

# LingeCore

## Energy Storage AI-Powered Operation and Revenue Optimization System

TAIB-100E



### Product Overview

Designed for energy storage applications, the system integrates featuring device-side perception, edge analysis, cloud optimization, strategy control, and continuous operations & maintenance (O&M). This helps customers upgrade from merely having 'operable equipment' to achieving a system that is optimizable, manageable, and capable of sustainable value creation

#### Core Capabilities

**Equipment Safety Prediction**  
Achieve early identification of battery risks based on multi-level models, enhancing system operation safety and controllability.

**Demand Control & Cost Optimization**  
Reduce demand charges and comprehensive electricity costs through load forecasting and strategic scheduling.

**Price-Driven Revenue Optimization**  
Intelligently generate charge/discharge strategies by combining dynamic electricity prices with operation status, enhancing peak-valley arbitrage capabilities.

**Cloud-Edge Collaboration & Continuous Optimization**  
Cloud strategy + Edge execution closed loop, supporting remote upgrades and continuous performance improvement.

#### Business Value

**Safer Operation**  
Shift from passive alarms to active prediction, reducing operation risks.

**Lower Electricity Costs**  
Optimize electricity usage structure, reducing demand and comprehensive electricity costs.

**Higher Revenue Capability**  
Upgrade from fixed strategies to dynamic optimization, increasing revenue potential.

**Measurable Operational Revenue**  
In typical use cases, revenue generated from daily operations can offset a portion of electricity expenses.



### TAIB-100E Edge Intelligent Execution Unit

**Edge Intelligence Core**  
Local data processing and AI inference, supporting real-time on-site decision-making.

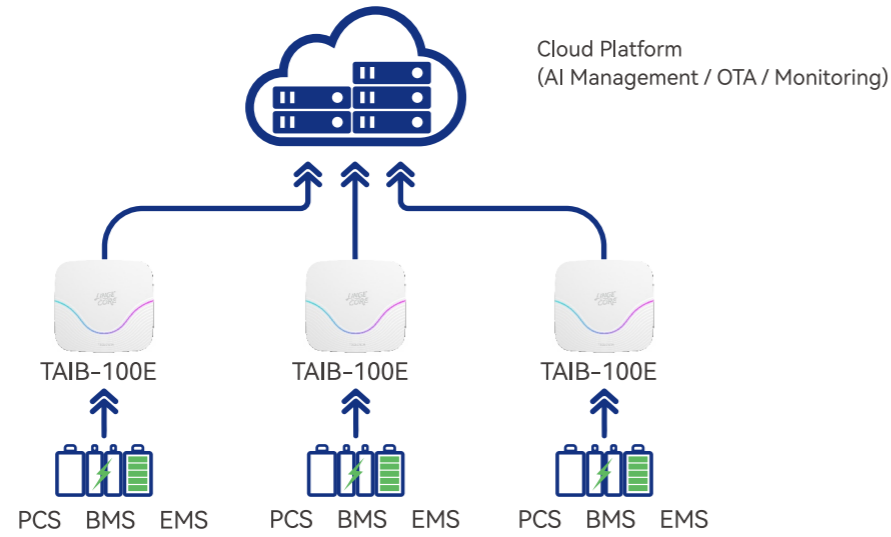
**Stable Operation Assurance**  
Supports offline operation, ensuring system continuity.

**Cloud-Edge Collaboration Node**  
Connects devices to the cloud platform, achieving closed-loop data and strategy.

**Capability Deployment Carrier**  
Transforms cloud algorithms into executable on-site strategies.

Model	TAIB-100E
<b>System Parameters</b>	
System Form	LINGECORE TAIB-100E + Cloud Platform
Application Scenarios	C&I Energy Storage / Grid-side Energy Storage / Energy Storage Cabinet / Energy Storage Container / Mobile Energy Storage Vehicle
Core Capabilities	Device-side Perception, Risk Identification, Revenue Optimization, Strategy Linkage, Continuous O&M
Data Access	BMS / EMS / PCS / Electricity Price Data / On-site Operation Data
Decision-making Capability	Price-driven Strategy, Revenue Optimization, Demand Control, Multi-objective Coordination
O&M Capability	OTA Upgrade, Log Monitoring, Remote Diagnosis, Version Management
Extension Capability	Life Assessment, Asset Management, Strategy Optimization, Simulation Assessment
<b>Hardware Specifications</b>	
Processor	ARM + FPGA Heterogeneous Computing Architecture
AI Capability	Local Model Inference, Status Analysis and Risk Identification
Storage	Industrial-grade eMMC, Supports Local Caching
Communication Interfaces	RS485 / CAN / Ethernet / Dry Contact
Communication Protocols	Modbus TCP/RTU, Supports IEC104 etc. expansion
Network Access	LAN / 4G / 5G / WiFi (Configurable)
O&M Capability	OTA Upgrade, Log Monitoring, Remote Diagnosis
Protection Rating	IP54
Operating Temperature	-20°C ~ +60°C
Dimensions	155 x 145 x 40 mm

# Application Architecture



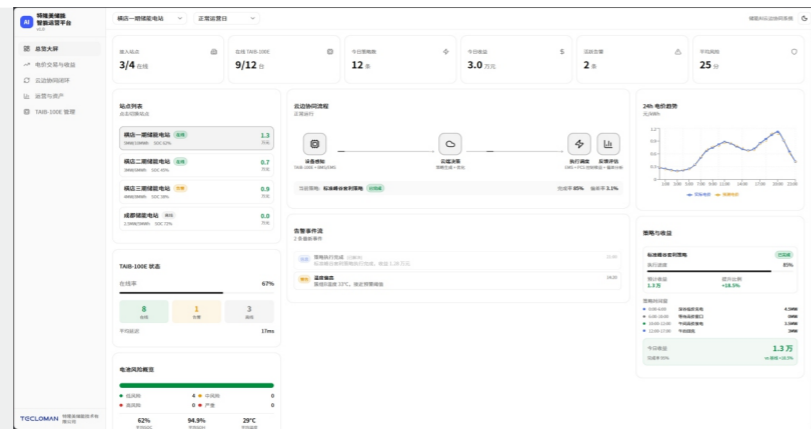
# Energy Storage AI Cloud Platform

Built on cloud-based intelligent decision-making, the platform integrates the TAIB-100E edge unit with on-site energy storage equipment to centrally showcase capabilities in revenue optimization, cloud-edge collaboration, asset operations, equipment management, and safety prediction.

- Revenue Optimization
- Risk Warning /Risk Alert
- Cloud-Edge Collaboration
- Asset Operations
- OTA O&M

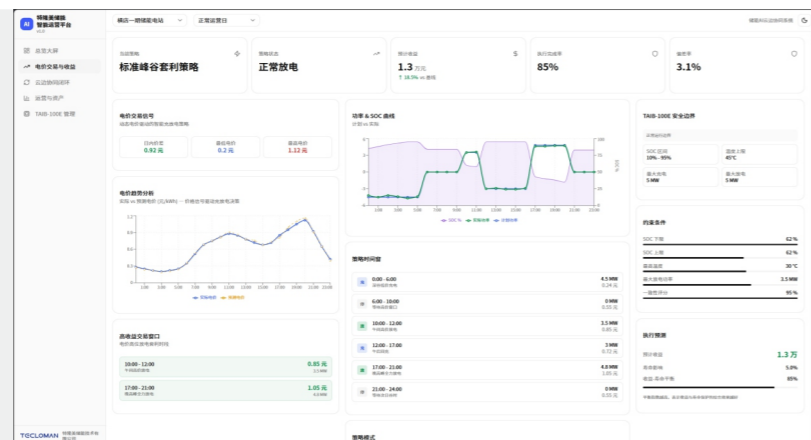
## Overview Dashboard

Get a one-screen overview of the global status, including sites, revenue, risks, and equipment operation status.



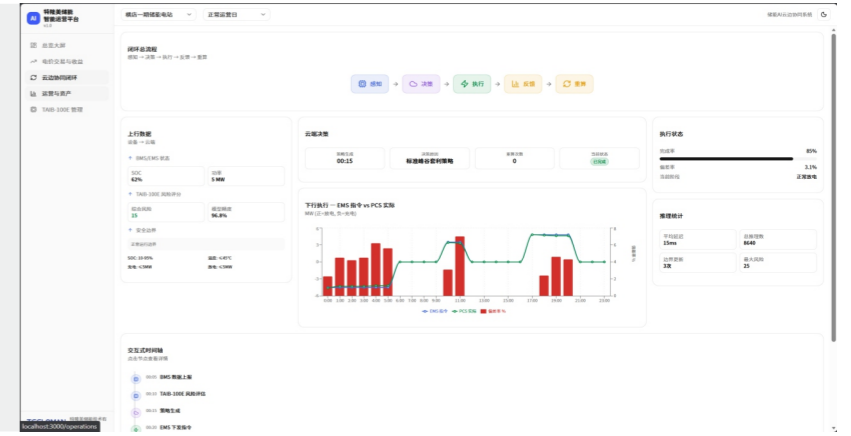
## Electricity Price Trading & Revenue

Displays the strategy generation logic through panels for electricity price, SOC, power, and revenue.



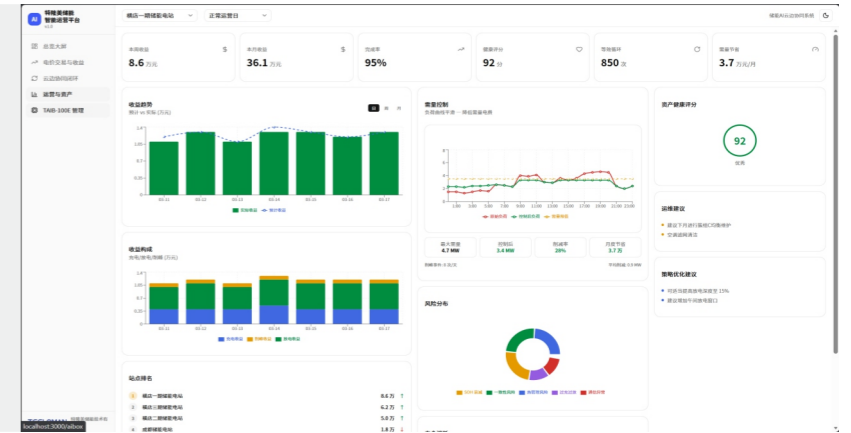
## Cloud-Edge Collaboration Closed Loop

Fully Present the Closed-Loop Process of Perception, Decision, Execution, Feedback, and Recalculation.



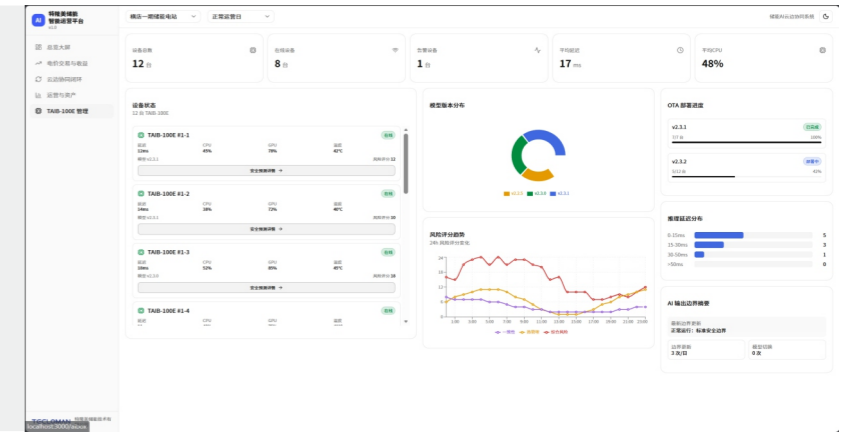
## Operations & Assets

Focuses on revenue trends, demand control, asset health, and operational recommendations.



## TAIB-100E Management

Centrally view device online status, model version, OTA progress, and inference status.



## Equipment Safety Prediction

Visually displays anomaly detection results through cell matrices and prediction curves.

