAN/LAN (PoE IN)	1×2.5Gbps WAN/LAN（PoE IN）
Power Supply		48V PoE(802.3at)or48V DC	48V PoE(802.3at)	48V PoE(802.3at)	48V PoE(802.3at)	48V PoE(802.3at)	48V PoE(802.3at)	48V PoE(802.3at)
Maximum Power Consumption		15W	15W	15W	15W	16W	16W	15W
Bare Machine Size (mm)		190*190*42	263.6*198.46*82	235.1*163.6*41.5	245.5*163.6*41.5	235.1*163.6*41.5	245.5*163.6*41.5	263.6*198.46*82
Installation Method		Ceiling-mounted	Pole-mounted	Pole-mounted	Pole-mounted	Pole-mounted	Pole-mounted	Pole-mounted
EMC		National Standard 3B	National Standard 3B	National Standard 2B	National Standard 2B	National Standard 2B	National Standard 2B	National Standard 3B
Operating Temperature		0℃ ~ +40℃	-40℃ ~ +70℃	-20℃ ~ +65℃	-20℃ ~ +65℃	-20℃ ~ +65℃	-20℃ ~ +65℃	-40℃ ~ +70℃
Weight		< 500G	< 1.8KG	660g	975g	717g	1.03KG	< 1.8KG
Reset Button		√	√	√	√	√	√	√

AC Controller



Function	Model	Small-sized AC Controller	Rack-mounted AC Controller
		AC200	AC1000
RAM		2Gbit	2Gbit
FLASH		128Mbit	128Mbit
Gigabit WAN		1	1
Gigabit LAN		4（PoE out）	4
USB		1 * micro USB Debugging Port	1*USB2.0+1*USB3.0
Power Supply		53.5V DC/1.22A	100~240V 50/60Hz AC
POE Power Supply		48V（802.3af/at）	——
Power Consumption		The maximum power consumption of a single board is 5W. The maximum output power of a single POE port is 30W. The maximum output power of the whole POE device is 57W.	The maximum power consumption of a single board is 12W
Bare Machine Size (mm)		110×95×25	440*250*44.5
EMC		National Standard 2B	National Standard 2B
Operating Temperature		0℃ ~ +45℃	0℃ ~ +45℃

Parameters of the wireless client, please refer to page 33.

Wireless Bridge



Function \ Model	High-power Outdoor Wireless Bridge	Small-sized Outdoor Wireless Bridge	Elevator Monitoring Wireless Bridge	PLC Communication Wireless Bridge
	ST515N	ST508E	ST208E	ST208S
Chip Solution	Qualcomm	Qualcomm	Qualcomm	Qualcomm
100Mbps Network Port	1	1	2	2
Wireless Standard	5.8G	5.8G	2.4G	2.4G
Wireless Rate	300Mbps	300Mbps	300Mbps	300Mbps
Transmit Power	29dBm	29dBm	20dBm	20dBm
Antenna Coverage Angle	Horizontal 60° Vertical 30°	Horizontal 60° Vertical 30°	Horizontal 60° Vertical 30°	Omnidirectional
Maximum Transmission Distance	5km	2km	1km	500m
Power Supply Method	12-24V Passive PoE	12-24V Passive PoE	DC9-24V /Passive PoE	DC9-24V /Passive PoE
Average Power Consumption	< 6w	< 4.5w	< 4.5w	< 4.5w
Bare Machine Size (mm)	158*97*38	141*77.5*53	140.7*77.39*53	85*76*25
Housing / Protection	ABS/IP64	ABS/IP64	ABS/IP64	Sheet Metal / IP30
Installation Method	Wall-mounted / Pole-mounted	Wall-mounted / Pole-mounted	Wall-mounted / Pole-mounted	Guide Rail / Hanging Ear
Operating Temperature	-40℃ ~ +70℃	-40℃ ~ +70℃	-40℃ ~ +70℃	-40℃ ~ +70℃
Service Button	√	√	√	√
Bare Machine Weight	< 200g	< 300g	< 200g	< 300g
Maximum Number for One-to-Many	64	64	8	8
Cloud Management	——	——	√	√
Open API Interface	——	——	√	√
Packaging Method	Single Unit	In Pairs	In Pairs	In Pairs
Pre-paired at Factory	——	——	√	√

5G+WiFi6 CPE



5G + WiFi6 CPE Model Selection				5G+WiFi7
Product Series	U200 Basic Model	U200 High-performance Model	U300	NR370i
Frequency Band	5G NR:n1/n28/n41/n77/n78/n79; LTE:B1/B3/B5/B8/B34/B38/B39/B40/B41	'-S: 5G,NR SA/NSA: n1/n2/n3/n5/n7/n8/n12/n13/n14/n18/n20/n25/n26/n28/n29/n30/n38/n40/n41/n48/n66/n70/n71/n75/n76/n77/n78/n79; LTE,FDD:B1/B2/B3/B4/B5/B7/B8/B12/B13/B14/B17/B18/B19/B20/B25/B26/B28/B29/ B30/B32/B66/B71; LTE TDD: B34/B38/B39/B40/B41/B42/B43//B48; WCDMA:B1/B2/B4/B5/B8/B19; '-L: LTE,FDD:B1/B2/B3/B4/B5/B7/B8/B12/B13/B14/B18/B19/B20/B25/B26/B28/B66/B71; LTE TDD:B38/B39/B40/B41; WCDMA:B1/B2/B4/B5/B6/B8/B19;	5G,NR SA/NSA: n1/n2/n3/n5/n7/n8/n12/n13/n14/n18/n20/n25/n26/n28/n29/n30/n38/n40/n41/n48/n66/n70/n71/n75/n76/n77/n78/n79; LTE FDD: B1/B2/B3/B4/B5/B7/B8/B12/B13/B14/B17/B18/B19/B20/B25/B26/B28/B29/ B30/B32/B66/B71; LTE TDD: B34/B38/B39/B40/B41/B42/B43/B46(LAA)/B48;	5G SA/NSA: n1/n2/n3/n5/n7/n8/n12/n13/n14/n18/n20/n25/n26/n28/n29/n30/n38/n40/n41/n48/n66/n70/n71/n75/n76/n77/n78/n79 LTE-FDD: B1/B2/B3/B4/B5/B7/B8/B12/B13/B14/B17/B18/B19/B20/B25/B26/B28/B29/B30/B32/B66/B71 LTE-TDD: B34/B38/B39/B40/B41/B42/B43/B48 LAA: B46 WCDMA: BB1/B2/B4/B5/B8/B19
Applicable Region	China	Global		
Core Solution	Unisoc	Qualcomm	Qualcomm	Qualcomm
Cellular	5G All-network Access	Three options available: 5G Global Access / 4G Global Access / No Cellular	5G Global Access	5G Global Connect
WiFi6	AX1800	AX3000	AX3000	BE6500
Theoretical Number of Devices Supported	32 units	256 units	256 units	512 units
Gigabit Network Port	1LAN	1WAN/LAN+3LAN	1WAN/LAN+2LAN	1WAN/SFP+4LAN
Housing Material	ABS	ABS	Sheet Metal	Sheet metal
Antenna	Built-in	Built-in	External	External



Industrial device networking

Full coverage of communication methods

1/2 Serial device server market share

2/5 DTU market share



Data transmission DTU | Serial device server | WiFi serial device server

CAN communication | Cellular Module | LoRa networking



Animal Husbandry

Power failure alarm, Biosafety, LoRaWAN full link

Muyuan (002714) | Wens (300498) | New Hope Liuhe (000876)



Smart building

Building park equipment and facility management
Water Supply, Electrical Power, Heating, HVAC, Elevator

Chengxing Property Management | Xiamen International Conference & Exhibition Center



Agriculture/Water treatment

Precise and efficient resource conservation
Help the development of agriculture and water treatment industry

Dayu Water-saving Group (300021) | Beijing Enterprises Water Group (00371)

*Data statistics are from Taobao in November 2022

Serial Server

Stronger protocol handling

Isolated 16-port RS485 rack-mount Serial Server N916





Edge serial server N780/N716
4/8/16-port isolated RS485



Edge computing, 1K tags, store-and-forward
2-Serial port N720



More noise immunity, more serial ports

Best-selling for 10 years
410s
1*RS485 + 1*RS232



1/2/4/8-port serial options
N510/520/540/580



Basic transparent transmission

Online bestseller, hit lipstick
DR134: 1*RS485
DR132: 1*RS232



Single serial port
302: 1*RS232
304: 1*RS485
306: 1*RS485/232/422



Data transmission DTU



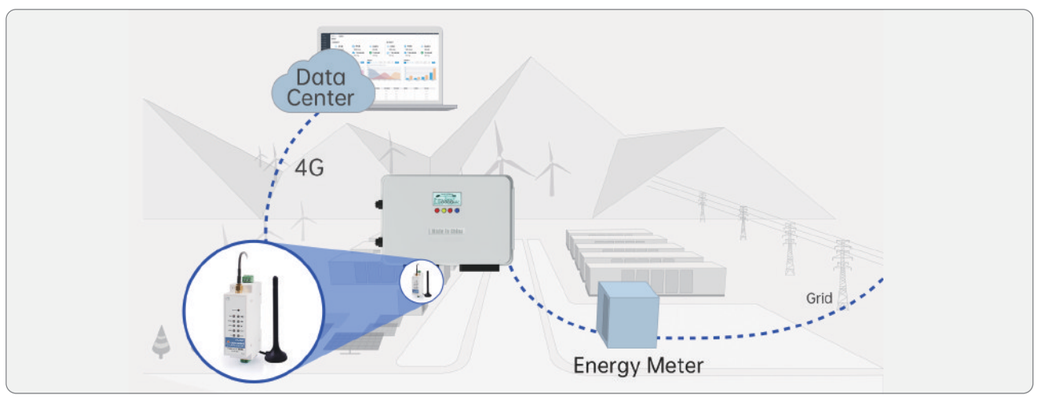





Function/Model		Lipstick DTU	High cost-effective light DTU	Cost-effective DIN-Rail 4G LTE Cat.1 DTU	Cost-effective DIN-Rail 4G LTE Cat.4 DTU	High reliability 4G LTE Cat.4 DTU	Edge Computing Cat.1 DTU
		DR154/DR152	G771	DR502	DR504	G786	N720-G
Hardware	Power	DC 5-24V	DC 9-36V	DC 9-36V	DC 9-36V	DC 9-36V	DC 9-36V
	EMC	Level 2	Level 3	Level 3	Level 3	Level 3	Level 3
	Serial Port	DR154 (1*RS485) DR152 (1*RS232)	1*RS485/1*RS232	1*RS485	1*RS485	1*RS485/1*RS232	2*RS485
	Baud Rate	600bps~230400bps	1200 ~ 230400	1200 ~ 230400	2400 ~230400	2400 ~ 230400	2400 ~ 230400
	Data Bits	7,8	8	8	8	8	8
	Stop Bit	1,2	1,2	1,2	1,2	1,2	1,2
	Parity Bit	NONE,EVEN,ODD	NONE,ODD,EVEN	NONE,ODD,EVEN	NONE,ODD,EVEN	NONE,ODD,EVEN	NONE,ODD,EVEN
Cellular	Network Type	LTE Cat.1	LTE Cat.1	LTE Cat.1	LTE Cat.4	LTE Cat.4	LTE Cat.1
	Frequency Band	LTE FDD：B1/3/5/7/8/20/28	LTE FDD： B1/B3/B7/B8/B20/B28 GSM/GPRS/EDGE： 900/1800MHz	LTE FDD： B1/B3/B7/B8/B20/B28 GSM/GPRS/EDGE： 900/1800MHz	LTE FDD： B1/B2/B3/B4/B5/B7/B8/B12/B13/B18/B19/B20/B25/B26/B28 LTE TDD：B38/B39/B40/B41 WCDMA： B1/B2/B4/B5/B6/B8/B19 GSM：B3/B8	LTE FDD: B1/B2/B3/B4/B5/B7/B8/B12/B13/B18/B19/B20/B25/B26/B28 LTE TDD：B38/B39/B40/B41 WCDMA: B1/B2/B4/B5/B6/B8/B19 GSM：B3/B8	TDD-LTE: B34/38/39/40/41 FDD-LTE: B1/2/3/4/5/7/8/12/13/14/17/18/19/20/25/26/28/66/71
	SIM	1*SIM	1*SIM	1*SIM	1*SIM	1*SIM	1*SIM
	Applicable Region	European	European	European	Global	Global	Global
Working Environment	Operatng temperature	'-25℃ ~+75℃	'-30℃ ~+75℃	'-30℃ ~+75℃	'-30℃ ~+75℃	'-30℃ ~ +75℃	-40℃~85℃
	Relative huminity	5%~95%(Non-condensing)	5%~95%(Non-condensing)	5%~95%(Non-condensing)	5%~95%(Non-condensing)	5%~95%(Non-condensing)	5%~95%(Non-
Physical	Installation	DIN Rail	Wall Mount	DIN Rail		Wall Mount	Wall mount
	Dimension (L)*(W)*(H)	74*24*22mm	82.6×86×25mm	44.5×31.8×13.94mm	44.5×31.8×13.94mm	111.51×94×28mm	86*30*98.5mm
Software	Protocols	TCP/UDP/HTTP/MQTT/DNS/NTP/FTP/SSL	TCP/UDP /DNS/HTTP/MQTT/SSL/TLS	TCP/UDP /DNS/HTTP/MQTT/SSL/TLS	TCP/UDP/DNS/HTTP/FTP	TCP/UDP/DNS/HTTP/FTP	MQTT/TCP
	Registration Packet	√	√	√	√	√	√
	Heartbeat Packet	√	√	√	√	√	√
	Transparent Transmission Mode	√	√	√	√	√	√
	Modbus RTU/TCP protocol conversion	√	×	×	√	√	✓
	Configuration	Serial,Net,SMS AT commands					Webpage

Solar Energy Remote Monitoring

The USR-DR502 supports a variety of network protocols, including TCP/UDP/MQTT (SSL), and can send photovoltaic power generation data to the customer-specified data monitoring center, enabling real-time monitoring of photovoltaic power generation and other information.



Serial device server








Function/Model		Cost-effective serial device server		High-performance edge computing serial device server		New-Generation China-made Edge Data Acquisition Gateway
		DR134/DR132	TCP232-30X	TCP232-410s	N5X0	N720-ETH
Basic information	Processor	China-made solution, Cortex-M4 processor	China-made solution, Cortex-M4 processor	ST solution, Cortex-M7 processor	ST solution, Cortex-M7 processor	Advanced solution, Cortex-M7 processor
	Operation system	Freertos	Freertos	Freertos	Freertos	Open Harmony
Hardware functions	Power supply range	DC 5 ~ 24V	302/304：DC 5 ~ 7V 306：DC 5 ~ 36V	DC 5 ~ 36V	DC 5 ~ 36V	DC 9 ~ 36V
	EMC protection	Level 2	Level 3	Level 3	Level 3	Level 3
	Number of serial ports	DR132(1*RS232) DR134(1*RS485)	302(1*RS232)304(1*RS485) 306(1*RS485/RS232)	2* RS485+RS232	N510(1*RS485) N520(2*RS485/RS232) N540(4*RS485) N580(8*RS485)	2*RS485
	Disconnection	×	×	×	×	✓, External TF card
Edge computing gateway	Number of points	25 points	25 points	128 points	300 points	1000 points
	Source of points	Serial port	Serial port	Serial port network port virtual points (calculation between points)	Serial port network port virtual points (calculation between points)	Serial port network port virtual points (calculation between points)
	Batch operation of points	JSON import and export		Supports import and export, point table configuration in CSV format	Supports import and export, point table configuration in CSV format	Supports import and export, point table configuration in CSV format
	Calculation formula	Ratio calculation only		Combination calculation of addition, subtraction, multiplication and division	Combination calculation of addition, subtraction, multiplication and division	Combination calculation of addition, subtraction, multiplication and division
	Reporting rules	Change report/periodic report		Change report/periodic report/timing report	Change report/periodic report/timing report	Change report/periodic report/timing report
	Data reading and writing	JSON supports 1 point read or write command each time		JSON, supports up to 5 points read and write instructions each time	JSON, supports up to 5 points read and write instructions each time	JSON read and write
	Number of channels	1 channel	1 channel	1 channel	1 channel	5 channels, 2 sockets + 2
Collection protocol	ModbusRTU	✓	✓	✓	✓	✓
	ModbusTCP	✓	✓	✓	✓	✓
	DL/T645	×	×	✓	✓	✓
Communication link	Transparent transmission application	✓	✓	✓	✓	×
	Network protocol	TCP/UDP/HTTP/MQTT	TCP/UDP/HTTP/MQTT	TCP/UDP/HTTP/MQTT	TCP/UDP/HTTP/MQTT	TCP/MQTT
	Maximum client for a single channel	16	16	16	N510/N520/N540 : 16 N580 : 8	×
	SSL/TLS encryption	×	×	✓	✓	✓
Protocol conversion	JSON	✓	✓	✓	✓	✓
	SNMP	×	×	×	✓	×
USR cloud	Cloud access method	Access cloud by id	Access cloud by id	Access cloud by SN	Access cloud by SN	Access cloud by SN
	USR cloud function	×	×	Support edge computing synchronization point table	Support edge computing synchronization point table	Device Configuration Point List Upload to Cloud, USR Cloud Remote Access to Built-in Web Interface
Internal features	Customized web	✓	✓	✓	✓	×
	485 anti-collision	×	×	✓	✓	✓
	HTTPS access to WEB	×	×	×	✓	✓
	TELNET	×	×	×	✓	×
	NTP function	×	×	✓	✓	✓
	Web log	×	×	✓	✓	✓

Ethernet Module






Function/Model	TCP232-E2/ED2	TCP232-T2/S2	K2/K3	K5/K6/K7
Processor	Imported chip, M7 core	Cortex-M0	K2(Cortex-M0) K3(Cortex-M4)	K5(Cortex-M0) K6(Cortex-M0) K7(Cortex-M7)
Hardware interface	2*TTL, pin type (E2) 3*TTL, pin type (ED2) 10Mbps/100Mbps Ethernet Port Speed	1*TTL(T2:pin type; S2:SMD type) 1*RJ45、10/100Mbps Speed	1*TTL 1*RJ45,10 /100 Mbps Speed	1*TTL 1*RJ45, 10/100 Mbps Speed
Working mode	TCP/UDP/HTTP/MQTT/modbus/SNMP/TELNET/TLS	TCP/UDP/HTTPD/Modbus	TCP/UDP/HTTPD/Modbus	TCP/UDP/HTTPD/Modbus
Edge computing	—	—	—	—
SSL/TLS encryption	√	—	—	—

Wireless Client (Wi-Fi Serial Device Server)



Feature/Model		High-performance (Qualcomm processor)				Commercial		
		W660s	W650	W630s	W610s	USR-DR404	USR-W610	USR-DR164/162
WiFi Parameters	WiFi Standards	IEEE 802.11a/b/g/n/ac/ax	IEEE 802.11a/b/g/n/ac	IEEE802.11a/b/g/n/ac	IEEE802.11b/g/n	IEEE802.11b/g/n	IEEE802.11b/g/n	IEEE802.11a/b/g/n
	2.4G WiFi	√	√	√	√	√	√	√
	5G WiFi	√	√	√	——	——	——	√
	WiFi Distance	Outdoor: 2.4G up to 200m; 5G up to 500m	Outdoor: 2.4G/5G up to 200m	Outdoor openarea 2.4G WiFi up to 400m 5G WiFi up to 200m	Outdoor open area 2.4G WiFi up to 400m	Outdoor open area 2.4G WiFi up to 450m	Outdoor open area 2.4G WiFi up to 150m	Outdoor open area 2.4G WiFi up to 200m
	Wireless Network Types	AP/STA/AP+STA/Bridge	AP/STA/AP+STA/Bridge	STA、AP、STA+AP、Bridge, Router	STA、AP、STA+AP、Bridge, Router	STA、AP、STA+AP、Bridge, Router	STA、AP、STA+AP、Bridge, Router	STA、AP、STA+AP
	Wireless Security Mechanism	WEP/WPA-PSK/WPA2-PSK	WEP/WPA-PSK/WPA2-PSK	WPA-PSK/WPA2-PSK/WPA3-SAE	WPA-PSK/WPA2-PSK/WPA3-SAE	WPA-PSK/WPA2-PSK	WPA-PSK/WPA2-PSK	WPA-PSK/WPA2-PSK
	AP Clients Numbers	16+	16+	16	8	8	8	8
	WiFi Roaming	√	√	——	——	——	——	——
Hardware Parameters	Power Voltage	DC12-48V	DC12-48V	DC9-36	DC9-36	DC9-36	DC9-36	DC9-36
	OperatingTemperature	-40℃~75℃	-40℃~75℃	-25℃~75℃	-25℃~70℃	-40~85℃	-40~85℃	-40~85℃
	EMC	ESD Level 4; EFT/Surge Level 3	ESD Level 4; EFT/Surge Level 3	EMC Level 3	EMC Level 3	EMC Level 3	EMC Level 3	EMC Level 2
	Watchdog	Software + Hardware	Software + Hardware	Software+Hardware	Software+Hardware	Software+Hardware	Software+Hardware	Software+Hardware
	1000Mbps RJ45	1 WAN/LAN + 4 LAN	1 WAN/LAN+ 4 LAN	——	——	——	——	——
	100Mbps RJ45	√	√	1*WAN/LAN、1*LAN	1*WAN/LAN、1*LAN	1*WAN/LAN	1*WAN/LAN	——
	RS485	√	√	√	√	√	√	√
	RS232	√	√	√	√	√	√	√
	Serial works independently	√	√	√	√	——	——	——
	Casing Material/Protection	Aluminum housing / IP30	Aluminum housing / IP30	Metal shell , Protection Grade IP30	Metal shell , Protection Grade IP30	V0 flame-retardant housing	Metal shell, Protection Grade IP30	V0 flame-retardant housing
	Dimensions	119*94*35mm	119*94*35mm	110.5*105*26mm	89*103.7*26mm	109.66*28*64.71mm	84.0 x84.0 x25.0mm	92*24*22mm
	Installation	DIN rail mounting	DIN rail mounting	Wall mounting	Wall mounting	Din rail mounting	Wall mounting	Din rail mounting
Serial Parameters	Baudrate	1200-230400	1200-230400	1200-230400	1200-230400	1200-230400	1200-230400	1200-230400
	Data Bit	7, 8	7, 8	7, 8	7, 8	7, 8	7, 8	7, 8
	Parity	1, 2	1, 2	1, 2	1, 2	1, 2	1, 2	1, 2
	Flow Control	√	√	√	√	√	√	——
	485 Anti-Collision	√	√	√	√	——	——	——
	Serial Cache	——	——	——	——	Sending cache is 4KByte, , receiving cache is 4KByte	Sending cache is 4KByte, , receiving cache is 4KByte	——
DTU	Protocol	TCP/UDP/HTTP/MQTT	TCP/UDP/HTTP/MQTT	TCP/UDP/HTTP TCP/UDP/MQTT/ PUSR Cloud/Alibaba Cloud/AWS	TCP/UDP/HTTP TCP/UDP/MQTT/ PUSR Cloud/Alibaba Cloud/AWS	TCP/UDP/HTTP TCP/UDP/MQTT/ PUSR Cloud/Alibaba Cloud	TCP/UDP/HTTP TCP/UDP/MQTT/ PUSR Cloud/Alibaba Cloud	TCP/UDP/HTTP TCP/UDP/MQTT/PUSR Cloud
	MQTT	√	√	√	√	√	√	√
	SSL/TLS	√	√	√	√	√	√	——
	Data Tunnel	6	6	6	6	2	2	2
	Maximum numbers of TCP Clients	16	16	16	16	24	24	5
	Modbus Polling	√	√	√	√	√	√	√
	Modbus RTUto Modbus TCP Conversion	√	√	√	√	√	√	√
	Cloud Polling	√	√	√	√	√	√	√
	WebSocket	——	——	——	——	√	√	——
	Heartbeat Packet	√	√	√	√	√	√	√
	Identity Packet	√	√	√	√	√	√	√
	Timeout Reconnect	√	√	√	√	√	√	√
	Timeout Restart	√	√	√	√	√	√	√
Device Management	PUSR Cloud Management	√	√	√	√	——	——	——
	SNMP	√	√	√	√	——	——	——
	DDNS	√	√	√	√	——	——	——
	Web Management	√	√	√	√	√	√	√
	Serial AT Commands Configuration	√	√	√	√	√	√	√
	Network ATCommands Configuration	√	√	√	√	√	√	√
Routing	Routing Configuration	√	√	√	√	√	√	——
	Port Forwarding	√	√	√	√	——	——	——
	DHCP	√	√	√	√	——	——	——
	Firewall	√	√	√	√	——	——	——
	Port/MAC/IP Filter	√	√	√	√	——	——	——

CAN Communication



Features/Model		CAN Protocol Converter			CAN FD Protocol Converter		CAN FD Protocol Gateway	All-In-One CAN Converter
		CAN115	CAN114	CAN112	CAN315	CAN316	CAN518	CAN528
Product Series	Product Type	CAN to Ethernet	CAN to RS485	CAN to RS232	CAN FD to Ethernet	CAN FD to RS485/RS232	CAN FD to Ethernet/485/232(Isolation version)	2*CAN(FD) to Ethernet/Fiber/RS485
	Product Design	White plastic shell, lipstick			White aluminum panel shell, din rail		White aluminum alloy shell, din rail	Aluminum housing, DIN rail
Hardware	Power Voltage	DC 5~24V			DC 9~36V			DC9-70V
	Number of Ethernet Ports	1	×	×	1	×	1	1
	Number of Serial Ports	×	RS485	RS232	×	RS485/RS232	RS485/RS232	RS485
	Number of CAN Ports	1×CAN			1×CAN FD		1×CAN FD	2*CAN(FD)
Protection	Electric Isolation	×	×	×	×	×	Strong isolation of power supply, serial port and CAN port	Isolation for all interfaces
	EMC	Level 3			Level 3			Level 3
Protocol Conversion	Filtering	14 groups			32 groups of designated IDs/extended frame/standard frame			
	Conversion Mode	Transparent conversion/Transparent band ID conversion/Standard protocol conversion	Transparent conversion/Transparent band ID conversion/Standard protocol conversion/ Custom frame header and trailer/Modbus					CAN(FD) to Ethernet/RS485/Fiber optic
	CANFD to Modbus RTU(master/slave)	×	×		×	√	√	√
	CANFD to Modbus TCP(master/slave)	×	×		√	×	√	√
Network Protocol	CAN Working Mode	Normal/listen only/loop	-	-	Normal/listen only/loop	-	Normal/listen only/loop	Normal/listen only/loop
	Network Working Mode	TCP/UDP	-	-	TCP/UDP	-	TCP/UDP	TCP/UDP/MQTT
	SOCKET	1	1	1	2	2	2	2
	Maximum numbers of TCP Clients	4	-	-	14	-	14	2
	Heartbeat Packet	CAN/Network heartbeart	-	-	CAN/Network/Serial heartbeat	-	CAN/Network/Serial heartbeat	CAN/Network/Serial
	Identity Packet	√	-	-	√	-	√	√

Solar Data Stick



Model	USB Knob Connector	USB Buckle Connector	USB Knob Connector	Small Aviator Connector (11.1mm)	Big Aviator Connector (12.6mm)				
Adapter Cable	--	--	--	--	--				
Inverter Brand	Huawei	GoodWe | Chint | SolaX	Growatt | SOFARSOLAR | Solinteg | SAJ Electric	Hopewind | INVT | MEGAREVO	KSTAR | Afore | EAST | TBEA | RCT Power | CSI Solar	Ginlong	SUNGROW	AiSWEI	Sineng Electric

LoRa Gateway



Function / Model		LoRa Gateway	LoRa DTU					LoRa Module
		USR-LG210-H	USR-LG206-H	USR-LG207-H	USR-DR206-H	USR-DR216-H (AC Power Supply)	USR-DR124	WH-L101-H
Wireless Parameters	RF Chip	Sx1262	Sx1262	Sx1262	Sx1262	Sx1262	Sx1281	Sx1262
	Operating	860-930Mhz	803-930MHz	860-930Mhz	803-930MHz	803-930MHz	2.4GHz-2.5GHz	803-930MHz
	Modulation	LoRa	LoRa	LoRa	LoRa	LoRa	LoRa、FLRC	LoRa
	Transmit	24 -30dBm ±1	20 -30dBm ±1	17-30dBm ±1	10-22dBm ±1	10-22dBm ±1	10-27dBm±1	10-22dBm ±1
	Transmission Distance	4.5km	6km	8km	6km	6km	6km	6km
	Private	√	√	√	√	√	√	√
	Wireless Data Rate	Max. 18.23 Kbps	Max. 62.5 Kbps	Max. 21.87 Kbps	Max. 62.5 Kbps	Max. 62.5 Kbps	LoRa: 2.38-253.9kbps	Max. 62.5 Kbps
	Network	Star Topology	Point-to-Point + Star	Point-to-Point + Star	Point-to-Point + Star	Point-to-Point + Star	Point-to-Point	Point-to-Point + Star
Serial Port Parameters	RS485	√	√	√	√	√	√	——
	RS232	√	√	√	√	√	——	——
	TTL	——	——	——	——	——	——	√
	Baud Rate	1200-115200					1200-921600	1200-115200
	Data Bits	7,8						
	Parity	NONE,ODD,EVEN						
	Stop Bits	1,2						
	Serial Port	——	1 KB	——	1 KB	1 KB	1 KB	1 KB
	Max. Bytes per Packet	240	240	200	240	240	LoRa: 240 FLRC: 110	240
Communication Functions	Transparent	√	√	√	√	√	√	√
	Master-Slave	——	√	√	√	√	√	√
	Addressed	——	√	√	√	√	√	√
	Networked	√	——	——	——	——	——	——
	ID-Tagged	√	√	——	√	√	√	√
	Relay	——	√	——	√	√	√	√
	Compatible	——	√	——	√	√	——	√
	Signal	——	√	——	√	√	√	√
	Uplink Communicatio	MQTT, TCP/UDP, Alibaba Cloud, USR	LoRa	LoRa	LoRa	LoRa	LoRa	LoRa
	Edge Data	√	——	——	——	——	——	——
Hardware Parameters	Power Supply	DC9 -36	DC9 -36	DC12-36	DC8 -24V	AC120-240V	DC8 -24V	DC1.9-3.7V
	Power Consumption	12V/0.75A	TX Current 44.3 mA @ 12 V Standby Current 10.4 mA @ 12 V	TX Current 350 mA @ 12 V Standby Current 15 mA @ 12 V	TX Current 26.5 mA @ 12 V RX Current 8 mA @ 3.3 V	——	——	TX Current 110 mA @ 3.3 V RX Current: 8 mA @ 3.3 V Min. Current: 2.5 uA @ 3.3 V
	Operating	-40℃ ~ 85 ℃	-40℃ ~ 85 ℃	-40℃ ~ 85 ℃	-40℃ ~ 85 ℃	-40℃ ~ 85 ℃	-40℃ ~ 85 ℃	-40℃ ~ 85 ℃
	Hardware	EMC433	EMC433	EMC433	EMC222	EMC333	EMC222	——
	Watchdog	Software +	Software +	Software +	Software +	Software +	Software +	Software
	Dimensions	134.07x108.02x37.5mm	86.0x102.2x25.0mm	102.2x86.0x25.0mm	109.66*64.67*28mm	109.66*64.67*28mm	92*24*22mm	26.65*18.22*2.6mm
	Enclosure / Protection	Metal enclosure, IP30	Metal enclosure, IP30	Metal enclosure, IP30	V-0 flame-retardant material	V-0 flame-retardant material	V-0 flame-retardant material	——
	Mounting	DIN rail / mounting	Mounting ears	Mounting ears	DIN rail	DIN rail	DIN rail	SMD
Configuration Methods	PC	√	√	√	√	√	√	√
	AT Commands	√	√	√	√	√	√	√
	Ethernet	√	——	——	——	——	——	——
	Remote	——	——	——	——	——	√	——

LoRaWAN/SWARM

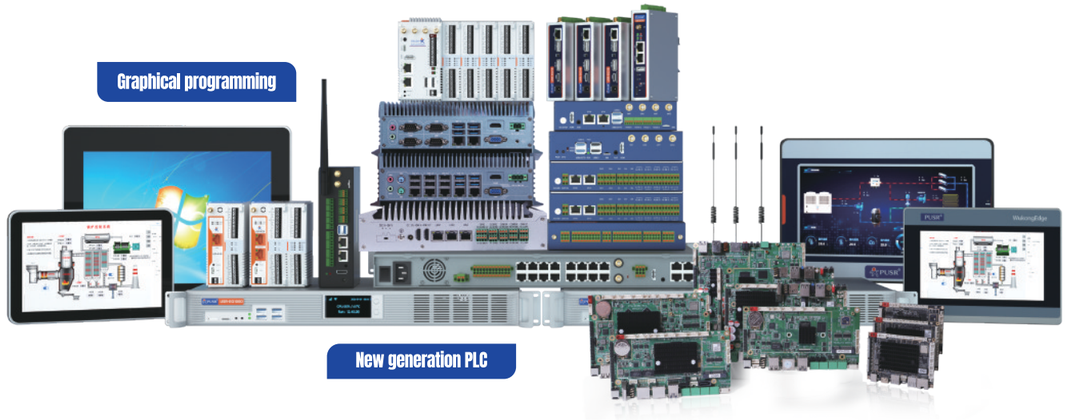


Features/Model		LoRaWAN DTU		LoRaWAN Module	LoRaWAN Gateway		Swarm	
		DR206(LoRaWAN)	DR216(LoRaWAN)	L101(LoRaWAN)	LG270(Indoor)	LG280(Outdoor)	FQ610	FQ310
Wireless Parameters	Wireless Solution	Sx126x	Sx126x	Sx126x	Sx1302	Sx1302	Swarm Ad-hoc network	Swarm Ad-hoc network
	Frequency Band	CN470, 470-510MHz AU915, 902-928MHz EU868 , 868-873MHz	CN470, 470-510MHz AU915, 902-928MHz EU868 , 868-873MHz	CN470, 470-510MHz AU915, 902-928MHz EU868 , 868-873MHz	CN470, 470-510MHz AU915/US915/AS923, 902-928MHz EU868 , 868-873MHz	CN470 , 470-510MHz AU915, 902-928MHz EU868, 868-873MHz	825~850MHz 902~928MHz	902~928MHz
	Modulation Mode	Standard LoRaWAN	Standard LoRaWAN	Standard LoRaWAN	Standard LoRaWAN	Standard LoRaWAN	Swarm Ad-hoc network	Swarm Ad-hoc network
	Transmitting Power	Peak : 21±0.5dBm	Peak : 21±0.5dBm	Peak : 21±0.5dBm	Peak27dBm	Peak27dBm	10-27dbm	17-27dBm
	Network Capacity	Networking with Gateway	Networking with Gateway	Networking with Gateway	1000+	2000	1024	256
	Relay	——	——	——	——	——	16-hop automatic relay	8-hop automatic relay
	Transmission Distance	5km in openarea	5km in openarea	5km in openarea	10km in open area	10km in open area	1km*16 in open area	1-3 km*16 in open area
	Protocol Version	1.0.3 protocol	1.0.3 protocol	1.0.3 protocol	1.1.0 protocoland below	1.1.0 protocol and below	——	——
	Wireless data rate	1-21kbps	1-21kbps	1-21kbps	1-21kbps	1-21kbps	740kbps	740kbps
	Network Access Mode	OTAA/ABP	OTAA/ABP	OTAA/ABP	OTAA/ABP	OTAA/ABP	1s fast automatic networking	1s fast automatic networking
Serial Parameters	RS485	√	√	——	√	——	√	√
	RS232	——	——	——	√	——	√	√
	TTL	——	——	√	——	——	——	——
	Baudrate	1200-115200	1200-115200	1200-115200	600-1230400	——	1200-921600	600-230400
	Data Bit	7, 8			7, 8	——	7, 8	7, 8
	Parity	NONE, ODD, EVEN			NONE, ODD , EVEN	——	NONE, ODD , EVEN	NONE/ODD/EVEN/MARK/SPACE
	Stop Bit	1, 2			1, 2	——	1, 2	1, 2
	Maximum bytes per packet	222	222	222	222	——	1024	1024
I/O	DI	——	——	——	1 * DI	——	——	——
	DO	——	——	——	1 * DO	——	——	——
Communication Functions	Working Mode	Class C	Class C	Class C	Class A/B/C	Class A/B/C	Serial/Network broadcast mode, Wireless serial server mode, Wireless switch	Serial/Network broadcast mode, Wireless serial server mode, Wireless switch mode
Hardware Parameters	Power Voltage	DC8~24V	AC120~240V	DC1.9V~3.7V	DC9~48V	802.3af-standard PoE power supply	DC9~24V	DC9~36V
	Power Consumption	Transmit: 0.54W Receive: 0.13W Standby: 0.13W	Transmit: Average2.64W Receive: Average1.54W Standby : Average1.54W	Transmit current 112mA@3V3 max Receive current 8mA@3V3 max Sleep current 5μA@3V3 ave	Average 3.5W, peak 6.6W	Average 3.6W, peak 4.8W	Peak: average 2.2W Standby: average 1W	Peak: average 3.1W Standby: average 4.7W
	Operating Temperature	-40~85℃	-40~85℃	-40~85℃	-25~75℃	-40℃~70℃	-25~75℃	-25~75℃
	Ethernet Port	——	——	——	RJ45	POE	RJ45	RJ45
	Hardware Protection	EMC222	EMC333	——	EMC333	EMC333	EMC222	EMC332
	Watchdog	Software+Hardware	Software+Hardware	Software	Software+Hardware	Software+Hardware	Software+Hardware	Software+Hardware
	Dimensions	109.66*28*64.67mm	109.66*28*64.67mm	26.65 x 18.22 x 2.60mm	135 × 104.5 × 51 mm	240*164*90.9 mm	84.0 x 84.0 x 25.0 (mm)	97*65*28.5 mm
	Casing Material/ Protection	V0 flame-retardant material	V0 flame-retardant material	——	Metal shell	Metal shell, IP67	Metal shell, IP30	Metal shell
	Installation	Din rail mounting	Din rail mounting	SMD mounting	DIN rail / Wall mounting	Wall mounting or pole mounting	Wall mounting	DIN rail / Wall mounting
Configuration	Web page	——	——	——	√	√	——	——
	Setup Tool	√	√	√	——	——	√	√
	AT Commands	√	√	√	——	——	√	√



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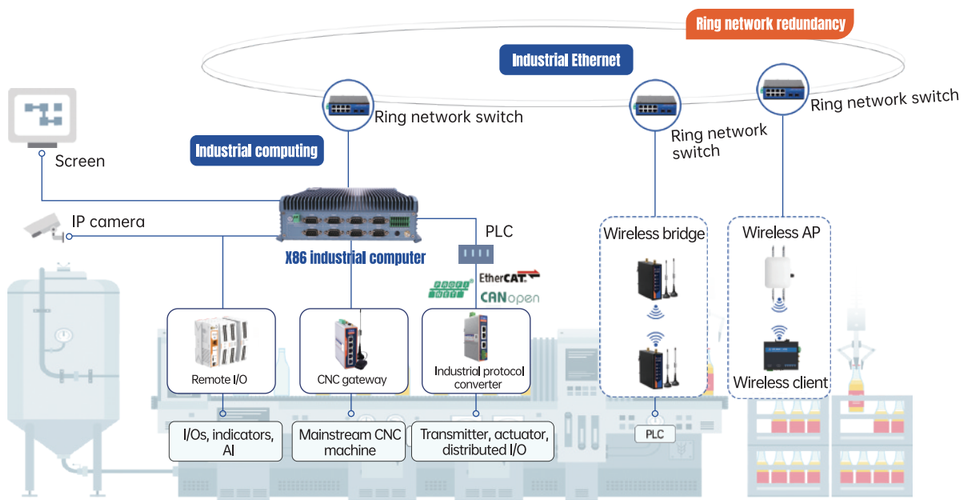




Feature/Model	USR-EC100	USR-EC300	USR-EC500
CPU	Celeron J6412	i5-7200U	i5-7200U
Memory(SRAM)	8GB(16GB)	8GB(16GB/32GB)	8GB(16GB/32GB)
Storage(ROM)	128GB Wide Temp SSD	128GB Wide Temp SSD	128GB Wide Temp SSD
Hard DriveExpansion	1*MiniPcie 1*MSATA	1*MSATA	1*MiniPcie 1*MSATA
Operating System	WIN10(WIN11/Ubuntu)	WIN10(WIN11/Ubuntu)	WIN10(WIN11/Ubuntu)
Display Interface	2*HDMI(4096*2160)	1*HDMI(4096*2160) 1*VGA(1920*1200)	1*HDMI(4096*2160) 1*VGA(1920*1200)
Ethernet Ports	2*1000M(RJ45)	2*1000M(RJ45)	5*1000M(RJ45)
WIFI	WIFI 2.4/5.8G	WIFI 2.4/5.8G	WIFI 2.4/5.8G
Audio	1*Line-out / 1*Mic-in	1*Line-out / 1*Mic-in	1*Line-out / 1*Mic-in
Serial Ports	2* RS232/RS485	2* RS232/RS485 4* RS232	4* RS232/RS485 4* RS232
USB	4*USB3.0	6*USB 3.0 2*USB 2.0	4*USB 3.0 6*USB 2.0
Power Supply	12V/5A	12V/5A	12V/5A
Power Consumption	Controlled at 15W Full load ＜ 100W	Controlled at 15W Full load ＜ 100W	Controlled at 15W Full load ＜ 100W
Size	159.6*127.0*53.2(mm)	236*183*72(mm)	236*228*72(mm)
Operating Temperature	-20~60℃	-20~60℃	-20~60℃
Operating Humidity	5~95%(No condensation)	5~95%(No condensation)	5~95%(No condensation)
ESD	Contact 6KV, Air 8KV	Contact 6KV, Air 8KV	Contact 6KV, Air 8KV
* CPU,memory and storage can be customized			

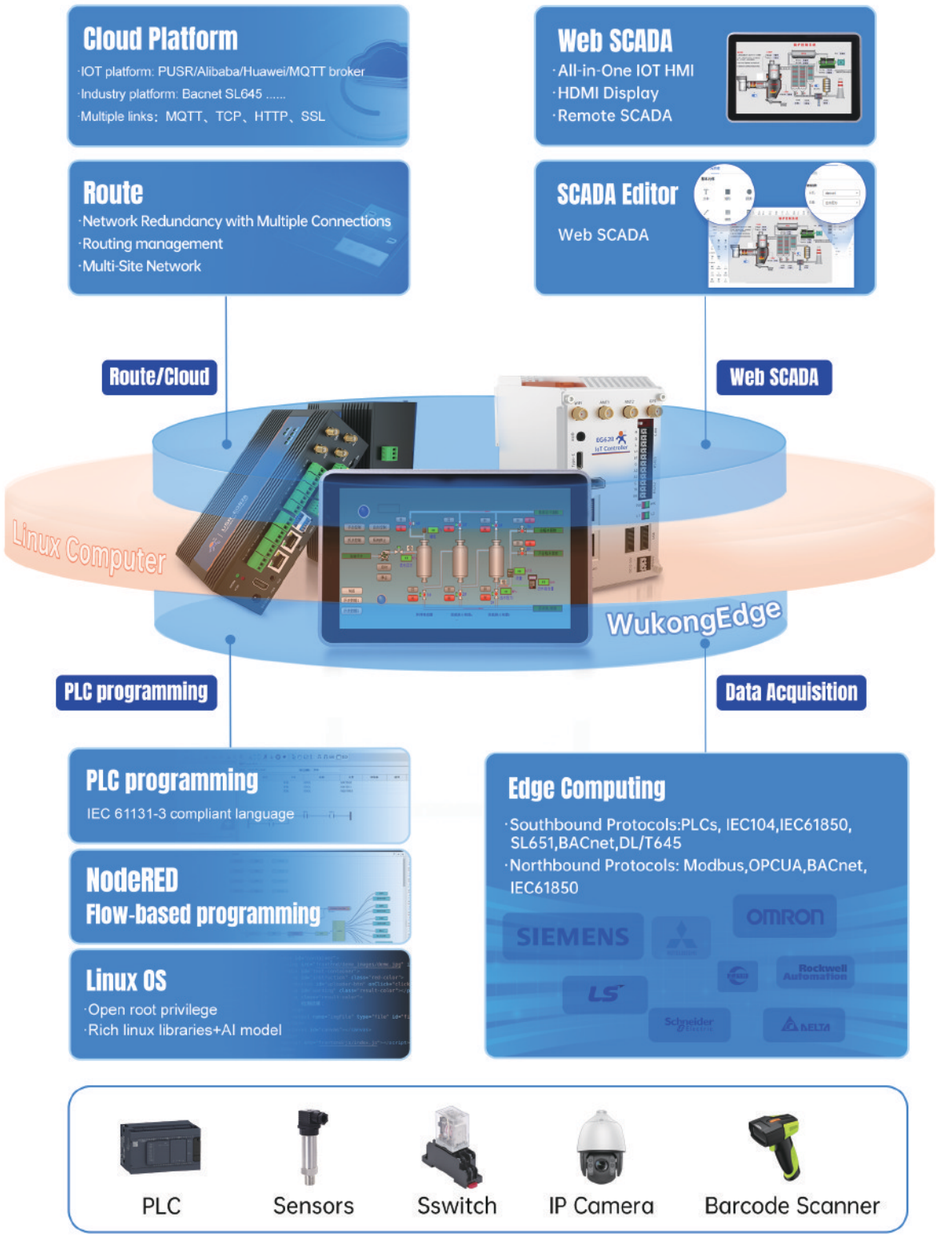
Automated Production Line

In automated production lines, this integrated solution combines PLC control, Modbus-to-PROFINET gateway, distributed I/O modules, CNC gateway, and X86 industrial PCs to achieve multi-protocol device interconnection, real-time data acquisition, and centralized monitoring — enhancing production intelligence and operational efficiency.



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Key Fetures/Model	EG828	EG628	SH800
Frequency Band	`-G4: LTE TDD: Band 34/38/39/40/41; LTE FDD: Band 1/3/5/8; GSM: 900/1800MHZ; `-GL: LTE-FDD:B1/B2/B3/B4/B5/B7/B8/B12/B13/B18/B19/B20/B25/B26/B28/B66; LTE-TDD:B34/B38/B39/B40/B41; WCDMA: B1/B2/B4/B5/B6/B8/B19; GSM: B2/B3/B5/B8; GPS:GPS/GLONASS/BDS/Galileo/QZss;	`-GL: LTE-FDD:B1/B2/B3/B4/B5/B7/B8/B12/B13/B18/B19/B20/B25/B26/B28/B66; LTE-TDD:B34/B38/B39/B40/B41; WCDMA: B1/B2/B4/B5/B6/B8/B19; GSM: B2/B3/B5/B8; GPS:GPS/GLONASS/BDS/Galileo/QZss;	--
Operating System	Linux Ubuntu 20.04	Linux Ubuntu 20.04	Linux Ubuntu 20.04
Processor	RK3568	RK3562J	RK3568
CPU	ARM Cortex - A55 Quad Core @2.0GHz	ARM Cortex - A53 Quad Core @1.8GHz	ARM Cortex - A55 Quad Core @2.0GHz
GPU	ARM G52 2EE 3D GPU	ARM G52 2EE 3D GPU	ARM G52 2EE 3D GPU
NPU	1.0TOPS@INT8	1.0TOPS@INT8	1.0TOPS@INT8
SRAM	DDR4 4GB	DDR4 4GB	DDR4 4GB
Storage	eMMC 32GB	eMMC 32GB	eMMC 32GB
Storage Expansion	--	128G microSD	--
Network Interfaces	2 × 100M Ethernet (100Mbps), 2.4GHz WiFi, 4G LTE	1 × Gigabit Ethernet (1000Mbps), 1 × 100M Ethernet (100Mbps), 2.4GHz/5GHz dual-band WiFi (802.11a/b/g/n/ac/ax), 4G LTE	2 × 100M Ethernet (100Mbps), 2.4GHz WiFi
SIM	1	2	--
USB	1*USB3.0 HOST 1*USB3.0 OTG	2*USB2.0 HOST 1*USB2.0 OTG(Type-C)	1*USB3.0 HOST 1*USB3.0 OTG
Display	1*HDMI 2.0 4K@60fps/1080p@120fps	1*HDMI 1.4， 1080p@60fps/4K@30fps	1*HDMI 2.0 4K@60fps/1080p@120fps
Touchscreen	--	--	10.1 inch capacitive TFT LCD
Serial Port	2*RS232 ,2*RS485	1*RS232 ,2*RS485	2*RS232 ,2*RS485
CAN	1*CANFD / CAN	1*CAN2.0B	--
IO Port	4*DI：Binary Input 2*DO：Relay 4*AI：Current/Voltage，4-20mA/0-10V	expansible	--
Power Supply	12V-2A	12-36V	12V-2A
Operating Temperature	-10 - 70°C	-20 - 70°C	-10 - 70°C
Safety/EMC	--	Level 3 Class B	--
WukongEdge			
Edge Computing	2000 Tags,Data Acquisition,Data computing, Data Delivery		
Data Delivery	Modbus，OPC UA，JSON，IEC104，IEC61850，Bacnet etc.		
Data Acquisition	PLC protocols，IEC104，IEC61850，Bacnet，DL/T645 etc.		
SCADA	SCADA Editor and Display		
PLC programming	IEC 61131-3 compliant language		
Secondary development	Linux Ubuntu System，C/C++,Python，Node-Red，Docker		

SmartLink HMI H7 Series



SmartLink HMI = Traditional HMI + Edge Gateway + Cloud Platform

·Local configuration, synchronized with cloud configuration
·Built-in WukongEdge: Data Acquisition, Control, and Cloud Connectivity
·Intranet Penetration: Remote upload/ download for HMI and PLC

Industrial IoT Gateway






Key Fetures/Model		M100	M100S	M300	M050
Edge Computing	Frequency Band	`-C1: LTE TDD: Band 34/38/39/40/41; LTE FDD: Band 1/3/5/8; GSM: 900/1800MHZ; `-EAU: LTE FDD: B1/3/5/7/8/20/28; LTE TDD: B38/40/41; WCDMA: B1/5/8; GSM/GPRS/EDGE: 850/900/1800MHZ;	`-C1: LTE TDD: Band 34/38/39/40/41; LTE FDD: Band 1/3/5/8; GSM: 900/1800MHZ; `-GL: LTE-FDD:B1/B2/B3/B4/B5/B7/B8/B12/B13/B18/B19/B20/B25/B26/B28/B66; LTE-TDD:B34/B38/B39/B40/B41; WCDMA: B1/B2/B4/B5/B6/B8/B19; GSM: B2/B3/B5/B8; GPS:GPS/GLONASS/BDS/Galileo/QZss;	`-G4: LTE TDD: Band 34/38/39/40/41; LTE FDD: Band 1/3/5/8; GSM: 900/1800MHZ; `-GL: LTE-FDD:B1/B2/B3/B4/B5/B7/B8/B12/B13/B18/B19/B20/B25/B26/B28/B66; LTE-TDD:B34/B38/B39/B40/B41; WCDMA: B1/B2/B4/B5/B6/B8/B19; GSM: B2/B3/B5/B8; GPS:GPS/GLONASS/BDS/Galileo/QZss;	`-C1: LTE TDD: Band 34/38/39/40/41; LTE FDD: Band 1/3/5/8; GSM: 900/1800MHZ;
	No. of Tags Supported	300	1000	2000	-
	Tag Creation	Serial port, network port, IO, Virtual points (calculated between tags)	Serial port, network port, IO, Virtual points (calculated between tags)	Serial port, network port, IO, Virtual points (calculated between tags)	IO
	Data Acquisition	Modbus RTU/TCP DL/T 645-2007	Modbus RTU/TCP DL/T 645-2007	Modbus RTU/TCP/PLC Protocols DL/T 645-2007, IEC104, IEC61850,Bacnet, DNP3.0	-
	Real Time report	5 Groups, Json Format	Multiple Groups, Json Format	Multiple Groups, Json Format	Multiple Groups, Json Format
	Report On Change	JSON template	single-point reporting and optional group reporting	Grouping	Grouping
	Data Delivery	Modbus RTU Modbus TCPJson Link Selection	Modbus RTU Modbus TCPJson Link Selection	Modbus RTU Modbus TCP Json bacnet OPC UA (Server) IEC104 TCP, Dedicated Link	Modbus/json Link Selection
Network Interfaces	Ethernet Port	1*WAN	1*WAN	1*WAN/LAN+1*LAN	1*WAN
	Wi-Fi	-	-	STA: 2.4G+5.8G (EW model)	STA: 2.4G+5.8G (WiFi
GPS Interfaces	Geolocation	-	GNSS	GNSS	-
Serial Ports	Type	1*RS485/RS232+1*RS485	1*RS485/RS232+1*RS485	1*RS485/RS232+1*RS485	-
IO	IO Type	2DI+2AI+2DO+ 6 Expansion slots	2DI+2AI+2DO+ 6 Expansion slots	2DI+2AI+2DO+ 6 Expansion slots	2DI+2DO+ 6 Expansion slots
Links	Protocols	TCP/UDP/HTTP/MQTT	TCP*2+MQTT*2 (4 links)	TCP/HTTP/MQTT (2links)	TCP/MQTT (2links)
	Cloud services	Alibaba/AWS/Huawei/Thingsboard	Alibaba/AWS/Huawei/Thingsboard	Alibaba/AWS/Huawei/Thingsboard	PUSR
VPN	VPN	×	×	PPTP/L2TP/OpenVPN/ (*IPSEC/*GRE)	×
Secondary development	Node-Red	×	×	✓	×
PUSR Cloud	PUSR CLoud	Edge computing/Monitoring/Remote Management/Firmware upgrading	Edge computing/MonitoringRemote Management/Firmware upgrading	Edge computing/Monitoring/Remote Management/Firmware upgrading	Monitoring/Remote Management/Firmware upgrading
SNMP	SNMP	SNMP V3	×	×	×

Expansion Slots



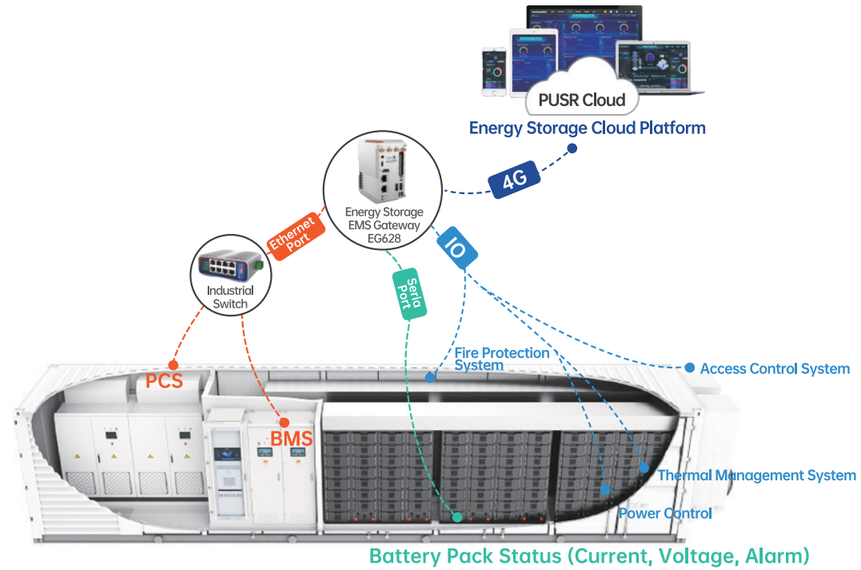




Key Fetures/Model	IO4040	IO0440	IO0080	IO8000	IO0404
IO Type	DI*4+DO*4	AI*4+DO*4	DO*8	DI*8	AI*4+AO*4
AI Range	--	4~20mA	--	--	4~20mA
DI Range	9~36V	--	--	9~36V	--
DO Max. Current	3A	3A	3A	--	--
AO Range	--	--	--	--	0~10V/4~20mA
Communication Interface	RS485	RS485	RS485	RS485	RS485
Extensible	✓	✓	✓	✓	✓
Independent	✓	✓	✓	✓	✓

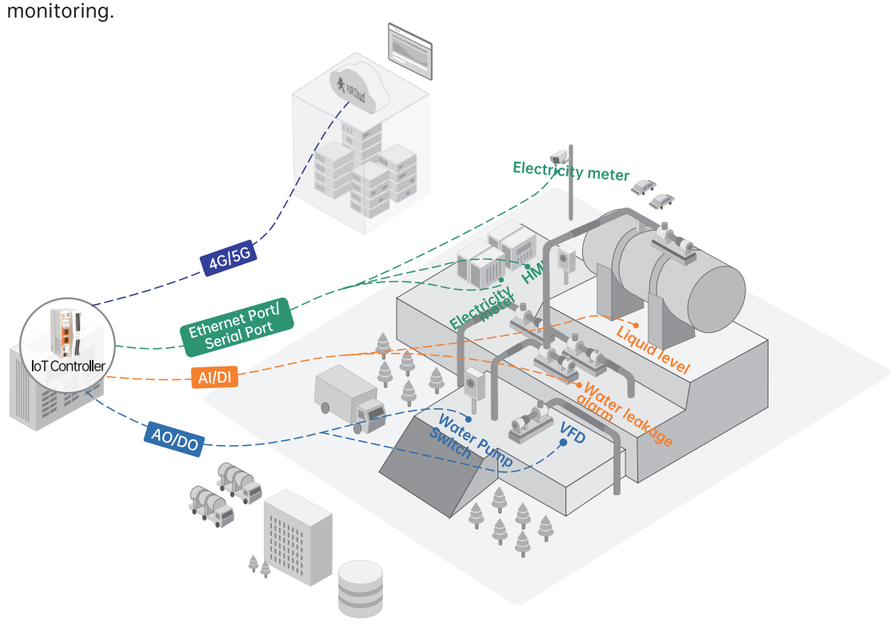
Industrial PC - Energy Storage Cabinets Monitoring

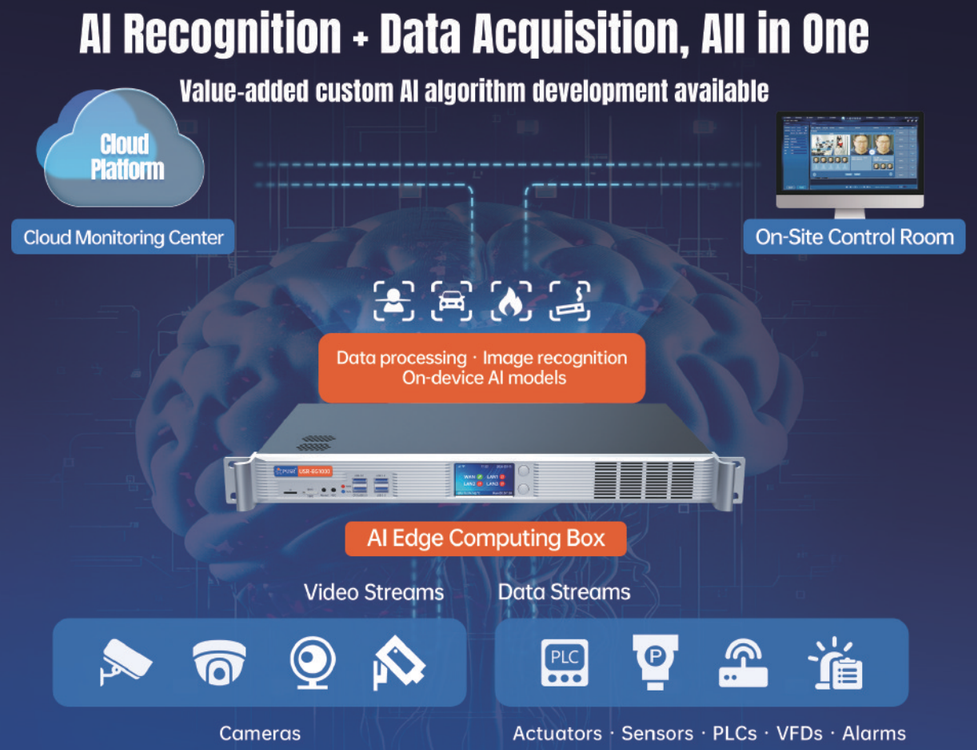
The industrial PC EG628 serves as the core controller for the energy storage container, enabling edge acquisition of multi-source data (e.g., BMS, PCS, ACS, fire protection sensors) and MQTTs protocol integration with EMS.



Edge Gateway - Unmanned Pump Station / PID Constant Pressure Water Supply

The M300 supports graphical programming for PLC-like logic control. It integrates with touchscreens, cameras, sensors, meters, inverters, electronic valves, and other devices. It connects to the PUSR Cloud for configuration -based monitoring.





Selection Guide

Step 1 — Choose AI algorithms by use case					
Pre-licensed algorithms — free out of the box	Small moving-object detection, smoking detection, phone-call detection, worker-absence detection, sleeping-on-the-job detection, face recognition, people counting, uniform detection, fence-climbing detection, illegal parking detection, hard-hat detection, reflective-vest detection, loitering detection, fight detection, line-crossing detection, area intrusion, fall detection, long-sleeve detection, open-flame detection (supported across the entire lineup)				
	Smoke detection, video-channel status monitoring, in-vehicle detection, foot-traffic analytics, crowd gathering, lane occupancy (RK3576 only)			E-bike detection, face capture, fire-exit blockage detection (RK3588 only)	
Additional algorithms require sales authorization	200+ more algorithms are available for trial, with alarms and data reporting disabled until licensed. Custom algorithm development supported				
Step 2 — Pick the IPC by camera count (add a switch if the built-in ports run short)					
Choose your IPC	**Model**	**Ultra-slim EG218A**	**EG628S with expandable I/O**	**1U rack-mount EG1000**	**Desktop EG928A**
	Capacity per unit	**Up to 8 cameras, 3 algorithms per channel**		**Up to 16 cameras, 3 algorithms per channel**	
		Running more than 3 algorithms on a channel? Reduce the number of cameras — contact our support team for details			
Add a switch	**Built-in Ethernet ports**	**1 port**	**2port**	**4port**	**3port**
	Optional PoE switch	Available in 5-, 8-, and 16-port versions; choose the fiber-port model for cable runs over 100 m Learn more >>			
Step 3 — Check that the IPC covers your data-acquisition and secondary-development needs					
DAQ points		**6,000 points**		**6,000 points (more available on request)**	
AI computing power		**6 TOPS**	**6 TOPS**	**6 + 40 TOPS with an optional AI accelerator card**	
CPU		**RK3576**	**RK3576**	**RK3588**	**RK3588J**
RAM & Storage		**4GB，64GB**	**4GB，32GB**	**4GB，64GB**	**8GB，128GB**

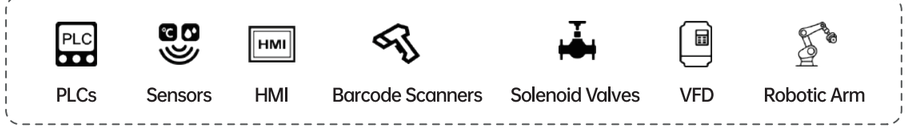
Industrial Protocol Converter

Break protocol barriers between devices





How to achieve effortless communication between industrial devices?







Features/Modle		EtherCAT Gateway	PROFINET Gateway	CANopen Gateway
		USR-PX520	USR-PX530	USR-PX511
Base Info	Protocol	EtherCAT Slave to Modbus RTU/TCP Master	PROFINET Slave to Modbus RTU/TCP Master	CANopen Slave to Modbus RTU/TCP Master
Hardware	Housing/Installation	Aluminum alloy shell Guide rail installation	Aluminum alloy shell Guide rail installation	Aluminum alloy shell Guide rail installation
	Power Input	DC 9-36V	DC 9-36V	DC 9-36V
	EMC	Level 3	Level 3	Level 3
	Isolation	Power / Ethernet ports / other interface	Power / Ethernet ports / other interface	Power / Ethernet ports / other interface
Interface	Ethernet	2 * EtherCAT port (IN/OUT) 1 * Standard Ethernet port	2 * PROFINET port (IN/OUT) 1 * Standard Ethernet port	1 * Standard Ethernet port
	Serial	1 * RS485	1 * RS485	1 * RS485
	CAN	/	/	1 * CAN
Master Side	Protocol	Modbus RTU/TCP	Modbus RTU/TCP	Modbus RTU/TCP
	Points	2000	2000	2000
Slave	Protocol	EtherCAT	PROFINET	CANopen
	Points Info	Supports 128 TXPDO and 128 RXPDO groups, with 128 variables per group	Supports 16 slots, 1400-byte input/output capacity	Supports 128 TPDO and 128 RPDO groups, 16 mapped variables per group
Gateway	Edge Computing	√	✓	✓
Configuration	Setup Tool	PXTool	PXTool	PXTool
	File	Standard ESI file	Standard GSDML file	Standard ESD file

Intelligent Sensing Devices

Multi-scenario Sensing, Omni-scene Monitoring



·IP68 Waterproof
·Extended Endurance

Low-Power Data Collector



Multi-purpose Sensors



Temperature &Humidity | Pressure | Liquid Level | Water Immersion | Vibration



Smart Agriculture& Husbandry



Intelligent Water Management



Urban Lifeline

PUSR
www.pusr.com

Multi-purpose Sensors



Vibration Sensor

Triaxial Vibration & Temp
Mag-mount / Threaded
Free PUSR Cloud

* Optional: RS485/4 - 20mA / Wireless 4G/LoRa/NB-IoT



Pressure Sensor

Precise silicon chips
Multi-range Options
Output: 4-20mA/RS485

* 1.5× Burst, compatible with water/oil pressure



Liquid Level Sensor

Precise silicon chips
IP68 protection
Range/Comms Configurable

* Special environments available: oil, alcohol, etc



Agri-soil Multi-sensor

IP68 resistance
Pin - type easy installation
RS485, MODBUS protocol

* Monitors temperature, humidity, pH, conductivity, NPK, etc.



Wind Sensor

Corrosion-proof aluminum
Low-friction bearings
RS485, Modbus protocol



Rain Gauge

Dual - tipping bucket
Stainless steel housing
Pulse / RS485



Meteorological Screen

IP65 rating
Integrated Multi-Parameter
Free PUSR Cloud

* Solar radiation-proof, anti-aging, high-temp resistant



Illuminance Sensor

High-sensitivity optical sphere
IP65-rated
Ranges: 6W, 20W



CO_2 Sensor

NDIR infrared technology
Industrial-grade probe
IP65-rated



Temp/Humid Sensor

Imported high-sensitivity sensor
IP65 dustproof & waterproof
4-20mA/RS485 output

* Split/integrated probe, optional display



Infrared Meter Reader

DL/T645 & 698 protocol
Adaptive baud rate check
Bluetooth configuration

Supports electricity/water/heat/gas meters



Water Leak Sensor

Stainless steel probe
IP68 waterproof
NO/NC contact for linkage alarm



Water Quality Sensor

IP68-rated
Auto temp compensation
Remote monitoring

*Multi-parameter monitoring: COD, pH, ORP



Doppler Flow Meters

Non-contact mounting
Smart flow algorithm
Widely used in water resources



Radar Level Gauge

Millimeter-wave radar
High accuracy, low power
Compact Design

PUSR collaborates with industry leaders to deliver a comprehensive portfolio of IoT sensors and integrated one-stop solutions.
Sensors undergo rigorous testing, and PUSR provides end - to - end technical support and services.



Large-Battery Data Logger

USR-SC360

Built-in 27,000mAh Lithium-ion battery, with 3–5 years of theoretical battery life*

Supports power supply to sensor

Data from USR Lab, under typical conditions: Sensor power consumption 0.3W, 5-second warm-up, hourly data collection, and daily reporting.



Solar-Powered Data Logger

USR-SC350

Solar panel + rechargeable lithium battery for uninterrupted operation in all weather

Built-in 6,400mAh rechargeable battery, charges fully in 3 days* with 3+ months of battery life

Supports power supply to sensor

Data from USR Lab, under typical conditions: Jinan/summer/sunny,south-facing bracket installed, 2–3 hours of effective sunlight daily.



Data Logger with Display

USR-SC330

Ultra-low power consumption, Type-C charging + built-in lithium battery

Power supply + data collection + transmission — flexible connectivity



Scan to Cloud

Large Screen Monitoring

Mobile Monitoring

Abnormal Alerts

Data Reports

Remote O&M

Data Logger Specifications

Category	Parameters	SC350 Solar Edition	SC360 Max-Runtime Editio
Power Supply Specifications	Power Supply Mode	1. 2×18650 lithium-ion battery pack + 1.6W photovoltaic panel 2. External DC input (5-12V range)	3×ER26500 Lithium-ion batteries
	Battery Capacity	6400mAH	27000mAH
Communication Interface	Interface Type	Port A: M12 waterproof aviation connector	
	Output Voltage	Selectable DC output: 5V/9V/12V (default: OFF)	
	Power Consumption	Max. 100mA @12V	
	Analog I/O	2-channels, Default: 4-20mA , Optional: 0-10V ,16-bit resolution	
	RS485 Interface	1 port standard Modbus RTU protocol Stop Bits: 1 (default), 2 Data Bits: 7, 8 (default) Baud Rate: 4800~115200 bps (default: 9600) Parity: EVEN, ODD, NONE (default)	
Network Connectivity	Power On/Off Method	Port A can rotate the magnetic ring to achieve RUN operation, OFF shutdown, and SET operation and maintenance states	
	Configuration Method	Mini-program scanning code configuration, PUSR cloud, Bluetooth configuration *	
	Antenna Connector	Built-in antenna, LET Cat 1	
	SIM Card	SIM 1: Flip-cover type, Nano-SIM, support APN (Hot plugging is not supported and it is not exposed) SIM 2: Embedded China Telecom ESIM, 5-year base plan pre-activated(100MB/month)	
Physical Specifications	Ingress Protection (IP) Rating	IP68	
	Dimensions	139.1*102.5*45mm(including M12 5PIN aviation connector)	
	Mounting Type	Wall Mounting , Hook Mounting , Reinforced Mounting with Positioning Holes , Clamp Mounting	
	Operating Humidity	5%~95% (Non-condensing)	
	Operating Temperature	-20~60℃	-30~70℃
Software Features	Low-Power Specifications	Sampling Interval, Reporting Interval, Warm-up Time Customizable	
	Communication Protocol	Support TCP, MQTT, PUSR Cloud, DNS resolution	
	SSL/TLS Encryption	MQTT supports SSL/TLS encryption and two-way certificate verification optional	
	Edge Reporting	Supports pre-setting ModbusRTU polling instructions, and after edge computing, customizes JSON templates for active reporting	









PUSR Cloud,a system for building IOT systems

"+IOT Services "aims to enhance the iot service capabilities for traditional industries and achieve intelligent upgrading and transformation



20w+ Registered users

95% Public Cloud renewal rate

2000+ Public Cloud payment figures

200w+ Total number of devices connected

500+ Number of private cloud deployments

10 years Technical precipitation

Gateway Management

SIM Card Management

Remote Networking

Wide Access

- Air Compressor
- Ironmaking Blast Furnace
- CNC
- Photovoltaic Equipment
- Medical Device
- Industrial Robot
- Engineering Machinery
- Pump Motor

Hardware-software integration



5G/4G

Ethernet

Wi-Fi

LoRa

Satellite

Full network standards

Switch · Button · Variable value

Dashboard · Indicator lights · Video



Configuration Display

Multi-terminal monitoring

Mobile Program | Visual Screen | Linkage and alarm | Custom brand | Timed task

Maintenance Management | Video Surveillance | Localization and tracking | Custom script | Cloud payment collection



O&M Support

99.9%

Self-developed O&M System, 99.9% High Availability

7*24h

Full-link monitoring 7×24-hour log audit and operation maintenance

CMMI 3

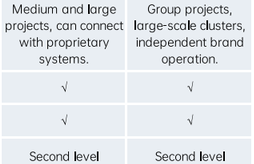
R&D management capability Awarded CMMI Level 3 international certification

PUSR Cloud Available Editions and Scope

category	Public Cloud				Private Deployment		
	Basic Edition	Premium Edition	Enterprise Edition	Flagship Edition	Lightweight version Private deployment	Standard Edition Private Deployment (Hot Sale)	Cluster Edition Private Deployment
	Free trial, Quick setup	Official User	High-end resources, Independent brand operation	Top resource services, for personal and commercial use	Small-scale projects, few devices, low frequency acquisition	Medium and large projects, can connect with proprietary systems.	Group projects, large-scale clusters, independent brand operation.
Gateway Management	√	√	√	√	√	√	√
User device added	30	300	1000	No restrictions	√	√	√
Cloud collection frequency	Minute level	Minute level	Minute level	Second level	Minute level	Second level	Second level
Data storage duration	31 days	1 year	1 year	Many years	1 year	3 years (scalable)	5 years (scalable)
Data storage capacity	5 million pcs/month	500 million pcs/year	1 billion pcs/year	No restrictions	√	√	√
Organization Management/Projects	3	200	500	No restrictions	50	1000	No restrictions
User Management	10	100	300	No restrictions	50	No restrictions	No restrictions
Default data/system large screen	√	√	√	√	√	√	√
SCADA Configuration	1	50	100	No restrictions	√	√	√
Alarm trigger	5	No restrictions	No restrictions	No restrictions	√	√	√
Timed task	5	20	50	No restrictions	√	√	√
Scene Quantity	1	20	100	No restrictions	×	√	√
Three-party gateway access	1	1	10	No restrictions	×	√	√
Camera access	5	20	100	No restrictions	×	√	√
Custom data reports	3	20	50	No restrictions	×	√	√
Customized large screen	1	10	20	No restrictions	×	×	×
Batch Processing	×	×	√	√	×	√	√
Maintenance order management	×	×	√	√	×	√	√
System-level settings	×	×	√	√	×	√	√
Enterprise exclusive configuration	×	×	√	√	×	×	×
Advanced Secondary Development	×	×	√	√	×	√	√

SIM Traffic Service

IoT SIM Card Management Platform: Bulk Renewal, Package Change, Traffic Alert, Customizable Packages



sim.usr.cn

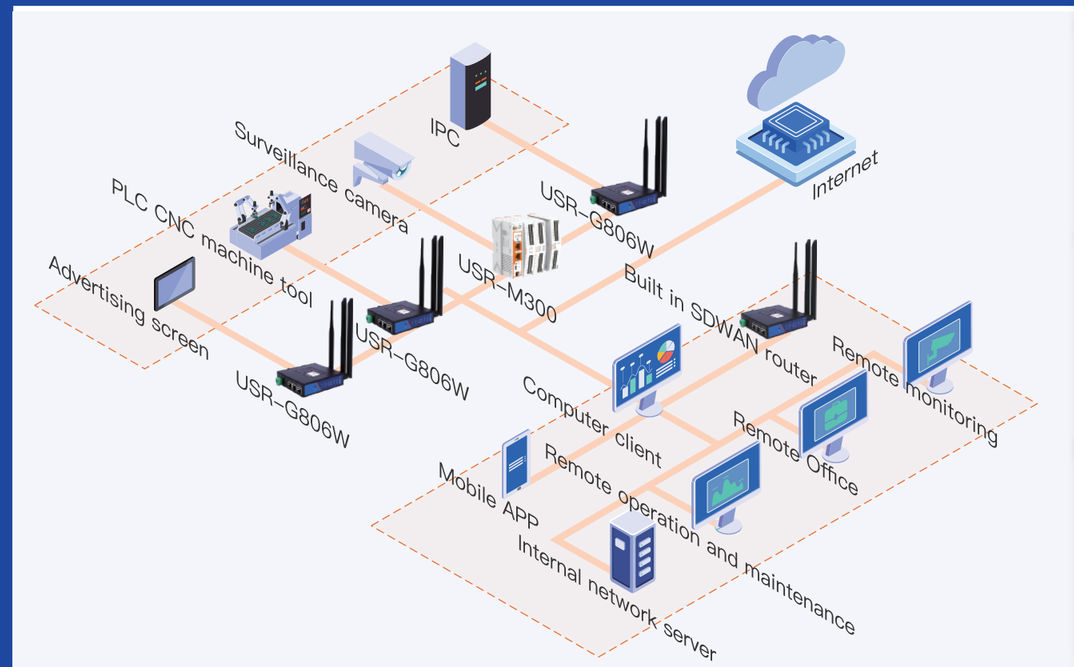
- Strategic Cooperation with Operators
- Unified Management of SIM Cards from Multiple Operators
- Unified Management of Gateways and SIM Cards
- Value-added Packages, Traffic Pool
- SIM Chip, SIM Cards
- Overseas SIM Cards for Over 200 Countries

PUSR®
www pusr.com

SD - WAN Remote Networking

PLC Remote Debugging | Video Remote Monitoring | Remote Office Access

Our latest - generation SD - WAN remote networking service supports Layer 3 IP networking and Layer 2 MAC networking, enabling cross - regional "same local area network" data transmission without boundaries. It can replace APN dedicated network cards and VPN solutions to achieve functions such as remote access to camer-as, remote configuration of PLCs and industrial control computers, remote downloading of programs to PLCs, remote downloading of files or programs to industrial control computers or PLCs, and remote terminal upgrades. This helps customers manage routers and terminal devices in a unified and efficient manner.



- No technical barriers, simple deployment
- No need for dedicated lines and public IP addresses
- End-to-end encryption, data security



R&D Excellence + Mass Production: Custom IoT Device Development & Bulk Delivery

ODM Electronic Design and EMS Electronic Manufacturing Services.

Industry-Tailored Solutions



Hydrological Telemetry Terminal

Serial port / IO data acquisition with 4G transmission to Hydrological platform, protocols 427,651



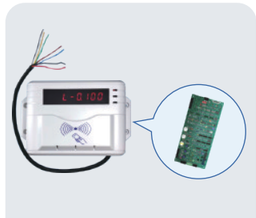
Freezer Data Logger

RS485/TTL measures temperature, humidity and power consumption, and data been transmitted via WiFi to the MQTT platform



Instrument Networking Interface Board

Collect pressure and liquid level gauge data at RS485/4~20mA and upload it via 4G

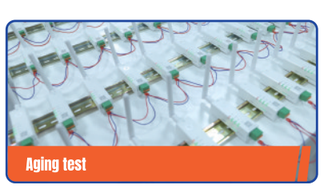


Campus Water Management Controller Board

4G Cat.1 cloud connection, Alipay payment connection, TTL signal controls the water output

Excellent Quality


Environmental Testing - High and Low Temperature & Temperature shock & Constant Temperature and Humidity


Aging test


ESD Susceptibility Test


Electrostatic Discharge Test


Surge Immunity Test


RF testing and debugging - 4G/WiFi