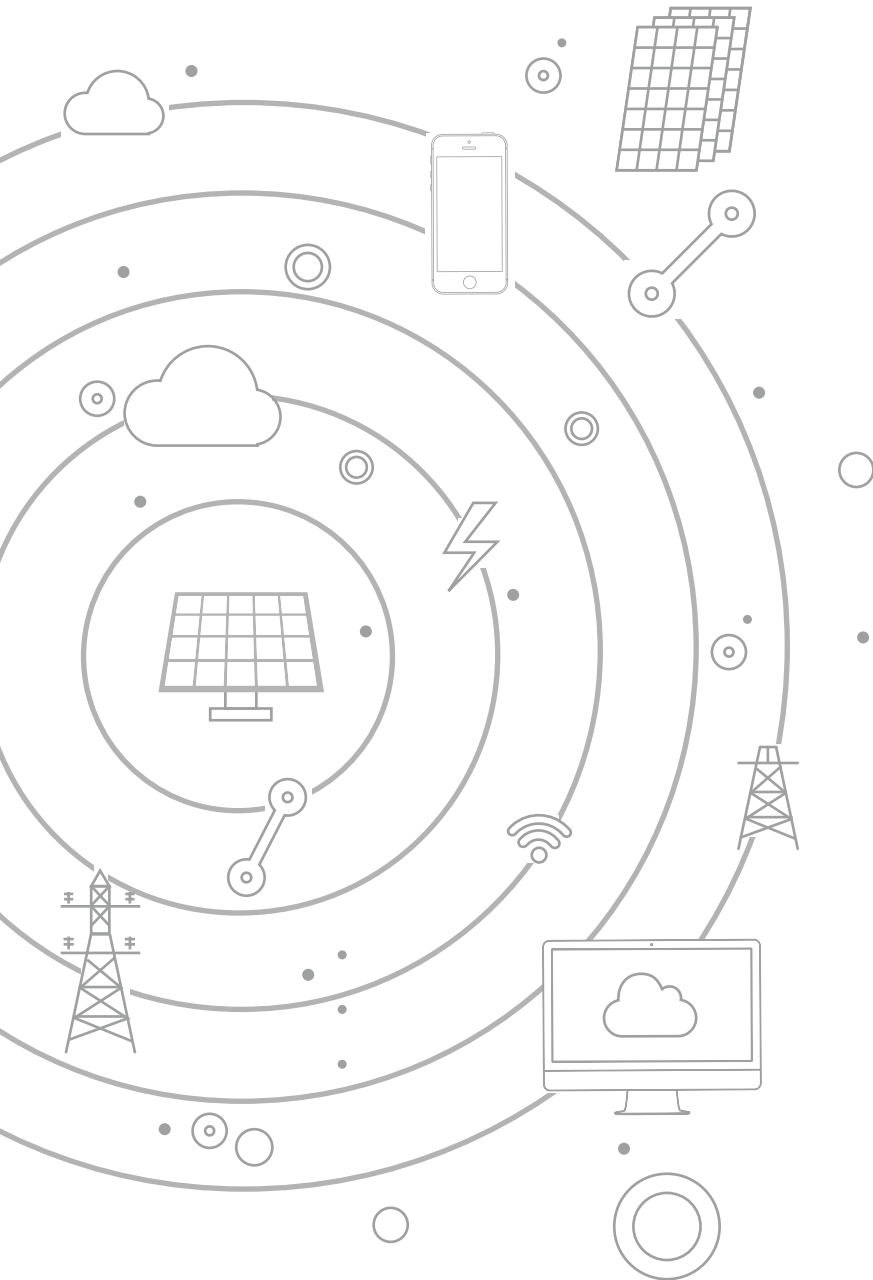


Intelligent management Solutions to power stations



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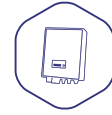
03. Software

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About Renac

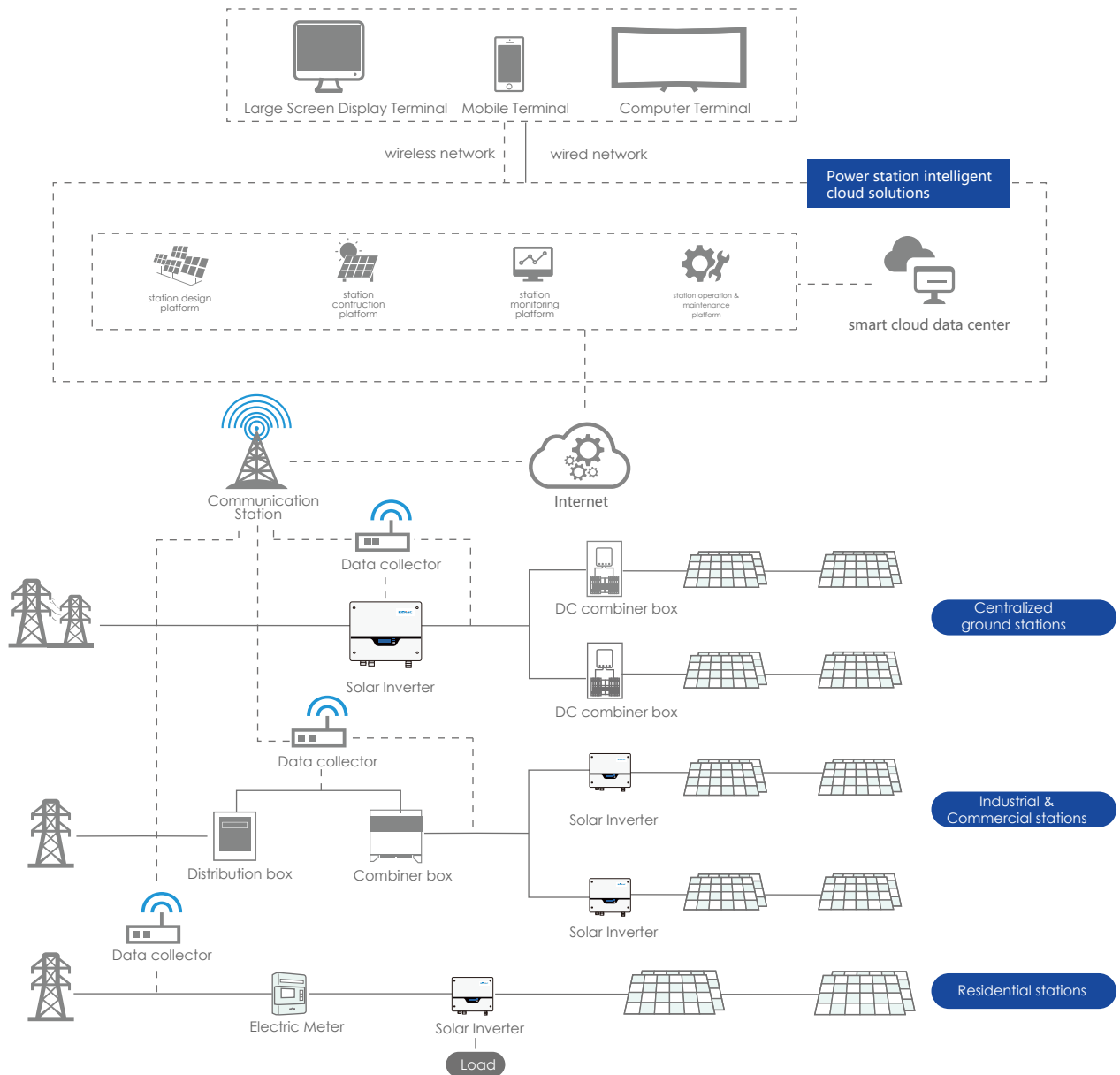
Jiangsu Renac Power Technology Co., LTD was founded in 2017. Established in Changzhou National High-tech Industrial Development Zone, Jiangsu province, with a registered capital of RMB 30 million. Renac Power focuses on providing advanced string inverters, hybrid inverters and integrated energy management system solutions for the distributed generation system and micro grid system. Currently there are subsidiaries in Wuxi and offices and warehouses in Shanghai, Nanchang and Shenyang. Since its establishment, Renac Power has won the Wuxi pioneering talent project, High and new technology enterprises to cultivate storage, and Jiangsu Province private high-tech companies honor recognition.

Currently Renac Power has developed into a comprehensive energy technology company integrating "core equipment products, intelligent operation and maintenance of power stations and intelligent energy management".

Our core monitoring products passed lots of international certifications such as CE, FCC, etc.



Power Station Intelligent Cloud Solutions



- ① Design customized data collection solutions or data transfer solutions, to ensure the correctness and effectiveness of data collection.
- ① Self-developed asset management modules, and perfect report system help customers to realize effective management of station life span.
- ① Self-developed ticket system truly realizes online cooperation, utilizing internet technology to troubleshoot quickly.
- ① First "open and sharing" operation and maintenance platform in solar industry, and global offline cooperative partnership network, truly realize Zero-distance operation and maintenance.
- ① Utilize remote monitoring software of the largest global independent PV monitoring brand to recognize and diagnose faults.

Power station monitoring platform



Variety of data

Weather information
Power station status
Device status, Daily power generation combined with chart form to make all data clear and precise

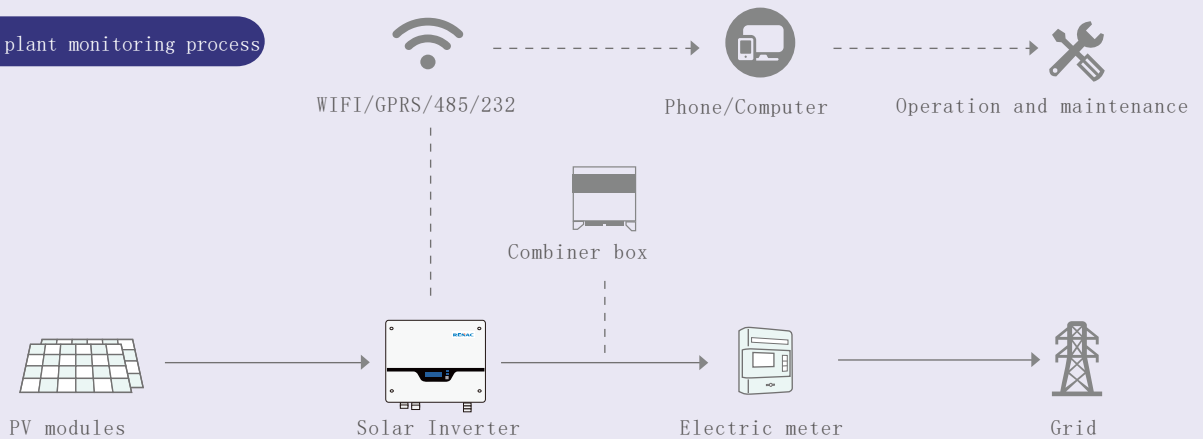
Failure alarm

Real-time monitoring of plant operation and alarm feedback
Independent research and development of data collection modules, safe and reliable

Big data analysis

Estimate power generation based on weather forecast
Analyze and compare plant status
Improve power generation efficiency

Power plant monitoring process



Module functions	Extreme Edition	Ultimate Edition	Standard Edition	Basic Edition
Weather data monitoring	●	●	●	●
Power station KPI indicator monitoring	●	●	●	
Power station monitoring	●	●	●	●
Power station equipment selection	●			
Power Plant income Forecast and Analysis	●	●		
Power station construction management	●	●		
Asset Management	●	●		
Asset Management	●	●	●	●
Statistical analysis	●	●	●	
Alarm management	●	●	●	●
Device smart analysis	●			
Device management and monitoring	●	●	●	●
Android Monitor App	●	●	●	●
IOS Monitor App	●	●	●	●
App quick registration	●	●	●	●



station construction
completion and operation



overall control of
station conditions



timely information
reception and
fault handling



Customer can make
real-time monitoring on
station conditions



Convenient export
of data report

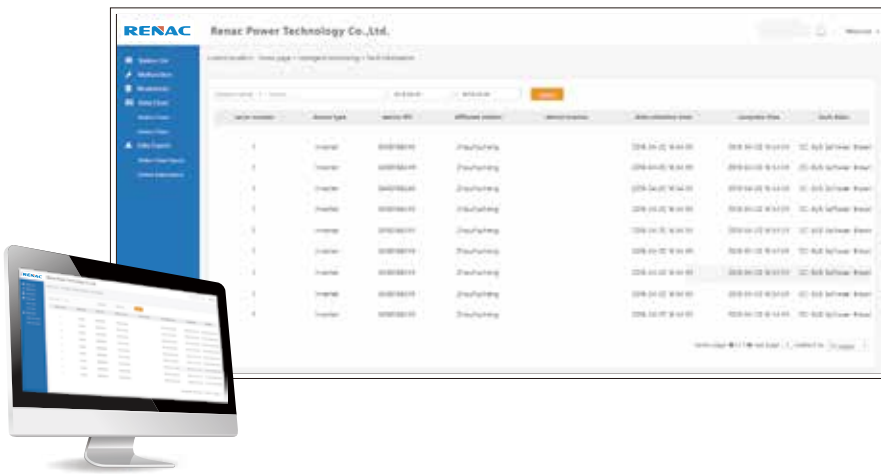


Perfect alarm system
correct fault analysis with clear



Data statistics report
station profits

Station operation & maintenance platform



Complete operation and maintenance process

Operation and maintenance process integration. Operation and maintenance personnel professionalization

Safe operation and maintenance

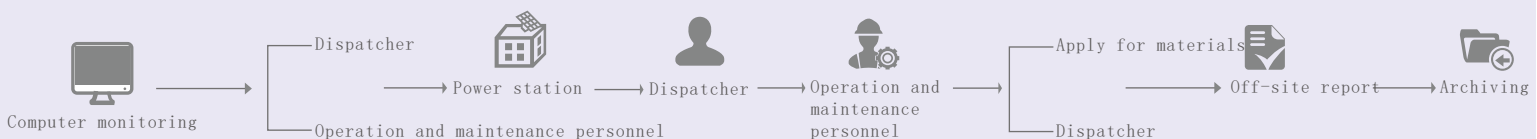
Two-ticket Management ensures safe Operation and Maintenance Precise fault analysis reduces operation and maintenance cost

Efficient operation and maintenance management

Rapid operation and approval process Operation and maintenance order record and archive

Module functions	Extreme Edition	Ultimate Edition	Standard Edition	Basic Edition
Defect management	●	●	●	
Task management and smart appointment	●	●	●	●
Staff management	●	●	●	●
KPI management	●	●		
Alarm Management	●	●	●	●
Remote expert diagnosis	●	●		
Material Management	●	●	●	●
Two-ticket management	●	●		
Material inventory checking		●		
Task statistics		●		
Operation and maintenance analysis	●			
Operation and maintenance App	●	●	●	●

Power Operation and maintenance process



Large-screen Operation & Maintenance platform



Comprehensive data display

Plant operation quantity and status
Map mode display

Quick data transfer

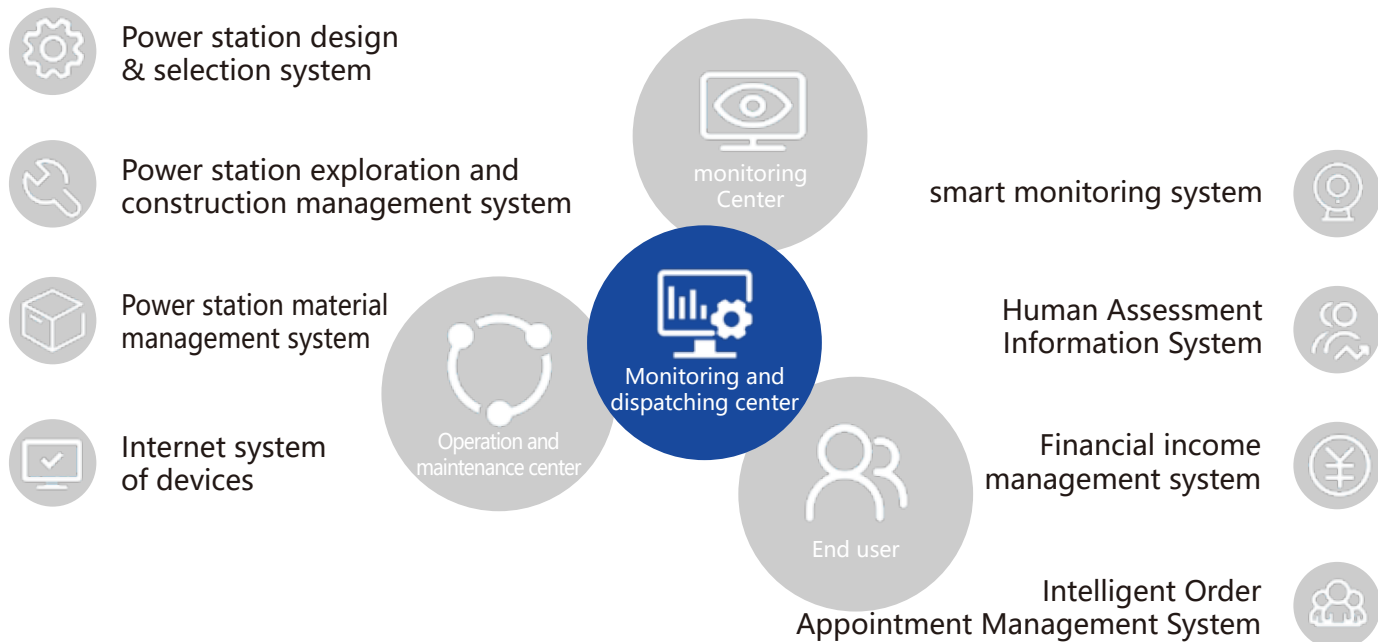
Power generation statistics
Power station fault information feedback

Simple operation flow

Multi-data full-screen display
Brief page introduction, easy to operate

Module functions	Extreme Edition	Ultimate Edition	Standard Edition	Basic Edition
Power Station Statistics	●	●	●	●
Power station overview	●	●	●	●
Equipment Overview	●	●	●	●
data statistics	●	●	●	
Map customization	●	●		

Customized software development services



Customization

Customized development of functions and interfaces based on customer requirements

Customized solution

customize monitoring solutions according to the power station sites

Independent deployment and data exclusivity

privatized and independent deployment, and exclusive big data monitoring

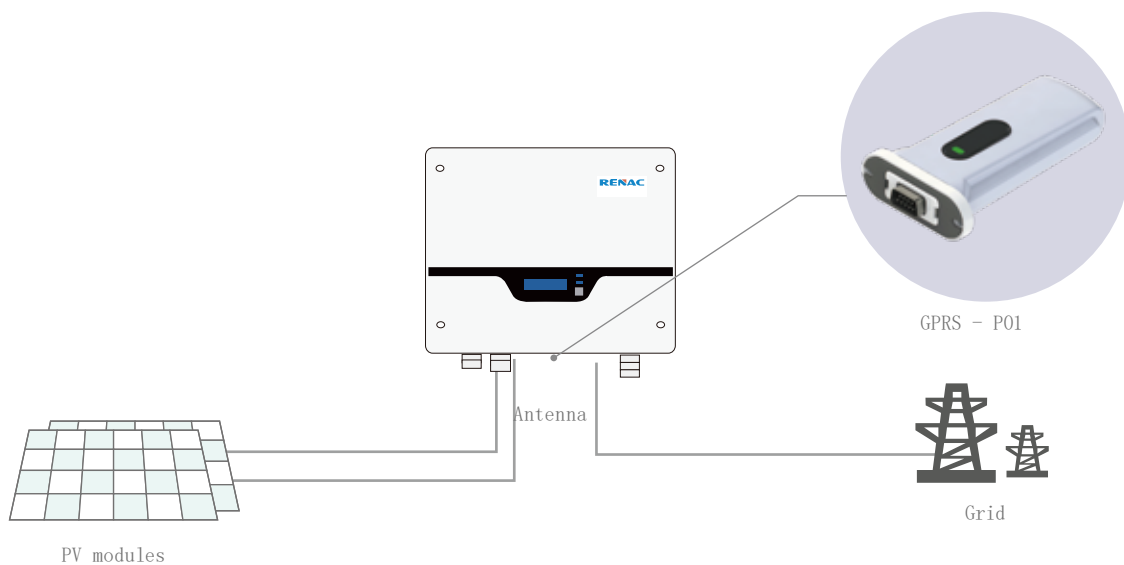
GPRS module (Stick type)



Product Highlights

- ◎ GPRS communication, applicable for areas with operator networks
- ◎ Support cloud platform monitoring
- ◎ Support remote modification of local parameters
- ◎ Reconnection when the network is unstable and restart when the connection fails, to ensure the device never disconnected
- ◎ Industrial-grade originals and designs, able to work under the temperature from -30°C to $+85^{\circ}\text{C}$
- ◎ Support multiple communication protocols (standard/non-standard)
- ◎ Compact module, easy to carry and install

• Application system schematic diagram •



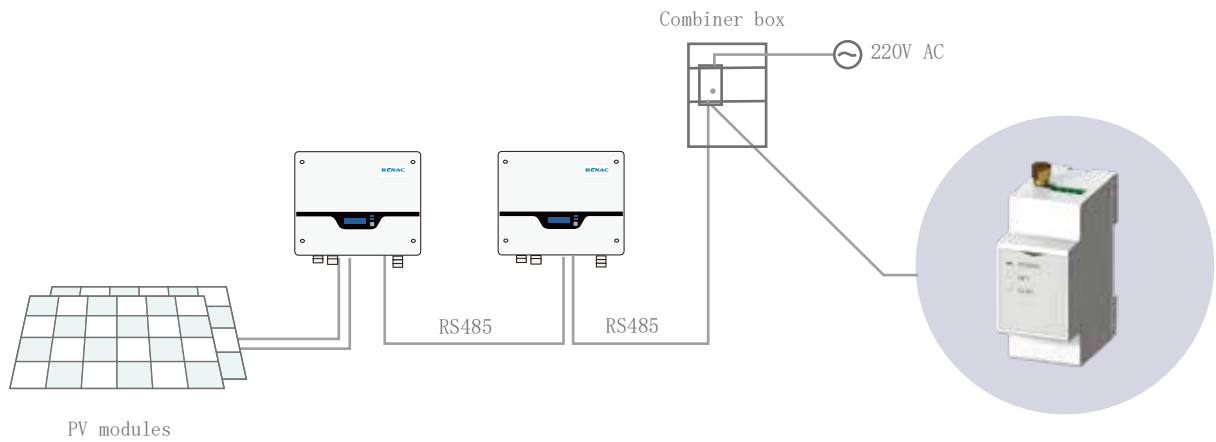
GPRS module (Rail type)



Product Highlights

- ⊙ 220V AC
- ⊙ RS485 module COM interface
- ⊙ Communication parameter: 9600/N/8/1
- ⊙ GPRS connection with remote server to transfer data
- ⊙ support remote module firmware upgrades
- ⊙ support 850/900/1800/1900MHz SIM card
- ⊙ Operation temperature: -20~70°C

• Application system schematic diagram •



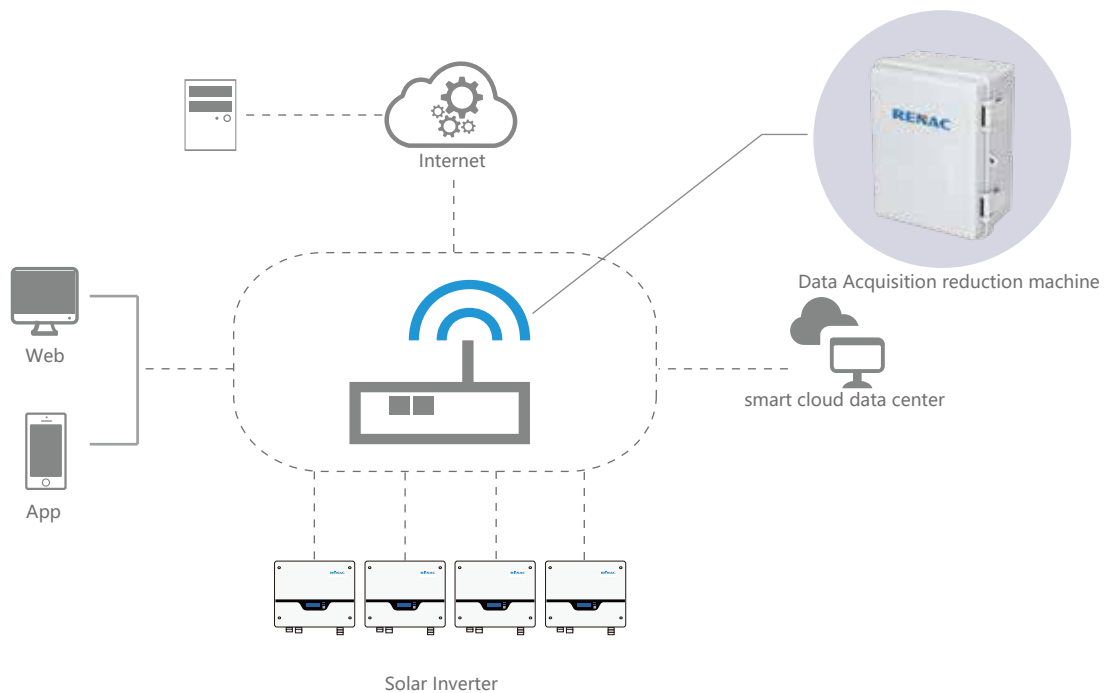
Data Acquisition reduction machine



Product Highlights

- ◎ Built-in communication server and Web monitoring site
- ◎ local storage
- ◎ able to send info to remote server (RJ45/GPRS/WIFI)
- ◎ Built-in Linux operating system
- ◎ Support up to 4 strings of 485, and each string can connect up to 18 devices
- ◎ Compatible with 104 communication protocols

• Application system schematic diagram •



Central control projects and implementation services

From small household power generation systems, industrial photovoltaic power generation systems to large power stations, we are specialized in providing complete power plant monitoring and operation system solutions for all kinds of power generation systems, including pre-plans, program design, hardware and software matching and implementation services.



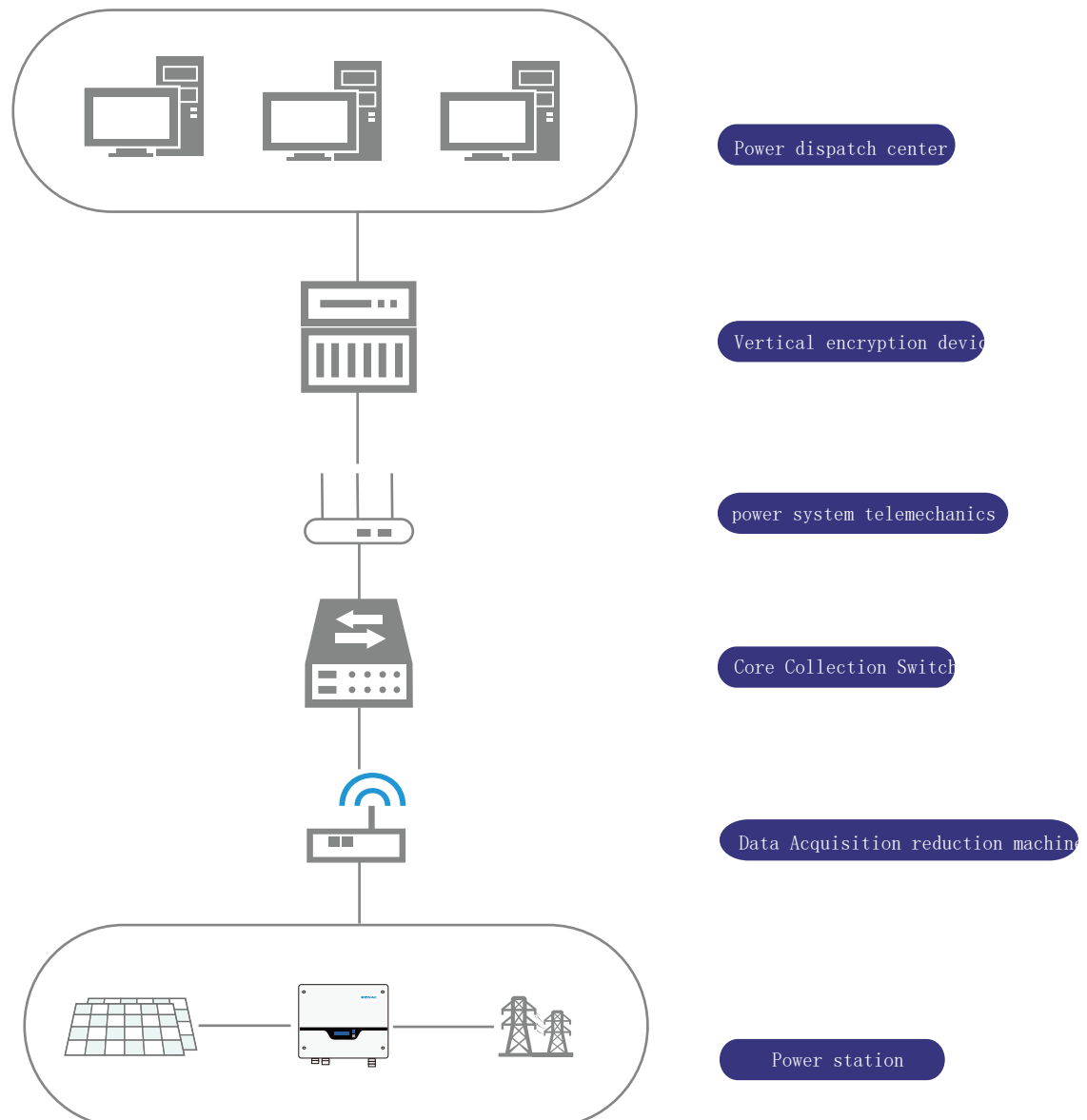
Central control project composition

Central Control Center

Realize the centralized management function of photovoltaic power stations and understand the operating status of each power station at real time

Station section

Realize station-side intelligent management, with online monitoring, fault diagnosis and alarm functions of on-site equipment



Project Reference



- 2017 Kunshan 1.5MW
- 2017 Yangzhou 1.8MW
- 2017 Qixian,Kaifeng, Henan 4MW
- 2017 Yucheng, Shangqiu, Henan 4MW
- 2017 Hengshui, Hebei 3MW
- 2017 Xinpi, Jiangsu 15MW





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