

EMS-1-P

C&I Energy Manager



EMS-1-P is designed for the energy needs of C&I sectors, covering diverse scenarios such as solar, energy storage, charging, and consumption. This series not only fully supports energy storage characteristics but also enables convenient access of various equipment units in the energy storage cabinet, efficient data aggregation, flexible protocol conversion, secure data storage, as well as centralized monitoring and intelligent maintenance. It brings unprecedented convenience and efficiency to energy management.

I Applicable Scenarios

Suitable for C&I energy management application scenarios involving solar, energy storage, charging, and consumption

- Equipment manufacturers and integrators can match it with energy storage systems to achieve full access of all equipment units in the energy storage system and strategy coordination
- O&M providers can realize online monitoring, safety early warning, and real-time access to equipment operating status through local or remote software platforms
- Commissioning personnel achieve local or remote upgrading of equipment, conduct rapid configuration and commissioning, and solve O&M pain points
- C&I owners use systematic energy management methods to improve energy utilization efficiency, increase revenue, and achieve optimal economic energy consumption

I Features

- Multi-interface Compatibility: RS485, CAN, Ethernet, DI/DO, AI/AO, USB, HDMI, etc.
- Multiple Communication Methods: Supports cloud access via various communication methods such as 4G, WiFi, and Ethernet.
- Localized Management: Embedded web management interface, allowing local login for viewing and O&M.
- Multi-platform Access: Supports encrypted data transmission to SOLARMAN or third-party platforms.
- Energy Strategy: Supports local/remote energy strategy configuration.
- Wide Protocol Coverage: Compatible with protocol access of inverters, electricity meters, and BMS from multiple brands.
- Safety Compliance: Complies with the international safety standard ETSI EN 303 645, with data encryption and user privacy protection capabilities.
- Hardware and Software Upgradability: Supports firmware OTA upgrade and data export.
- Strong Expandability: Reserved SD card slot for expansion.

Configuration Parameter	
Remote Communication	Ethernet, WiFi, 4G
Ethernet	2-way 10/100/1000M, 2-way 10/100M
WiFi Standard	IEEE 802.11b/g/n/ax
4G Standard	FDD-LTE, TDD-LTE
Bluetooth Standard	BLE 5.2
GPS	GNSS/GPS
HDMI	1-way HDMI 2.1, supporting maximum output of 7680x4320@60Hz
USB-C	1-way TYPE-C, compatible with USB 3.0 and lower protocols
USB-A	1-way TYPE-A, compatible with USB 2.0 and lower protocols
SD	1-way Micro SD, supporting up to 256G
RS485	8-way
CAN	3-way
DI	16-way
DO	8-way
PWM	1-way PWM input detection, 1-way PWM output
AI	3-way current detection, 1-way voltage detection
EMMC	32GB EMMC
Memory	4GB LPDDR4X
NPU	Supports mixed operations of INT4/INT8/INT16/FP16/BF16/TF32, with a computing power of up to 6TOPS

Hardware Parameter	
Installation Method	Wall-mounted/Rail-mounted
Power Supply	12-36V
Voltage Sampling	0-36V(±5%)
Current Sampling	0-20mA(±5%)
Operating Temperature	-30°C~+85°C
Operating Humidity	5%-95% no condensation

Software Parameters	
Southbound Data Access	Supports access of various devices such as BMS, PCS, EMS, PV, and I/O systems, and data protocol adaptation
Northbound Data Upload	Supports multi-channel encrypted transmission, such as access to SOLMAN platform and standard protocol platforms like IEC104 and Modbus TCP
Parallel Cabinet Management	≤16
User Configuration	Local/remote configuration
Firmware Upgrade	Local/remote upgrade
Safety Mechanism	Software/hardware watchdog
Others	Real-time control, remote OTA, breakpoint resume

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