EMS1000

Jinko ESS Energy Management System

EMS1000 is JinkoSolar’ s self-developed station-level energy management system designed for customer-side applications. It enables secure, bidirectional communication with on-site equipment, delivering stable control and executing user-defined functions. The system is well-suited for applications with moderate data volumes and less stringent real-time response requirements, such as commercial & industrial (C&I) behind-the-meter projects and microgrids. Core capabilities include real-time measurement, multi-protocol communication, local steady-state and transient control, and grid dispatch integration.



EMS1000 Controller

AI-Powered Dispatch

Built-in proprietary AI algorithms optimize energy storage returns through load forecasting and power trading strategies. Meanwhile, a cell-level AI large model delivers ultra-early thermal runaway warnings, protecting asset safety at the source.

End-to-End Solution

Covering all C&I scenarios with support for both grid-connected and islanded operation, as well as grid-forming coordination. Fully self-developed from cell to system, it offers a true turnkey solution. Simplified O&M with factory pre-configuration and testing enables one-click setup on site.

Cybersecurity Compliance

Developed in alignment with global information security standards and key customer requirements, the system implements robust security policies, including access control, security auditing, account protection, and session management. An in-house vertical encryption module ensures both software and hardware network security.

Full Visibility

Provides eight-layer comprehensive visualization from device to plant level, with multi-platform access via Web, APP, and large screens. A multi-level intelligent alert mechanism significantly reduces O&M complexity, giving operators clear insight into plant status at a glance.

EMS System

Model	Jinko EMS1000
Configuration	EMS1000 controller (wall-mounted), switch, UPS, grid connection meter, RTU, Jinko Smart Cloud
Controller Functions	Grid on/off switching, anti-reverse power, anti-overload, demand control, PV self-consumption optimization, PV-storage coordination, time-of-use power scheduling, black start, peak shaving, valley filling, peak-valley arbitrage
Jinko Cloud Functions	Real-time monitoring, remote upgrade, intelligent O&M
Certifications	GB/T 42726-2023、GB/T 7216-2016、GB/T 14598、ISO27001、IEC62443

System Interface

Interface Quantity	2 Optical Ports / 2 Ethernet Ports
DI/DO	8/8
B-Code Time Synchronization	1

Power Supply

Input Power	AC 100V~240V，50Hz
Power Consumption	<50W

Data Capacity

Telemetry / Teleindication Points	2,000,000 / 2,000,000
Remote Control / Remote Regulation Points	4,000 / 4,000

Communication Protocols

Communication Medium	Fiber optic or Ethernet
Protocols Supported	Modbus RTU, Modbus TCP，IEC61850 GOOSE，IEC61850 MMS，DNP 3.0，IEC60870-5-104

Environmental Specifications

Operating Environment	-30°C~60°C，5%~95%RH
Operating Altitude	4,000m

EMS Cabinet

Dimensions	600×300×800mm

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