

# ProControl Base

## Cabinet Level Local ESMU

High-end integrated display and control system for commercial and industrial energy storage solutions.



### Features



#### High-Performance Data Processing MCU

Equipped with a powerful processor and ample memory, ensuring fast response to demand-side instructions and efficient data processing.



#### Advanced Graphics and AI Capabilities

Featuring advanced graphics processing and AI capabilities, offering robust performance for enhanced device intelligence.



#### High-Brightness Full-View Touch Display

1280\*800 resolution, 45cd/m<sup>2</sup> brightness, full viewing angle, and three-point capacitive touch screen, allowing easy viewing of system data and settings both indoors and outdoors.



#### Independent Smart Local Control

Built-in modes such as self-use, peak shaving, PV priority, grid priority, backup, and battery modes provide convenient local operation. Supports local intelligent monitoring, data curve generation, parameter settings, firmware updates, maintenance report generation, and log recording for simplified after-sales service.



#### Flexible Cloud Connectivity

Supports multiple interfaces including LAN, WiFi, and LTE for versatile cloud platform connections based on customer needs.



#### Comprehensive Communication & Control Interfaces

Includes CAN, RS485, RS232, Type-C, USB3.0, LAN, TF card slot, Nano SIM, HDMI, and RTC interfaces, enabling connection to various external devices and sensors for centralized management and control.

### Interface Showcase



### Parameters

#### General Parameters

CPU	RK3568 4xA53@2.0GHz
Memory	RAM: 4GB, EMMC: 64GB, EEPROM:64KB, SSD: 1T(Optional)
GPU	Mali-G52
NPU	Support 1 Tops computing power
OS	Ubuntu 20.04
Brightness	450cd/m <sup>2</sup>
Resolution	1280*800
Angle	Full viewing Angle
Touch	3 point capacitive screen
Communication interface	3* CAN, 6* RS485, 1*RS232, 1*Type-C, 1* USB3.0, 4* 1000Mbps, Lan, 1* TF card, 1* Nano SIM card, 1* HDMI, 1* RTC
Control interface	12* DO, 16* DI, 2* NTC, 1* Buzzer
Wireless communication	Wifi/BT, 4G, GPS
IP Rating	IP65
Operating temperature	-20°C~70°C

# ProControl Prime

## Station Level Local EMS

Reliable control and display solution for large distributed energy storage systems.



### Features



#### Information Summarization and Monitoring

EMS collects and uploads operational data of distributed energy storage systems for centralized monitoring. It displays system trends, performance metrics, and fault history to help users optimize operations.



#### Strategy Algorithm Configuration

EMS offers flexible strategy algorithms for customizing energy storage system operations based on specific needs and system conditions. This allows for optimal energy dispatch and management to maximize efficiency and cost-effectiveness.



#### Alarm Generation and Handling

EMS provides a user-friendly tool for creating graphical interfaces of energy storage systems. It allows real-time monitoring and management through topology, status diagrams, and device controls.



#### Energy Metering and Anti-Reverse Flow Control

EMS handles energy metering and anti-reverse flow control, effectively managing energy flow within the storage system and ensuring stable PCS operation.



#### BMS Data Collection and Display

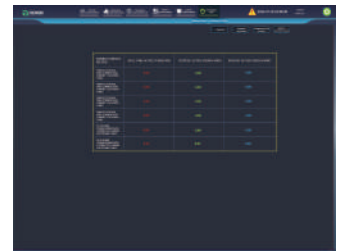
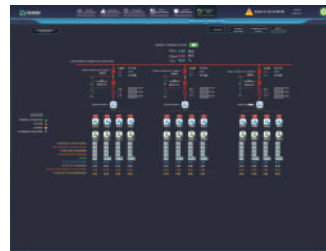
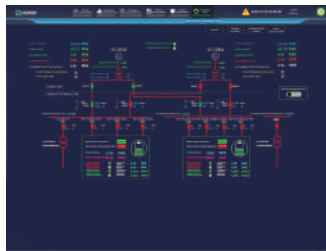
EMS communicates with Battery Management Systems (BMS) to collect real-time data on battery parameters and displays it graphically. This includes battery health, charge/discharge status, SOC, and SOH.



#### Profit Analysis

EMS includes robust profit analysis capabilities for in-depth assessment of energy storage system operational data. This analysis helps users evaluate economic benefits, providing strong support for decision-making.

### Interface Showcase



### Parameters

#### General Parameters

CPU	2U Rack Server
Memory	Intel® Xeon® Gold 5218 Processor 22M Cache, 2.30 GHz, Qty 2
Hard disk capacity	64G
NIC	3*1.2T SAS
PCIE	4 Gigabit LAN cards6 PCIe 3.0
Power Supply	slots 550W power supply*2
Chassis Size	Chassis Specifications: 445*87*746mm
IP Rating	IP20
Operating Temperature	5.0°C~40.0°C (41.0°F~104.0°F)
Operating Humidity	85% RH

# Renon Smart

## Cloud Energy Management System

### We're Using Smart Power to Simplify Your Life.

Renon Smart is a comprehensive device management and monitoring solution for national agents, secondary agents, installers and users. Comprehensive system for managing large-scale power station and commercial and industrial energy storage systems



### Features



#### Instant Clarity with Remote Data Monitoring and Analysis

Remote data monitoring, automatic curve generation, and big data analysis management make the product operation status clear at a glance.



#### Enhanced Security with Distributed Architecture and Data Encryption

Distributed architecture deployment and data security encryption ensure that cloud data is more secure and reliable.



#### Seamless Connections with Intelligent Mall and Trial Applications

Intelligent mall application and new product trial application enable users to contact source manufacturers directly, making product promotion faster and more accurate.



#### Boost Customer Satisfaction with Remote Firmware Upgrades

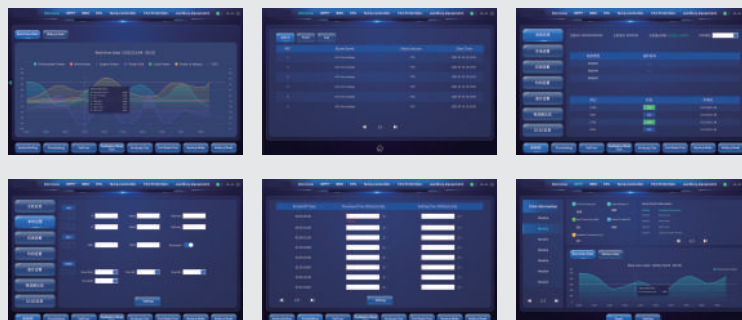
Remote firmware upgrading and intelligent operation and maintenance report generation effectively improve customer satisfaction.



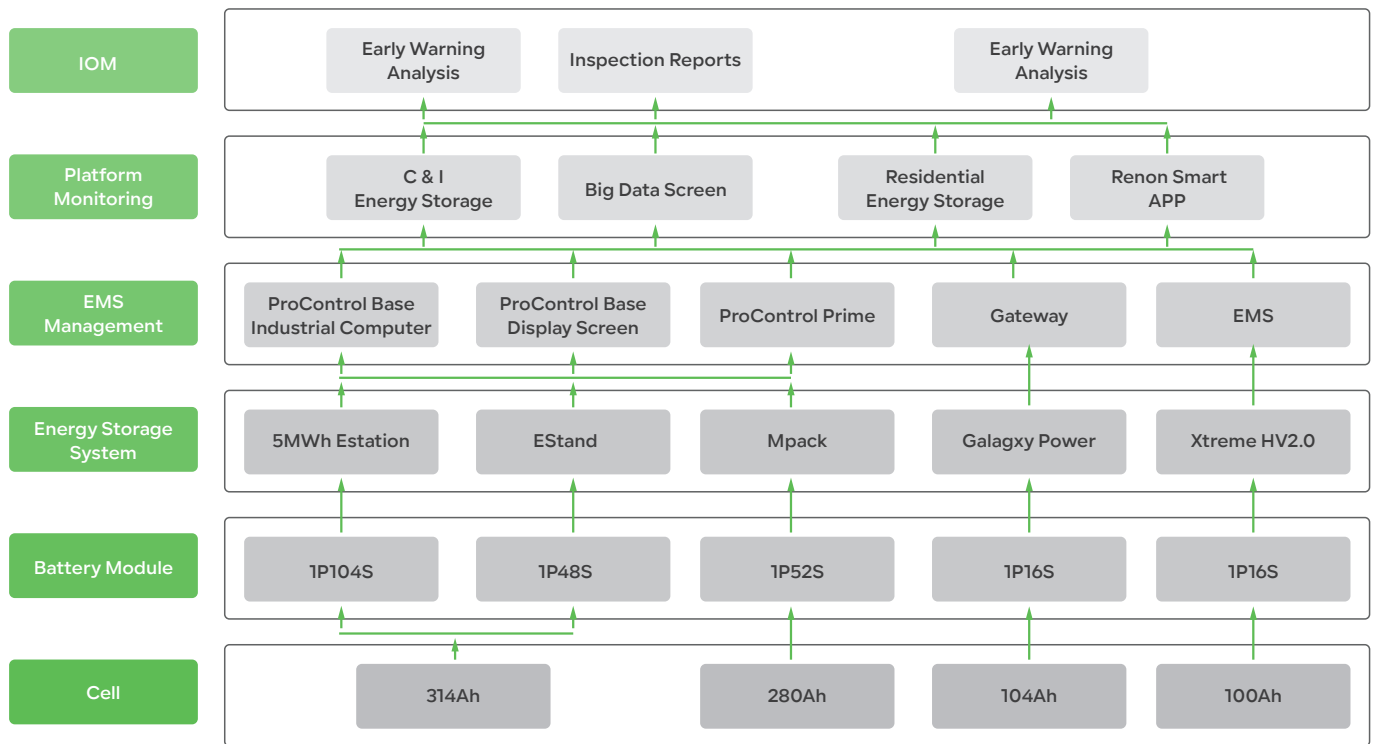
#### Optimized Channel Construction with a Six-Level Distribution System

The six-level distribution system, from the brand owner to end-users, is more conducive to robust product channel construction.

### Interface Showcase



## Physical Link



## Platform Architecture

