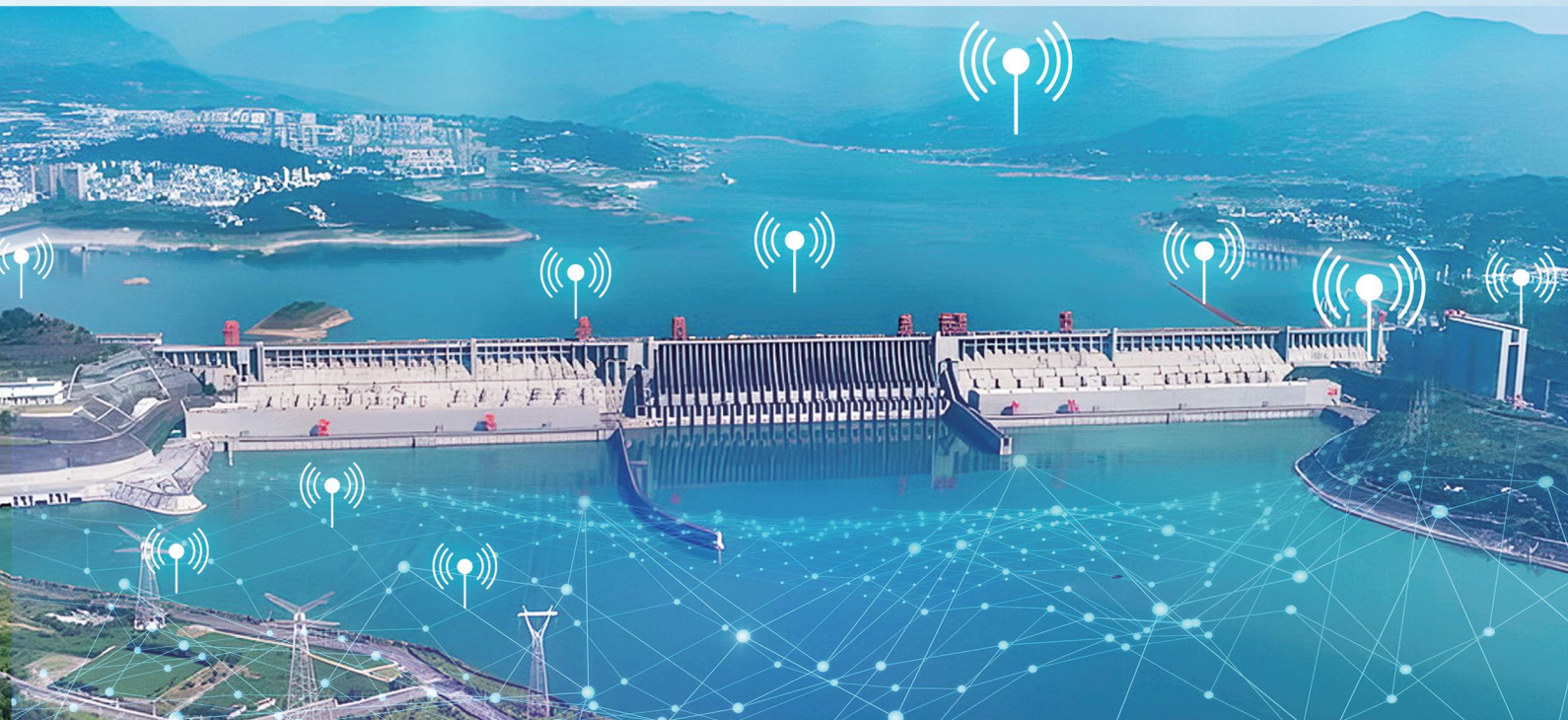


Water Conservancy Industry Solutions

To drive the intelligent transformation of water conservancy operations at all levels, we have developed an Integrated "Space-Air-Ground-Water-Structure" Smart Monitoring System. This system serves Smart Water Conservancy, Smart City, and Smart Irrigation District, providing comprehensive, real-time monitoring of on-site conditions.



Water Conservancy Info Products Manual

Smart Water Conservancy | Smart City | Smart Irrigation District

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The parameters provided in this brochure are only a general description and introduction of the products, and the content may differ from the actual products, which will also be upgraded with further research and development. For the best solution, please consult our sales and technical departments!
The trademarks in this brochure belong to PWBj. Any infringement by the use of product information within the scope of the company's patents will be prosecuted for legal responsibility!

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Version: 2603-PW-SH

Beijing Precision Wave Instrument Co., Ltd.

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Products

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Company Profile

Beijing Precision Wave Instrument Co., Ltd. is a leading high-tech enterprise specializing in the R&D, manufacturing, and sales of water level transmitters, velocity meters, and flow meters, etc. We also provide comprehensive information system integration and application software development.

Focused on water conservancy informatization projects, Precision Wave offers integrated solutions including consulting, design, implementation, and O&M—for water resource management, disaster mitigation, urban water monitoring, and hydropower automation. Our facility features independent machining, electrical assembly, and production workshops. Supported by dedicated departments in R&D, technology, quality management, and product management, we ensure rigorous quality control from the very source.

With dozens of patents and a strong domestic brand, we are a co-drafter of the Group Standard for Radar Water Level Transmitters. Our products are featured in the National Water Conservancy System's Key Recommended Catalog and have earned certifications for Enterprise Compliant with National Product Quality Supervision and Spot Checks, China Green & Energy-Saving Environmental Protection Product, and Water-Saving Product Certification.



2005 year

Precision wave instrument was established in 2005



6000 +

Cooperative customer 6000+



80

ten thousand
Product sales exceed 800,000 sets



34 ↑

Provinces & Regions
100% Domestic Market Coverage



40 +

Serving customers in 40+ countries



Service Network

Our products have achieved comprehensive coverage of the domestic market. Domestic Service Network:

Headquarters: Beijing

Production Base: Xianghe Manufacturing Company

Another factory: Tianjin Company

Regional Offices: Inner Mongolia, Shenyang, Shandong, Zhengzhou, Chengdu, Chongqing, and Guangxi.



Chengdu Office



Shenyang Office



Zhengzhou Office



Guangxi Office

Certifications & Qualifications

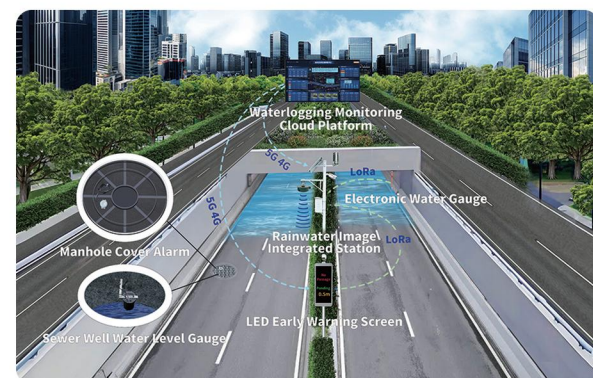
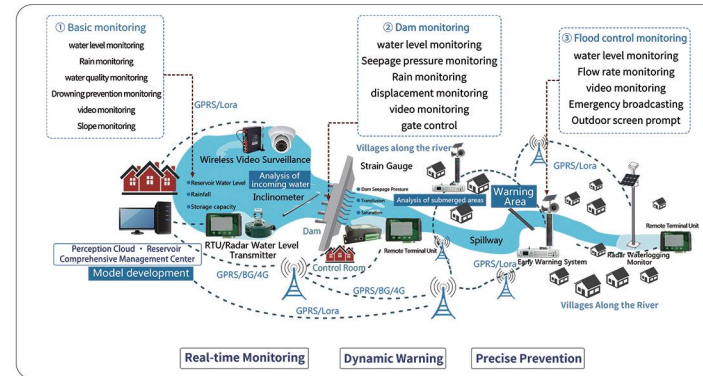
With dozens of patents for our self-developed products, we take pride in our independent domestic brand. As a co-drafter of the Group Standard for Radar Water Level Gauges, Precision Wave is featured in the Key Recommended Catalog for Excellent Products in the National Water Conservancy System. Our commitment to excellence is backed by numerous certifications, including Enterprise Compliant with National Product Quality Supervision and Spot Checks, China Green & Energy-Saving Environmental Protection Product, and Water-Saving Product Certification.



Business Areas

Smart Water Conservancy

- 1 Water Resource Management Information System
- 2 Reservoir Safety Early Warning
- 3 Reservoir dam safety monitoring
- 4 Dam safety & seepage monitoring
- 5 Reservoir Rainfall and Water Regime Monitoring
- 6 Smart Real-time Debris Flow Monitoring

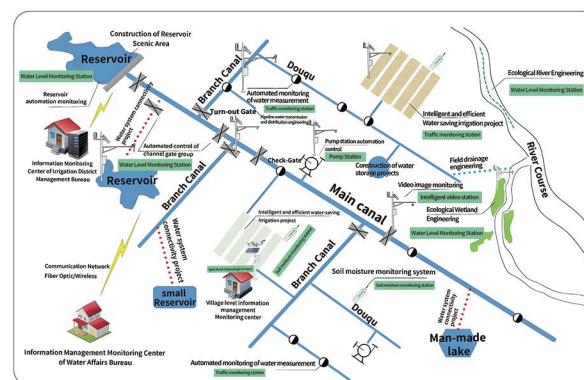


Smart City

- 1 Monitoring and early warning of urban waterlogging water level
- 2 Urban smart drainage monitoring and early warning system
- 3 Urban sewage discharge monitoring scenario
- 4 Monitoring of water level in urban road waterlogging
- 5 Urban drainage network
- 6 Monitoring scenarios for soil moisture and temperature in urban greening
- 7 Integrated intelligent monitoring of urban and rural water supply

Smart Irrigation District

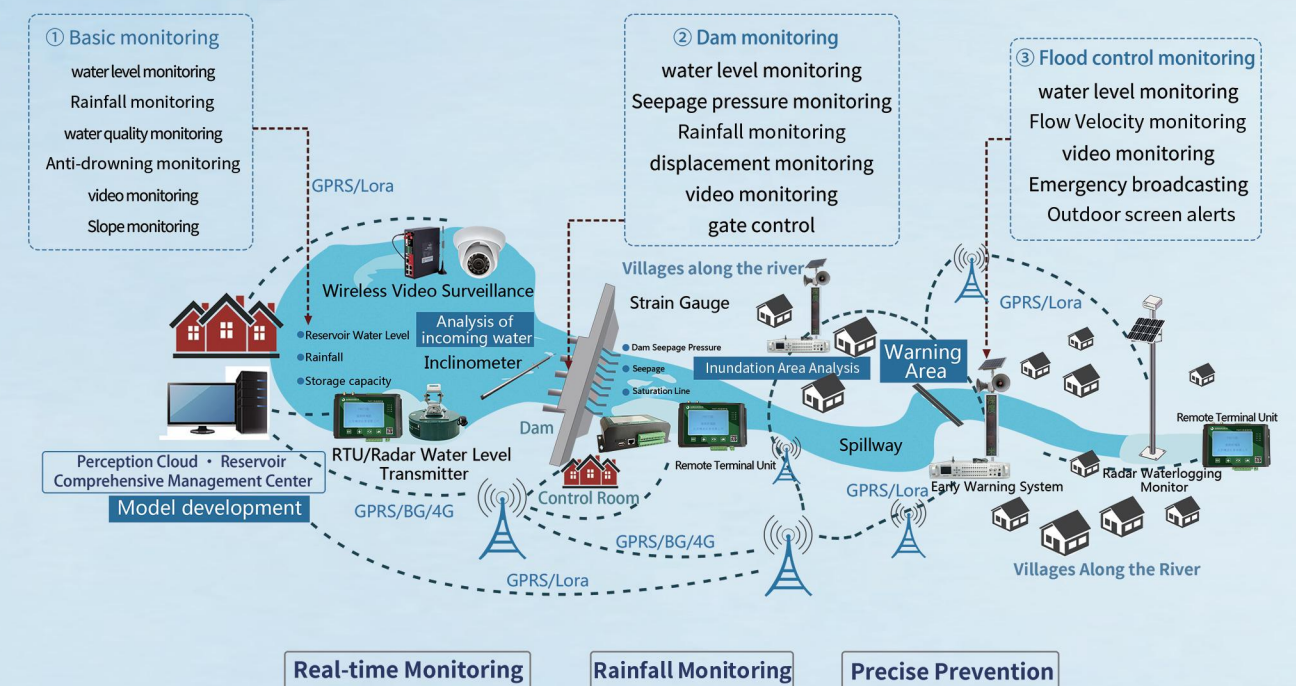
- 1 Automated irrigation control in irrigation areas
- 2 Water resource management and decision support in irrigation areas
- 3 Comprehensive information management of irrigation areas
- 4 Water saving control and management in irrigation areas



Solutions

Smart Water Conservancy

Reservoir Rainfall-Water Regime & Dam Safety Monitoring & Early Warning Solution



The precision wave reservoir safety monitoring & early warning system consists of smart reservoir perception, IoT information Communication, and a Cloud-based Smart Monitoring & Management Platform.

Reservoir online monitoring enables automated collection, analysis, and reporting of operational data, including reservoir water levels, flow rates, rainfall, video surveillance, and seepage pressure/flow. Key components such as Ad-hoc networks and IoT systems provide robust data acquisition and communication capabilities. The cloud platform of the Reservoir Safety Monitoring & Early Warning System features data analysis and early warning functions, facilitating remote perception of operational status, trend analysis, and comprehensive business support for safety management, routine inspections, and online maintenance.

The system effectively enhances the intelligence level of reservoir safety supervision and the efficiency of emergency response, providing solid and reliable technical support for the safe and stable operation and scientific dispatch management of the reservoir.

Applications



Solutions

Smart Water Digital Twin Management Platform

One Map for Small Reservoir Hydrological & Dam Safety Monitoring



The intelligent water conservancy visualization platform realizes the collection, aggregation, analysis, early warning, basic data management, online operation and maintenance of local data terminals, and inspection records of reservoir rainfall and dam safety data. It also uses GIS to intelligently predict, forecast, and warn equipment status information, real-time data, and warning information through a single map. By sharing data, the system's water and rain situation data, dam safety monitoring data, alarm data, and inspection data are pushed to the autonomous region monitoring platform to achieve information interconnection and intercommunication.

Leveraging cutting-edge technologies such as Big Data, IoT, and AI, the platform breaks down the end-to-end silos in water conservancy data from collection, transmission, analysis, and application. It upgrades reservoir management from the traditional model of "manual inspection and reactive response" to a digital management model characterized by "real-time perception, intelligent analysis, proactive prediction, and coordinated response." This significantly reduces the workload for manual data statistics and on-site troubleshooting while enhancing the efficiency and precision of water conservancy management.

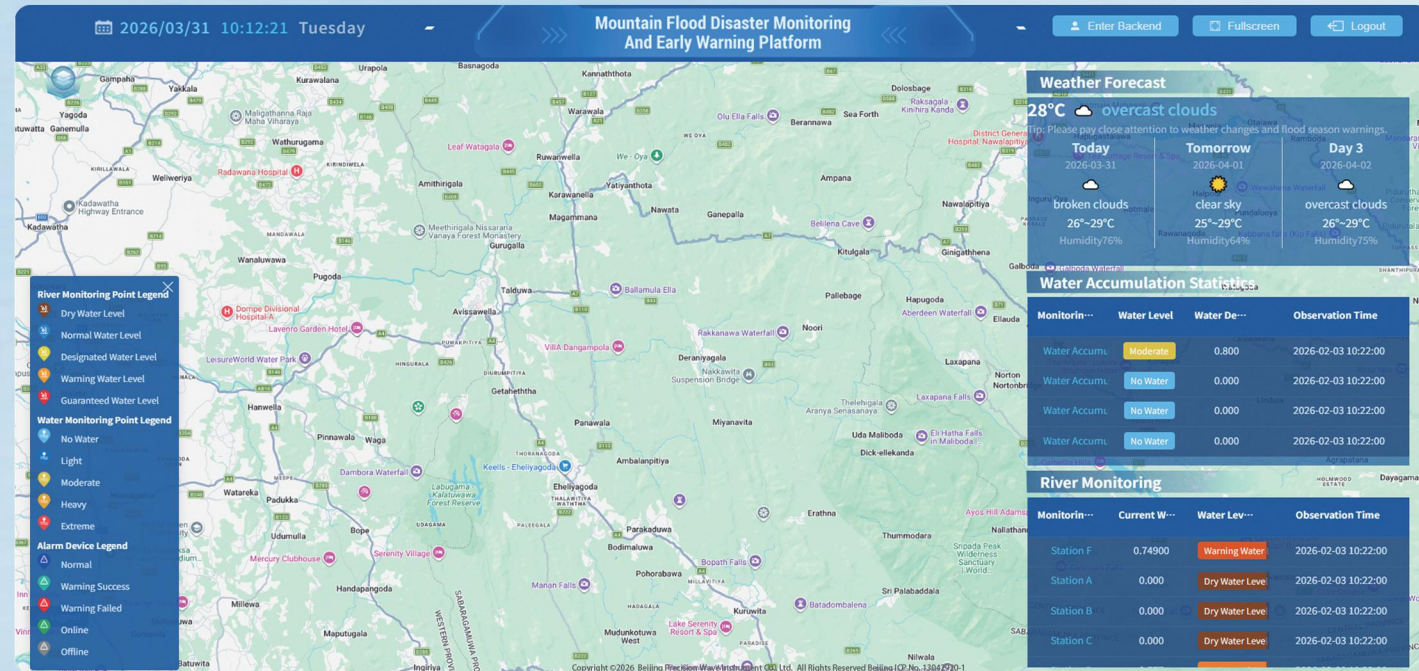
Applications



Solutions

Flood Monitoring & Early Warning Platform

One Map for Mountainous Flash Flood Monitoring & Early Warning



The Mountainous Flash Flood Monitoring & Early Warning Platform integrates data collection, transmission, analysis, and early warning into a unified system. It ensures the timely and accurate dissemination of warning information through a top-down communication mechanism, significantly enhancing overall monitoring and early warning capabilities.

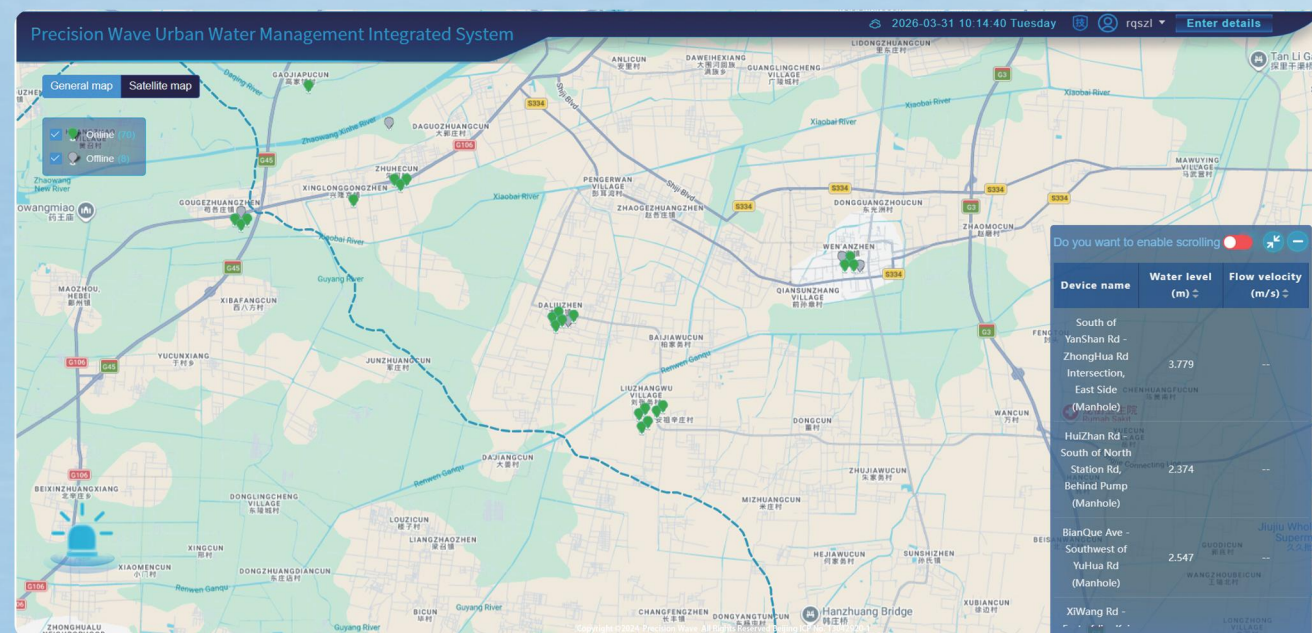
By deeply integrating cutting-edge technologies including IoT, Satellite Remote Perception, Big Data Analytics, and GIS, the platform deploys multi-dimensional sensing terminals across key areas such as mountain valleys, river channels, and geo-hazard points. It enables all-weather, high-precision, and automated collection and transmission of rainfall, water level, soil moisture, and surface deformation data.

Leveraging intelligent algorithmic models, the platform performs real-time computation, trend extrapolation, and risk assessment on massive monitoring datasets to precisely define risk levels and impact zones. Breaking the spatial and temporal limits of traditional models, it builds a multi-tiered, categorized, and multi-channel intelligent warning system. Customized alerts are rapidly pushed to flood control departments, village grid managers, and residents in threatened areas. This marks a fundamental shift in disaster prevention from "reactive response" to "proactive prevention and control." Its advanced technical capabilities and practical effectiveness significantly enhance the early identification, precise warning, and scientific disposal of mountainous flash floods. By building a "technological defense line" for disaster reduction, the platform ensures the ultimate safety of lives and property.

Applications



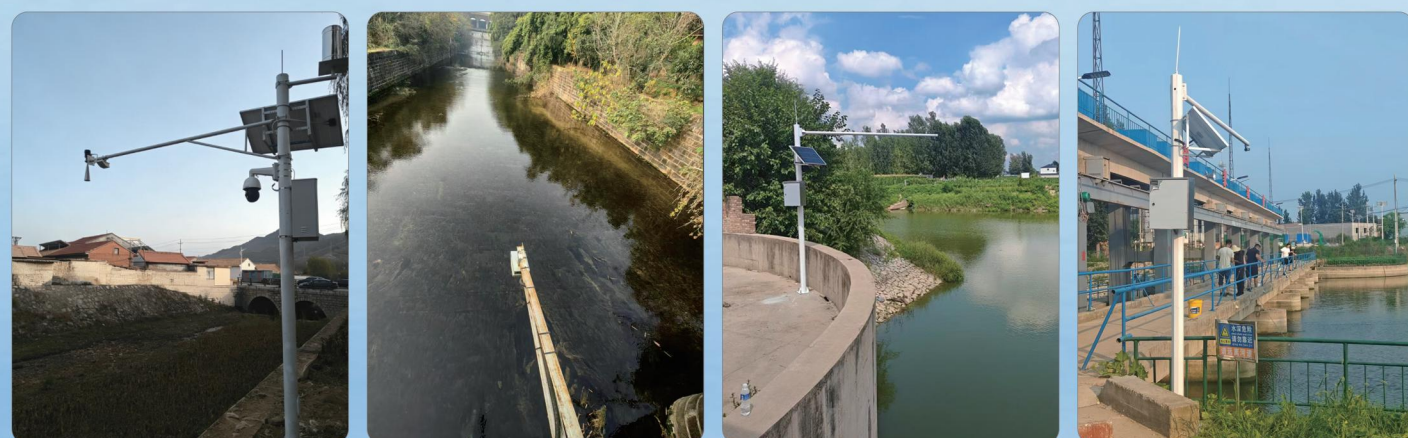
Precision Wave Hydrological and Water Conservancy Equipment Monitoring Platform



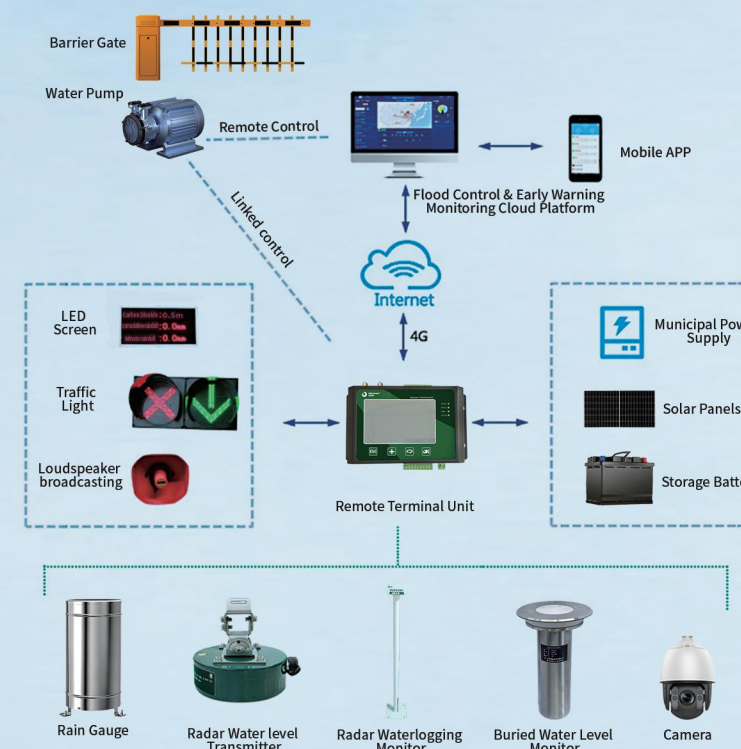
The Precision Wave Monitoring and Analysis Platform is a professional monitoring management system built for the operation and maintenance of hydrological and water conservancy projects. It can centrally display core information such as the basic information, operation and management status, real-time monitoring data, and equipment conditions of various monitoring stations, realizing the unified aggregation and intuitive presentation of the online rate, data integrity, and communication status of monitoring stations across the entire region. Through standardized and visualized information display, the platform enables operation and maintenance personnel to fully grasp the overall operation status of stations in their jurisdiction without leaving their offices, effectively replacing the inefficient traditional modes of manual on-site inspection, scattered record-keeping, and telephone communication, and significantly improving the convenience and timeliness of equipment monitoring and operation and maintenance management.

The platform equips frontline station operation and management personnel with an efficient, unified information query portal and intelligent decision support. It delivers real-time alerts for critical issues including equipment anomalies, data threshold violations, and communication interruptions, enabling managers to quickly locate problems and promptly mitigate potential risks. Leveraging complete, accurate historical and real-time monitoring data, the platform provides a scientific basis for routine inspections, maintenance planning, and fault diagnosis. This effectively reduces operational costs and management risks, while elevating the stability, reliability, and intelligent management level of hydrological and water conservancy monitoring systems. Additionally, the platform supports data statistics, trend analysis, and anomaly alarms, providing quantifiable evidence for O&M scheduling, emergency response, and performance evaluation. It further ensures the long-term stable operation of water conservancy monitoring facilities and drives the digital, intelligent, and efficient transformation of hydrological and water conservancy management.

Applications



Urban Waterlogging & Road Ponding Monitoring and Early Warning Solution



Urban Waterlogging & Water Level Monitoring and Early Warning

The system establishes a four-tier architecture of "Perception - Transmission - Platform - Application" to realize intelligent prevention and control of urban waterlogging.

The Perception Layer collects core data such as ponding depth and rainfall in real time through devices like rainfall gauges and radar waterlogging monitors. The Transmission Layer relies on 4G networks, with Remote Terminal Units (RTUs) stably uploading data to the cloud platform. The Platform Layer completes data analysis and risk assessment. The Application Layer issues early warnings via multiple channels including mobile APP, SMS, LED screens and public address systems, and enables remote linked control of water pumps for drainage and barrier gates for traffic restriction, forming a closed loop of "Monitoring - Early Warning - Response" to efficiently guarantee urban flood control safety.

Applications



Solutions

Urban Waterlogging Monitoring Platform

One Map for Urban Waterlogging Prevention and Control



The Urban Waterlogging and Ponding Monitoring & Early Warning Platform deeply integrates cutting-edge information technologies such as AIoT (Artificial Intelligence of Things) intelligent interconnection, AI image recognition and mobile communication. By scientifically deploying integrated intelligent monitoring devices including rainfall gauges, water level transmitters and video cameras in key urban waterlogging-prone areas, the system realizes all-weather, full-coverage, high-precision real-time perception of ponding depth, rainfall intensity and on-site conditions. The system automatically collects, transmits and analyzes multi-source monitoring data, and quickly completes data verification, trend analysis and risk assessment via intelligent algorithms. It breaks the limitations of low efficiency and delayed response in traditional manual inspections, providing real-time, accurate and reliable data support and early warning information for urban flood control command.

With the goal of "Early Detection, Early Warning, Early Response", the platform can immediately and automatically generate graded early warning information once it detects excessive ponding or abnormal rainfall, and quickly push the alerts to relevant departments such as urban management, emergency management and traffic police. It assists command personnel in accurately dispatching resources, efficiently carrying out waterlogging drainage, emergency rescue and traffic guidance. Through digital and intelligent means, the platform significantly improves emergency response speed and disposal efficiency, effectively reduces risks such as road closure and property losses caused by urban waterlogging, practically guarantees citizens' travel safety and normal production and living order, and comprehensively enhances the city's disaster prevention and mitigation capacity, refined governance level and comprehensive emergency support capability.

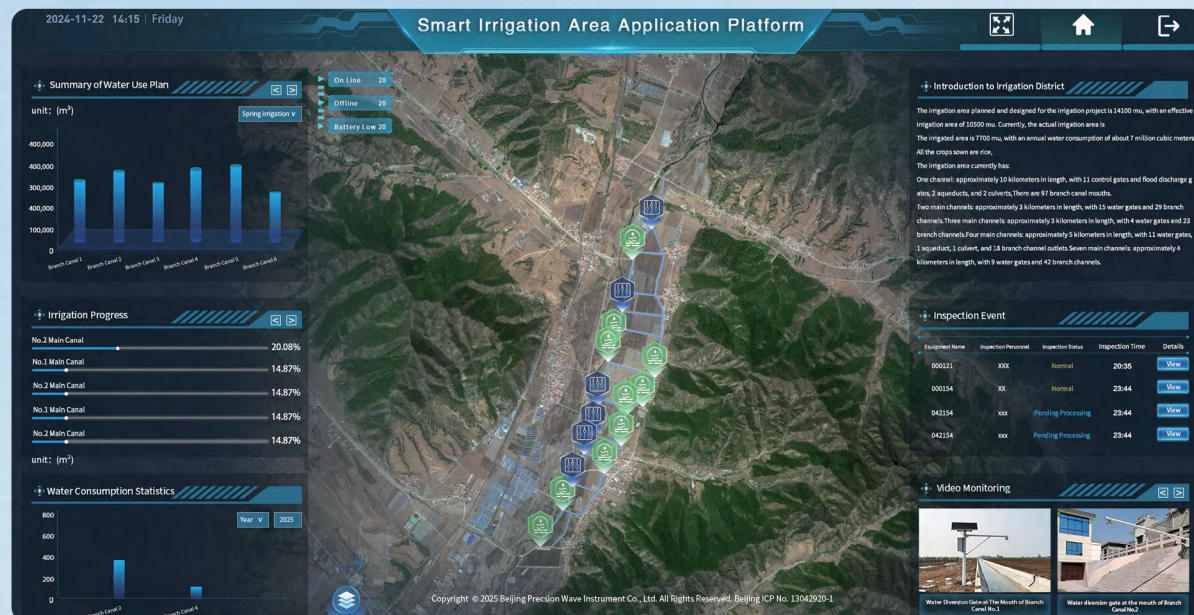
Applications



Solutions

Smart Irrigation District Platform

One Map for Irrigation District



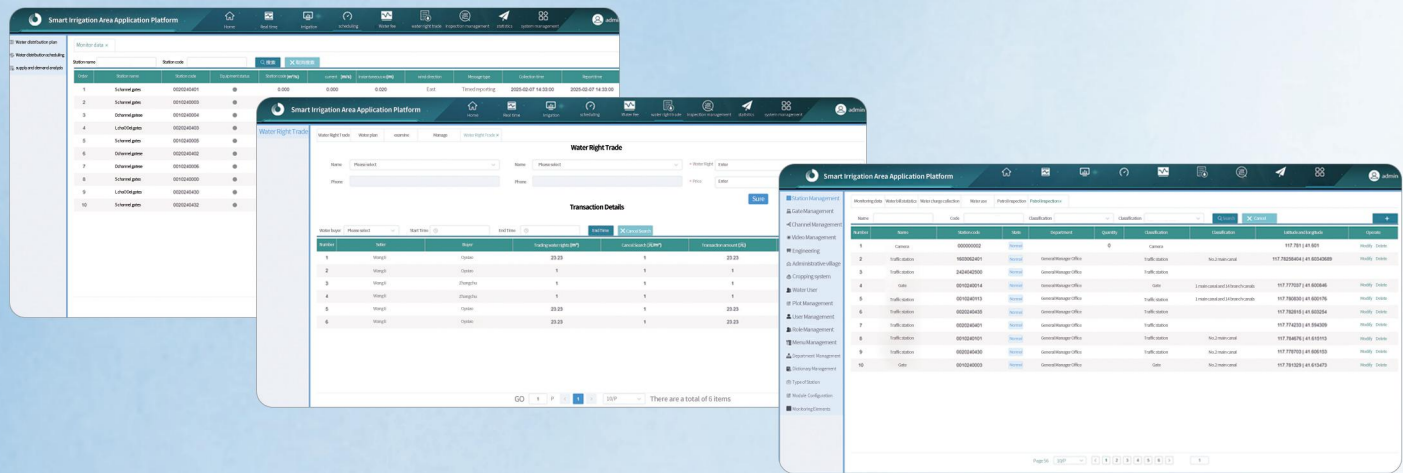
The Smart Irrigation Area Application Platform is an integrated comprehensive management platform designed for modern irrigation and water conservancy. It deeply integrates core capabilities such as water and rainfall information, water conservancy engineering information, intelligent gate control, water resource optimization and unified scheduling, and constructs a "monitoring control scheduling management" full chain smart water conservancy system. The platform has complete data collection, stable transmission, secure storage, and intelligent processing capabilities. Through real-time perception of key elements such as water and rain conditions, water quality, water quantity measurement, and meteorology in the irrigation area, it realizes digital control of all elements and processes, completely changing the traditional irrigation area's extensive management mode that relies on manual inspection and experience judgment, and greatly improving the automation and refinement level of irrigation management.

This platform integrates practical functions such as data collection, video surveillance, equipment status collection, real-time data display, intelligent data analysis, and automatic report generation, providing a one-stop, visual, and convenient operation experience for irrigation area management. Management personnel can real-time grasp the operation status of irrigation areas, accurately grasp water demand, scientifically allocate water resources, and achieve on-demand irrigation, efficient water conservation, and intelligent gate control; At the same time, the system automatically generates statistical reports and analysis conclusions, reducing manual statistical workload, improving decision-making efficiency and scheduling rationality. Leveraging informatization and intelligent technologies, the platform effectively improves water resource utilization and ensures stable, high-efficiency agricultural irrigation. It assists irrigation districts in achieving water savings, higher efficiency, stable yields, and increased income, while comprehensively enhancing their modern management and sustainable development capabilities.

Applications

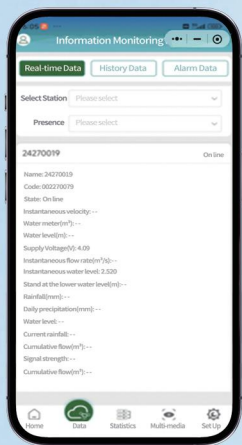


Platform PC Terminal

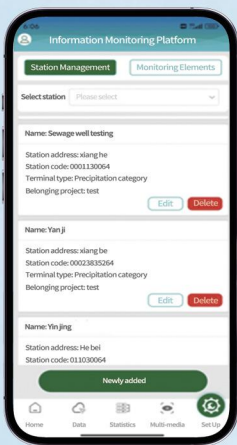


It consists of functional modules such as a map of the irrigation area, comprehensive query, water measurement management, engineering operation and maintenance management, automatic control system for gate stations, water distribution scheduling, video surveillance, and water price reform. The platform covers application functions such as information collection, water management, water fee collection, flood prevention and drought resistance, and engineering inspection. It presents rich graphics and data interfaces, simplified operation function modules, and is close to the actual management of irrigation areas. It provides efficient management and data support services for the intelligence and informatization of the irrigation industry.

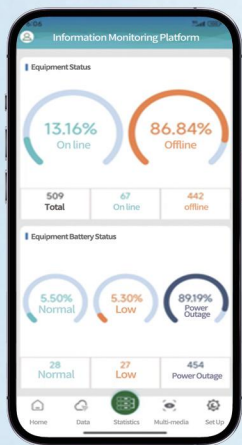
Platform Mobile Terminal



Mini Program



Android App



iOS App

The APP consists of five major sections: comprehensive information, monitoring and warning, inspection and management, water resources management, and contact list. Mobile devices can view monitoring data such as water level, rainfall, flow rate, water quality, and safety monitoring anytime and anywhere, and grasp the safety status of the site; Record and supervise cleaning, inspection, maintenance, and incident handling, and real-time grasp the operation and maintenance work of the site; Provide site archive viewing, work notifications, flood control material management, warning message processing and other work to improve work efficiency and management level.

PWRD81H

Product Features

- ① Integrated lens antenna with small beam angle
- ② False echo storage function for shielding interference signals
- ③ Zero point echo function to prevent false alarms
- ④ Time-varying gain control function adjustable based on signal strength
- ⑤ Convenient Bluetooth function for debugging
- ⑥ Can be used for serial port debugging
- ⑦ Equipped with angle measurement function
- ⑧ Low power consumption
- ⑨ Equipped with display and adjustable programmer

Application Scenarios

Water level measurement of reservoirs, hydropower stations, and river channels.



Technical Parameter

Range: 45m/85m/120m	Beam angle: 6°/3°	Working current: ≤5mA (12V DC)
Accuracy: ±1mm	Shell material: Aluminium/ABS	Operation temperature: -40~80°C
Process connection: G1½" A thread/G3" A thread/ bracket	Frequency: 80GHz	Protection rating: IP68
Signal output: RS485 Modbus	Power supply: 6~30V DC	Bluetooth version: V5.2
		Lightning protection rating: 4

PWRD81HA

Product Features

- ① Planar microstrip array antenna
- ② False echo storage function for shielding interference signals
- ③ Zero echo function for false alarm prevention
- ④ Time-varying gain control function adjustable based on signal strength
- ⑤ Bluetooth function for convenient debugging
- ⑥ Equipped with angle measurement function
- ⑦ Low power consumption
- ⑧ Adjustable parameters via serial port

Application Scenarios

Water level measurement for urban roads and bridges, reservoirs, rivers, hydropower stations, geological disaster (debris flow) monitoring, and farmland irrigation canals.



Technical Parameter

Range: 45m/85m	Beam angle: 8°	Working current: ≤5mA (12V DC)
Accuracy: ±1mm	Shell material: Aluminium	Operation temperature: -40~80°C
Process connection: Universal bracket	Frequency: 80GHz	Protection rating: IP68
Signal output: RS485 Modbus	Power supply: 6~30V DC	Bluetooth version: V5.2
		Lightning protection rating: 4

Products 80GHz Radar Water Level Transmitter

PWRD81HB

Product Features

- ① False echo storage function for shielding interference signals
- ② Zero echo function for false alarm prevention
- ③ Time-varying gain control function adjustable based on signal strength
- ④ Bluetooth function for convenient debugging
- ⑤ Adjustable parameters via serial port
- ⑥ Equipped with angle measurement function
- ⑦ Low power consumption
- ⑧ Compact and lightweight, with two thread types for easy installation

Application Scenarios

Water level measurement for farmland irrigation canals, urban underground sewage/rainwater pipelines, urban road and bridge ponding, small reservoirs, urban inland rivers, and open channels.



Technical Parameter

Range: 10m/20m/35m	Beam angle: 6°	Working current: ≤5mA (12V DC)
Accuracy: ±2mm	Shell material: ABS/Aluminium	Operation temperature: -40~80°C
Process connection: G1" A + G1½" A thread/ bracket	Frequency: 80GHz	Protection rating: IP68
Signal output : RS485 Modbus	Power supply: 6~30V DC	Bluetooth version: V5.2
		Lightning protection rating: 4

PWRD81HC

Product Features

- ① Integrated lens antenna with narrow beam angle
- ② False echo storage function for shielding interference signals
- ③ Zero echo function for false alarm prevention
- ④ Time-varying gain control function adjustable based on signal strength
- ⑤ Bluetooth function for convenient debugging
- ⑥ Adjustable parameters via serial port
- ⑦ Equipped with angle measurement function

Application Scenarios

Water level measurement for urban road and bridge ponding, reservoirs, river channels, hydropower stations, geological disaster (debris flow) monitoring, and irrigation canals.



Technical Parameter

Range: 45m/85m	Beam angle: 6°	Working current: ≤5mA (12V DC)
Accuracy: ±1mm	Shell material: ABS	Operation temperature: -40~80°C
Process connection: M66 * 2 threaded/bracket	Frequency: 80GHz	Protection rating: IP68
Signal output: RS485 Modbus	Power supply: 6~30V DC	Bluetooth version: V5.2
		Lightning protection rating: 4

Products 80GHz Radar Water Level Transmitter

PWRD81HD

Product Features

- ① Conical antenna with strong wave focusing capability
- ② False echo storage function for shielding interference signals
- ③ Zero echo function for false alarm prevention
- ④ Time-varying gain control function adjustable based on signal strength
- ⑤ Bluetooth function for convenient debugging
- ⑥ Low power consumption
- ⑦ Adjustable parameters via serial port

Application Scenarios

Water level measurement for lakes, river channels, reservoirs, hydropower stations, etc.



Technical Parameter

Range: 45m/85m/120m	Beam angle: 6°/3°	Working current: ≤5mA (12V DC)
Accuracy: ±1mm	Antenna material: Stainless steel	Operation temperature: -40~80°C
Process connection: G1½" A thread/ bracket	Frequency: 80GHz	Protection rating: IP68
Signal output: RS485 Modbus	Power supply: 6~30V DC	Bluetooth version: V5.2
		Lightning protection rating: 4

Products 60GHz Radar Water Level Transmitter

PWRD61H

Product Features

- ① False echo storage function for shielding interference signals
- ② Zero echo function for false alarm prevention
- ③ Time-varying gain control function adjustable based on signal strength
- ④ Bluetooth function for convenient debugging
- ⑤ Adjustable parameters via serial port
- ⑥ Equipped with angle measurement function
- ⑦ Compact and lightweight
- ⑧ Low power consumption

Application Scenarios

Water level measurement for farmland irrigation canals, urban rainwater pipelines, urban road and bridge ponding, small reservoirs, and urban inland rivers, as well as flow measurement for open channels.



Technical Parameter

Range: 7m/12m	Beam angle: 8°	Working current: <5mA (12V DC)
Accuracy: ±1mm	Shell material: ABS	Operation temperature: -40~80°C
Process connection: G1" A thread/ bracket	Frequency: 60GHz	Protection rating: IP68
Signal output: RS485 Modbus	Power supply: 6~30V DC	Bluetooth version: V5.2
		Lightning protection rating: 4



PWRD92H

Product Features

- ① Conical antenna with strong wave focusing capability
- ② False echo storage function for shielding interference signals
- ③ Zero echo function for false alarm prevention
- ④ Time-varying gain control function adjustable based on signal strength
- ⑤ Bluetooth function for convenient debugging
- ⑥ With display, adjustable via programmer
- ⑦ Adjustable parameters via serial port
- ⑧ Low power consumption

Application Scenarios

Water level measurement for lakes, river channels, reservoirs, open channels, tidal water levels, etc.



Technical Parameter

Range: 30m/35m/70m	Beam angle: 8°	Working current: ≤5mA (12V DC)
Accuracy: ±2mm	Antenna material: Stainless steel	Operation temperature: -40~80°C
Process connection: G1½ " A thread/bracket	Frequency: 26GHz	Protection rating: IP68
Signal output: RS485 Modbus	Power supply: 6~30V DC	Bluetooth version: V5.2
		Lightning protection rating: 4



PWRD92HT

Product Features

- ① Strong anti-interference capability
- ② False echo storage function for shielding interference signals
- ③ Zero echo function for false alarm prevention
- ④ Time-varying gain control function adjustable based on signal strength
- ⑤ Bluetooth function for convenient debugging
- ⑥ With display, adjustable via programmer
- ⑦ Adjustable parameters via serial port
- ⑧ Low power consumption

Application Scenarios

Water level measurement for lakes, river channels, reservoirs, open channels, farmland irrigation, and urban road and bridge ponding.



Technical Parameter

Range: 20m/30m/50m	Beam angle: 10°	Working current: ≤5mA (12V DC)
Accuracy: ±2mm	Antenna material: ABS	Operation temperature: -40~80°C
Process connection: longmen frame	Frequency: 26GHz	Protection rating: IP68
Signal output: RS485 Modbus	Power supply: 6~30V DC	Bluetooth version: V5.2
		Lightning protection rating: 4



PWJ601-Y

Product Features

- ① Built-in radar level gauge
- ② Timed water level collection, storage and reporting
- ③ Support for multiple communication modes simultaneously
- ④ False echo storage function for shielding interference signals
- ⑤ Zero echo function for false alarm prevention
- ⑥ Support for manual data setting function
- ⑦ Adjustable parameters via serial port, with Bluetooth debugging support
- ⑧ Remote query of real-time and historical data

Application Scenarios

Water level height measurement for urban rainwater and sewage pipe networks (manholes).



Technical Parameter

Range: 20m	Communication method: 4G	Antenna material: ABS	Protection rating: IP68
Accuracy: ± 1mm	Working temperature: -40~80 °C	Parameter setting methods: USB, remote, Bluetooth APP	
Static pressure level transmitter: Optional	Frequency: 80GHz	Transmission protocols: TCP/IP, UDP/IP, MQTT, HTTP/HTTPS	



PWJ601-F

Product Features

- ① External radar level transmitter
- ② Timed water level collection, storage and reporting
- ③ Support for multiple communication modes simultaneously
- ④ Interference signal shielding with false echo storage function
- ⑤ Blind-spot-free, high accuracy, easy installation
- ⑥ Support for manual data setting function
- ⑦ Adjustable parameters via serial port
- ⑧ Remote query of real-time and historical data

Application Scenarios

Water level measurement for urban stormwater and sewage pipe networks (manholes).

Technical Parameter

Range: 10m/20m/30m	Frequency: 80GHz	Antenna material: ABS	Protection rating: IP68
Accuracy: ± 1mm	Communication method: 4G	Parameter setting methods: USB, remote, Bluetooth APP	
Static pressure water level transmitter: optional		Transmission protocols: TCP/IP, UDP/IP, MQTT, HTTP/HTTPS	

Products

Buried Water Level Monitor



PWRTU621

PWCSA51

Product Features

- ① Not restricted by on-site terrain and space
- ② Buried installation for the probe
- ③ Remote parameter setting and data extraction
- ④ Integrated design with built-in monitoring host
- ⑤ Reduced construction costs
- ⑥ Interference-free data collection

Application Scenarios

Ponding monitoring for urban management, municipal roads, residential areas, low-lying areas, underground parking lots, logistics parks, etc.



Technical Parameter		
Range: 2m	Working temperature: -25~60 °C	Detector casing: stainless steel
Flow accuracy: 0.5%	Working current: < 20mA (excluding communication)	Protection rating: IP68
Communication method: 4G/LORA	Battery: Built in 3.6V DC/38000mAH, lithium battery	

Products

Radar Waterlogging Monitor



PWRDA61

Product Features

- ① Built-in rechargeable battery, compatible with integrated or external solar panel charging systems.
- ② LORA-based long-range data transmission.
- ③ Customizable height for different scenarios

Application Scenarios

Ponding monitoring for urban management, municipal transportation roads, low-lying areas, etc.



Technical Parameter		
Range: 1m/2m/3m optional	Battery life on rainy days: 15 days	Sensor: 80GHz/60GHz radar
Lora transmission distance: 5km (open space)	Measurement accuracy: ± 1mm	Transmission method: LORA/4G optional
Reporting Frequency: Default: report & sample every 30 mins. Instant report when water level threshold is hit.		Protection rating: IP68

Products

Paddy Field Water Level Monitor



PWRDA62

Product Features

Built-in rechargeable lithium battery with integrated solar panel charging.

Application Scenarios

Monitoring of water level in paddy fields.



Technical Parameter		
Range: 1m/2m/3m optional	Battery life on rainy days: 15 days	Sensor: 80GHz/60GHz radar
Lora transmission distance: 5km (open space)	Measurement accuracy: ± 1mm	Transmission method: LORA/4G optional
Reporting Frequency: Default: report & sample every 30 mins. Instant report when water level threshold is hit.		Protection rating: IP68

Products

Submersible Pressure Level Transmitter



PWTR21

Product Features

- ① Features high-quality vented cable, designed for long-term submersion in water.
- ② Excellent overload resistance and anti-interference performance, delivering cost-effective, reliable and stable operation.
- ③ Integrated with proprietary automatic calibration algorithm, effectively eliminating measurement fluctuations caused by water surface turbulence.

Application Scenarios

Water supply & drainage, environmental protection industries



Technical Parameter		
Range: 1m/5m/10m/25m/50m/100m	Working temperature: -10~70 °C	Relative humidity: 95% RH
Measurement accuracy: ± 0.2%	Power supply: 12V DC	Protection rating: IP68
Resolution: 0.001m	Output signal: RS485 Moudbos	

Products

Integrated Image-Based Sludge/Water Monitor



PWL1602

Product Features

① Non contact measurement

② High precision

③ Low power consumption

④ Built in RTU adopts wireless data transmission and intelligent capture function

Application Scenarios

Water and sediment level measurement for flash flood disaster mitigation



Technical Parameter		
Accuracy: ± 1mm	Resolution: 1mm	Working voltage: 5~18V DC
Range: 45m/85m	Sampling interval: 1min-24h	Protection rating: IP68
Beam angle: 8 °	Reporting interval: 1min-72h	Communication method: 4G

Products

Radar Flow Velocity Meter



PWRV431

Product Features

① Insensitive to water vapor, temperature and pressure variations

② Non-contact measurement with zero wear and zero contamination

③ Resistant to corrosion, foam and other interferences

④ Integrated angle measurement capability

⑤ Supports accurate low flow velocity measurement

Application Scenarios

Measurement of flow velocity in rivers, channels, rubber dams, pump station outlets, etc.



Technical Parameter		
Speed measurement range: 0.001-30m/s	Power supply: 6-30V DC	Shell material: Aluminum
Flow velocity radar beam angle: 12 °× 12 °	Working current: 18.53mA (12V DC)	Protection rating: IP68
Flow rate radar frequency: 24GHz	Signal output: RS485 Modbus	Lightning protection rating: 4
Working temperature: -40~80 °C		

Products

Radar Flowmeter



PWFL432

Product Features

① Integrated output of flow rate, velocity, and water level

② Ideal for surface flow measurement with low fluctuation

③ Planar microstrip array antenna

④ Built-in Bluetooth functionality

⑤ Angle measurement capability

⑥ Optional wireless connectivity

⑦ Low-velocity measurement support

Application Scenarios

Flow measurement for rivers, reservoir sluice gates, hydropower stations, and farmland irrigation canals.



Technical Parameter			
Water level range: 45m	Speed measurement range: 0.02~21m/s	Power supply: 6~30V DC	Shell material: Aluminium
Water level accuracy: ± 1mm	Flow velocity radar beam angle: 12 °× 12 °	Working current: 55mA/60mA(12V DC)	Protection rating: IP68
Water level radar frequency: 80GHz	Flow rate radar frequency: 24GHz	Signal output: RS485 Modbus	Lightning protection rating: 4
Beam angle of water level radar: 8 ° Working temperature: -40~80 °C			

Products

Doppler Ultrasonic Flowmeter



PWFL532

Product Features

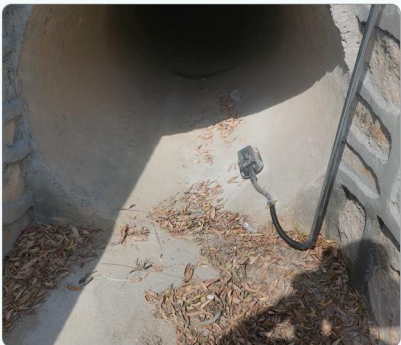
① Contact-type measurement with the sensing point positioned ahead of the probe, ensuring no flow field interference and high measurement accuracy.

② Delivers more objective and precise flow calculation results.

③ Equipped with wireless communication capability.

Application Scenarios

Flow monitoring for rivers, open channels, urban stormwater and sewage pipeline networks, drainage outlets, and agricultural irrigation canals.



Technical Parameter		
Flow velocity range: 0.021~6.10m/s for bidirectional measurement	Water level range: 2m/5m	Working temperature: -35~70 °C
Flow velocity measurement accuracy: ± 1%	Liquid level accuracy: ± 0.25%	Protection rating: IP68
Flow velocity resolution: 1mm/s	Power supply: 7~15V DC	

Products

Radar Ultrasonic Doppler Flowmeter



PWFL632

Product Features

- ① Non-intrusive installation without pipe cutting, enabling convenient installation and maintenance
- ② Delivers high-accuracy measurement to meet stringent requirements

Application Scenarios

Suitable for industrial pipelines, municipal water supply & drainage, water conservancy monitoring, chemical process fluids and other related industries.



Technical Parameter

Radar speed measurement range: 0.03-20m/s	Radar speed measurement accuracy: $\pm 0.01\text{m/s}$; $\pm 1\%\text{FS}$	Radar ranging range: 0~12m
Radar ranging accuracy: $\pm 1\text{mm}$	Ultrasonic speed measurement accuracy: $\pm 0.005\text{m/s}$; $\pm 1\%\text{FS}$	Ultrasonic speed measurement range: -6~6m/s
power supply: 6-30V DC	Pressure measurement accuracy: 0.2%	Communication protocol: RS485 Modbus

Products

Acoustic Doppler Current Profiler



PWFL533

Product Features

- ① Non-contact measurement with minimal interference
- ② Simultaneous acquisition of multiple hydrological parameters
- ③ High efficiency and ease of use
- ④ Reliable operation under complex working conditions

Application Scenarios

Designed for hydrological monitoring in rivers, oceans, lakes and other water bodies.



Technical Parameter

Acoustic measurement range: 0.06m~25m	Flow velocity resolution: 0.001m/s	Measurement time interval: 1~60min adjustable
Blind spot: 0.03m	Flow velocity measurement range: $\pm 10\text{m/s}$	Protection rating: IP68
Measurement accuracy: $\pm 0.5\%$ $\pm 1.0\text{mm/s}$	Water level measurement: 0-20m $\pm 0.1\%$ FS	
Communication protocol: RS485 (standard Modbus protocol), SDI-12, RS-232, RS-422		

Products

Transit Time Ultrasonic Flowmeter



PWFL832

Product Features

- ① Non-contact and non-destructive installation
- ② High-accuracy measurement for low flow velocities
- ③ Suitable for a wide range of pipe diameters and materials
- ④ Excellent anti-interference performance
- ⑤ Environmentally friendly with zero secondary pollution

Application Scenarios

Designed for flow measurement in closed pipelines, including municipal water supply & drainage, industrial cooling water, chemical pure fluids and other applications.



Technical Parameter

Water level range: 2m/5m	Flow velocity range: 0.021~6.10m/s bidirectional measurement	Working temperature: -35~70 °C
Liquid level accuracy: $\pm 0.25\%$	Flow velocity measurement accuracy: $\pm 2.0\%$ measurement value	Protection rating: IP68
Power supply: 7~15V DC	Flow velocity resolution: 1mm/s	

Products

Integrated Ultrasonic Water Level Transmitter



PWCS70H Series

Product Features

- ① Adopting advanced microprocessors
- ② Unique echo processing technology
- ③ False echo storage function
- ④ Built in temperature compensation
- ⑤ Small beam angle
- ⑥ Easy debugging and calibration
- ⑦ Can be used for serial port debugging
- ⑧ Equipped with display and adjustable programmer
- ⑨ Low power consumption

Application Scenarios

Water level measurement in rivers, canals, and the water treatment industry.



Technical Parameter

Model: PWCS71H/PWCS72H/PWCS73H	Signal output: RS485 Modbus	Power supply: 6-26V DC
Range: 5m/10m/15m	Material of transducer housing: PA66+GF30/PVDF	Protection rating: IP68
Accuracy: 0.25% (full scale)	Working current: 8mA@12V DC	Lightning protection rating: 4
Process connection: G1½" A / G2" A / M66 * 2 thread; bracket	Working temperature: -40~80 °C	



PWRD77

Product Features

- ① Equipped with echo curve and display function
- ② Easy debugging and calibration
- ③ Bluetooth tuning, 4G communication
- ④ Easy to install and maintain
- ⑤ Stable and reliable

Application Scenarios

Designed for flow measurement in Parshall flumes, throatless flumes, rectangular flumes and other open-channel flume and weir structures.



Technical Parameter

Flow range: 0.1L/s~10m ³ /s	Flow accuracy: ±1%~3% (depending on the type of weir plate)	Working temperature: -40~80 °C
Radar sensor frequency: 80GHz	Signal output: 4~20mA+RS485 Modbus+4G(optional)	Power supply: 110V~230V AC/24V DC
Protection rating: control table IP65;radar sensor IP68		



PWRTU610

Product Features

- ① Integrated design of collection, control, and transmission
- ② Support automatic switching between primary and backup communication channels
- ③ Support multiple communication methods
- ④ Low power design

Application Scenarios

Hydrological & Water Regime Monitoring and Reporting , Reservoir automation Monitoring,Water Resources Management Systems,Groundwater Monitoring,Source Well Monitoring Systems, Urban Flood Control Monitoring,Sluice Gate & Pump Station Monitoring,Remote Pump Monitoring,Soil Moisture Monitoring, Automated Water-Saving Irrigation Monitoring,Flash Flood Disaster Prevention & Control,Urban-Rural Water Supply & Network Monitoring.

Technical Parameter

Storage capacity: 32M	Working current: <10mA @ 12V DC	Remote transmission protocols: TCP/IP, UDP, MQTT, HTTP
Power interface: Industrial grade terminal interfac	Static duty current: 0.0236mA	Parameter setting method: Bluetooth APP, Remote
Power supply range: 3.6~18V DC	Communication method: 4G	Protection rating: IP30
Physical interface: 2 RS485 serial ports, 1 pulse rainfall port, 1 set of relay ports, and 1 controllable power supply for external power supply		



PWRTU620

Product Features

- ① All-in-one design integrating data acquisition, control and transmission
- ② Enables automatic switching between primary and backup communication channels
- ③ Compatible with multiple communication protocols and methods
- ④ Ultra-low power consumption design for long-term operation

Application Scenarios

Hydrological & Water Regime Monitoring and Reporting, Reservoir automation Monitoring , Water Resources Management Systems,Groundwater Monitoring,Source Well Monitoring Systems, Urban Flood Control Monitoring,Sluice Gate & Pump Station Monitoring,Remote Pump Monitoring,Soil Moisture Monitoring,Automated Water-Saving Irrigation Monitoring,Flash Flood Disaster Prevention & Control , Urban-Rural Water Supply & Network Monitoring.

Technical Parameter

Storage capacity: 32M	Working current: <10mA @ 12V DC	Remote transmission protocols: TCP/IP, UDP, MQTT, HTTP
Display screen: 256*160 LCD , 4-key keyboard	Static duty current: 0.0236mA	Protection rating: IP30
Power supply range: 6.5~18V DC	Communication method: 4G	Shell: Metal
Physical interfaces: 2 RS485 serial ports, 2 RS232 serial ports, 2 pulse rainfall ports, 2 sets of relay ports, 2 controllable power supplies for external power supply, 4 digital input ports, and 4 analog input ports.		Parameter setting methods: Bluetooth APP parameter setting, display programmer, operation and maintenance platform, USB upper computer

PWRTU621

Product Features

- ① Lora remote data collection
- ② Anti interference and stable transmission
- ③ Support multiple communication methods
- ④ Support binding multiple nodes
- ⑤ Integrated design of collection, control, and transmission
- ⑥ Support automatic switching between primary and backup communication channels

Application Scenarios

Hydrological & Water Regime Monitoring and Reporting, Reservoir automation Monitoring,Water Resources Management Systems,Groundwater Monitoring,Source Well Monitoring Systems, Urban Flood Control Monitoring,Sluice Gate & Pump Station Monitoring,Remote Pump Monitoring,Soil Moisture Monitoring,Automated Water-Saving Irrigation Monitoring,Flash Flood Disaster Prevention & Control, Urban-Rural Water Supply & Network Monitoring.

Technical Parameter

Storage capacity: 32M	Static duty current: <50uA @ 12V DC	Remote transmission protocols: TCP/IP,UDP/IP,MQTT,HTTP/HTTPS
Protection rating: IP30	Average working current: <15mA @ 12V DC	Parameter setting method: USB, Bluetooth APP, Remote
Communication method: 4G	Power supply range: 7~30V DC	LORA parameters: 433MHz frequency band, transmission power of 22dB
Physical interface: 2 RS485 serial ports, 1 pulse rainfall port, 1 set of relay ports, and 2 controllable power supply for external power supply		

Products

Remote Terminal Unit

PWRTU640

Product Features

- ① Compliant with SL 651 Hydrological Protocol
- ② Supports multi-channel high-definition video input
- ③ Real-time On-Screen Display (OSD) of text/data overlay on video streams
- ④ Supports 1080P 100fps H.265/H.264 video encoding

Application Scenarios

Hydrological and hydrological situation monitoring, reservoir automated monitoring, water resources management system, groundwater monitoring, water source well monitoring system, urban flood control monito, sluice and pumping station monitoring, remote pump monitoring, soil moisture monitoring, water-saving irrigation automatic monitoring, mountain flood disaster prevention and control, urban and rural water supply and pipeline.



Technical Parameter

Storage capacity: 32GB	Serial Interface: Supports 2 RS232 and 4 RS485 channels
Wireless Communication: Supports 5G/4G/WIFI/BT	Network Interface: 2 independent Gigabit Ethernet ports
Network Policy: Automatically switch networks in priority order from wired, WIFI, to 4G	Audio interfaces: 1 HDMI audio output, 1 earphone output (4-band US standard)

Products

Manhole Cover Alarm

PWCA

Product Features

- ① Reliable wireless transmission, precise positioning and instant alarm
- ② Easy non-destructive installation, compatible with a wide range of application scenarios

Application Scenarios

Suitable for various municipal road manholes, industrial park chemical/power manholes, water conservancy drainage and flood control facilities, and old residential area renovation projects.



Technical Parameter

Alarm angle range: 1 ° -180 °	Communication method: 4G	Sleep current: <10uA	Working humidity: 95% (no condensation)
Alarm response time: 20~40 seconds under normal network conditions	Built-in Battery: Lithium Thionyl Chloride Battery, 3.6V, 8000mAh		
Alarm reporting interval: Adjustable 1~1440minutes	Auto Wake-up Interval: Adjustable 1 minute ~ 30 days		

Products

Soil Moisture Meter

PWTRSQ801

Product Features

- ① All-in-one design integrating sensing, data acquisition, transmission and power supply, enabling easy installation
- ② Sensor with built-in high-efficiency lithium battery, paired with a low-power RTU
- ③ Equipped with a magnetic switch, allowing power on/off control of the data logger using the supplied magnet

Application Scenarios

Designed for real-time soil temperature and moisture monitoring in farmlands, forests, grasslands and irrigation areas. Also suitable for water conservancy and geological disaster prevention, providing reliable data support for monitoring landslides, mudslides and other natural hazards.



Technical Parameter

Measurement parameter: Soil volumetric moisture content (soil moisture)	Accuracy: ± 0.5 °C	Resolution: 0.01 °C
Humidity range: 0~100% Vol; Resolution: 0.01% Vol	Measurement parameter: soil temperature	
Accuracy: Error within effective range ≤ 3% Vol	Soil temperature range: -40~60 °C	

Products

Rainfall Gauge

PWYD

Product Features

- ① User-friendly operation with a straight forward work flow
- ② Delivers highly accurate rainfall measurement
- ③ Enables real-time monitoring of precipitation dynamics
- ④ Features high sensitivity and rapid response

Application Scenarios

Suitable for meteorological observation, hydrological research, agricultural irrigation, urban management and a wide range of other applications.



Technical Parameter

Catchment diameter:φ200 ^{0.60} mm	Working temperature: -10~50 °C	Resolution: 0.1mm/0.2mm/0.5mm
Sharp edge angle: 40 °~45 °	Working humidity:<95% (40 °C)	Measurement accuracy: ≤ ±3%
Output Signal: Dual-contact Open/Close Signal Output	Rain intensity range: 0.01mm~4mm/min (maximum allowable intensity of 8mm/min)	

Applications

Reservoir/River Water Level Monitoring



Urban Waterlogging/Pipe Network & Manhole Monitoring



Applications

Mountain Flood and Geological Disaster Monitoring



Irrigation District Monitoring

