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ZEEDA ENERGY

"Smart Energy + Charging Robot"
Home Scene Solution

Globalization・AI Energy・Robotics



A Global Leader in AI-Driven Smart Energy & Robotics Integrated Solutions

To pioneer the future of smart energy and robotics through AI-powered innovation, delivering integrated solutions for residential and public applications that redefine sustainable living and intelligent mobility.

Comfortable
Zero-Carbon Living

A Standard Solar + Storage Solution for Villas

Solar Power
Zero-Carbon Living

Nighttime Energy Storage
Smarter Solar + Storage

Seamless Backup Power
24/7 Energy Protection



Recommended Smart Home Energy Package

Roof area 100 ㎡

Single Integrated Unit

Component capacity	20kWp
Inverter capacity	12kW
Energy storage capacity	15kWh

Roof area 80 ㎡

Single Integrated Unit

Component capacity	15kWp
Inverter capacity	12kW
Energy storage capacity	10kWh

Roof area 50 ㎡

Single Integrated Unit

Component capacity	10kWp
Inverter capacity	10kW
Energy storage capacity	10kW

Roof area 30 ㎡

Single Integrated Unit

Component capacity	6kWp
Inverter capacity	6kW
Energy storage capacity	5kWh



IIntegrated Solar + Storage Unit

Single-Phase

High-Power Solar + Storage Inverter and Energy Storage Battery Module



Solar + Storage Inverter

- Integrated control design for more efficient monitoring
- High DC/AC ratio for higher utilization
- Multiple MPPTs for efficient power generation

Energy Storage Battery Module

- High-quality cells for enhanced safety・
- IP65 protection, built for all weather
- Cell monitoring with comprehensive thermal management
- 5 kWh per module, scalable as needed

Basic Specifications

Operating Temperature Range	-25° C to +60° C (>45° C derating)
Cooling Method	Natural Cooling
Maximum Operating Altitude	⩽ 4,000 m
Operating Humidity Range	0–95% (Non-condensing)
IP Rating	IP66
Topology	High-Frequency Isolation
Communication	RS485 / CAN 2.0 / Wi-Fi
Display	LED / App / Web

Integrated Solar + Storage System 3.68-6kW Single-Phase System

Photovoltaic parameters

	ZEEB-3.6S-A1	ZEEB-5S-A1	ZEEB-6S-A1
Recommended Maximum PV String Power @ STC	7.2kW	10kW	10kW
Maximum PV Voltage		500V	
Rated Voltage		360V	
MPPT Voltage Range		120V-480V	
Full-Power MPPT Voltage Range	200V-425V	250V-425V	250V-425V
Start-up Voltage		200V	
Number of MPPTs		2	
Number of Strings per MPPT		1	
Maximum MPPT Input Current		20A	
MPPT Short-Circuit Current		25A	

Grid connection parameters

	ZEEB-3.6S-A1	ZEEB-5S-A1	ZEEB-6S-A1
Maximum Continuous Output Power	3680W	5000W	6000W
Maximum Apparent Output Power	3680VA	5000VA	6000VA
Maximum Continuous Input Power	7360W	9200W	9200W
Rated AC Voltage		230Vac	
Rated Frequency		50/60Hz(±5Hz)	
Rated Output Current	16A	21.7A	26.1A
Maximum Output Current	16.7A	22.7A	27.3A
Maximum Input Current	16A	22.7A	40A
Power Factor		0.8 Leading to 0.8 Lagging	
THDi		<3% (Rated Power)	

Off-grid parameters

	ZEEB-3.6S-A1	ZEEB-5S-A1	ZEEB-6S-A1
Rated AC Output Power	3680W	5000W	6000W
Maximum AC Output Power	3680VA	5000VA	6000VA
Rated Output Current	16A	21.7A	26.1A
Rated Output Voltage		230Vac	
Rated Output Frequency		50/60Hz	
THDu		<3% (Linear Load)	

Battery Specifications

	ZEEB-3.6S-A1	ZEEB-5S-A1	ZEEB-6S-A1
Battery Type		Lithium Iron Phosphate (LFP)	
Rated Battery Voltage		48V	
Charging Voltage Range		42~58V	
Max. Charging/Discharging Current	80A/80A	120A/120A	125A/125A
Rated Charging/Discharging Power	3600W/3900W	5000W/5400W	6000W/6400W
Battery Capacity		100-400Ah	

Efficiency

Max. Efficiency	97.00%
European Efficiency	96.30%

Protection

DC Switch	Available
Anti-Islanding Protection	Available
Residual Current Monitoring	Available
PV Reverse Polarity Protection	Available
AC Short-Circuit Protection	Available
AC Overvoltage Protection	Available
Surge Protection	DC Type II; AC Type III
Remote Shutdown	Available
Arc-Fault Detection	Optional

Integrated Solar + Storage Unit

Three-Phase

High-Power Solar + Storage Inverter and Energy Storage Battery Module



Solar + Storage Inverter

- Integrated control design for more efficient monitoring
- High DC/AC ratio for higher utilization
- Multiple MPPTs for efficient power generation

Energy Storage Battery Module

- High-quality cells for enhanced safety
- IP65 protection, built for all weather
- Cell monitoring with comprehensive thermal management
- 5 kWh per module, scalable as needed

Basic Specifications

Operating Temperature Range	-25° C to +60° C (>40° C derating)
Cooling Method	Natural Cooling
Maximum Operating Altitude	⩽ 3,000 m
Operating Humidity Range	0–95% (Non-condensing)
IP Rating	IP66
Topology	High-Frequency Isolation
Communication	RS485 / CAN 2.0 / Wi-Fi / 4G
Display	LED / App / Web

Integrated Solar + Storage System 4–12 kW Three-Phase System

	ZEEB-4T-A1	ZEEB-5T-A1	ZEEB-6T-A1	ZEEB-8T-A1	ZEEB-10T-A1	ZEEB-12T-A1
Photovoltaic parameters						
Recommended Maximum PV String Power @ STC	10kW	11kW	12kW			
Maximum PV Voltage		1000V				
Rated Voltage		720V				
MPPT Voltage Range		140V-950V				
Full-Power MPPT Voltage Range	200V-800V	230V-800V	250V-800V			
Start-up Voltage		200V				
Number of MPPTs		2				
Number of Strings per MPPT		1				
Maximum MPPT Input Current		20A				
MPPT Short-Circuit Current		25A				
Grid connection parameters						
Maximum Continuous Output Power	4000W	6000W	5000W			
Maximum Apparent Output Power	4400VA	6000VA	5500VA			
Maximum Continuous Input Power	10000W	12000W	11000W			
Rated AC Voltage		400Vac				
Rated Frequency		50/60Hz(±5Hz)				
Rated Output Current	5.8A	7.3A	8.7A			
Maximum Output Current	13.1A	13.1A	13.1A			
Maximum Input Current	21A	22.6A	22.6A			
Power Factor		0.8 Leading to 0.8 Lagging				
THDi		<3% (Rated Power)				
Off-grid parameters						
Rated AC Output Power	4000W	5000W	6000W			
Maximum AC Output Power	4400VA	5500VA	6000VA			
Rated Output Current	5.8A	7.3A	8.7A			
Maximum Output Current		13.1A				
Rated Output Voltage		400Vac				
Rated Output Frequency		50/60Hz				
THDu		2% 线性负载				

Photovoltaic parameters

Recommended Max. PV String Input Power @ STC	16kW	20kW	22kW
Max. PV Voltage		1000V	
Rated Voltage		720V	
MPPT Voltage Range		140V-950V	
Full-Power MPPT Voltage Range	290V-800V	320V-800V	350V-800V
Start-up Voltage		200V	
Number of MPPTs		2	
Number of Strings per MPPT		1	
Max. MPPT Input Current		20A	
MPPT Short-Circuit Current		25A	

Grid connection parameters

Max. Continuous Output Power	8000W	10000W	12000W
Max. Apparent Output Power	8800VA	11000VA	132000VA
Max. Continuous Input Power	16000W	20000W	22000W
Rated AC Voltage		400Vac	
Rated Frequency		50/60Hz(±5Hz)	
Rated Output Current	11.6A	14.5A	17.4A
Max. Output Current	26.1A	26.1A	26.1A
Max. Input Current	35A	35A	35A
Power Factor		0.8 超前 -0.8 滞后	
THDi		<3%（额定功率）	

Off-grid parameters

Rated AC Output Power	8000W	10000W	12000W
Max. AC Output Power	8000VA	10000VA	12000VA
Rated Output Current	11.6A	14.5A	17.4A
Max. Output Current		26.1A	
Rated Output Voltage		400Vac	
Rated Output Frequency		50/60Hz	
THDu		2% 线性负载	

Integrated Solar + Storage System 4.0–12.0 kW Three-Phase System

	ZEEB-4T-A1	ZEEB-5T-A1	ZEEB-6T-A1	ZEEB-8T-A1	ZEEB-10T-A1	ZEEB-12T-A1
Battery Specifications						
Battery Type	Lithium Iron Phosphate (LFP)					
Rated Battery Voltage	51.2V					
Charging Voltage Range	44~58V					
Max. Charging/Discharging Current	100A/100A	120A/120A	120A/150A	160A/200A	200A/240A	200A/240A
Rated Charging/Discharging Power	4000W	5000W	6000W	8000W	10000W	10000W/12000W
Battery Capacity	100-800Ah					
Efficiency						
Max. Efficiency	96.60%			97.20%		
European Efficiency	94.50%			95.50%		
Protection						
DC Switch	Available			Available		
Anti-Islanding Protection	Available			Available		
Residual Current Monitoring	Available			Available		
PV Reverse Polarity Protection	Available			Available		
AC Short-Circuit Protection	Available			Available		
AC Overvoltage Protection	Available			Available		
Surge Protection	DC Type II; AC Type III			DC Type II; AC Type III		
Remote Shutdown	Available			Available		
Arc-Fault Detection	Optional			Optional		

Explorer Robot

ZD Energy Home Charging Robot
Built for Autonomous Driving



TECHNOLOGY HIGHLIGHTS

Self-Developed Monocular Vision Pose Recognition Algorithm
A core proprietary algorithm that uses a single camera to replace traditional dual-lens and structured light systems, achieving precise spatial recognition with lower hardware complexity.

Innovative Trajectory Optimization Algorithm
Significantly enhances the plug-in and unplugging force of the robotic arm, improving both reliability and operational efficiency during the charging process.

Environmental Adaptability Upgraded
Includes independently developed robot controller, drive modules, and sensors for complete system integration and optimized performance.

SPECIFICATIONS

Weight	Robot Weight:	⩽ 50 kg
Size	Overall Dimensions:	480 mm × 160 mm × 835 mm
Performance	Operating Temperature:	-30° C to 55° C
	IP Rating:	IP55
	Maximum Effective Operating Range:	±10 cm (Vehicle Width Direction)
		±15 cm (Vehicle Length Direction)
		85–115 cm (Height Direction)
		0–45° (Pitch)
	Yaw Angle Range for Charging Dock Alignment:	±5°
	Degrees of Freedom:	5
	Payload Capacity:	⩾ 5 kg
	Visual Positioning Accuracy:	⩽ 0.2 mm
	Successful Connection Rate:	⩾ 99.5%
System connection	Interfaces / Protocols:	Bluetooth / 4G / Wi-Fi
	Control:	Vehicle / App / Mini Program / Cloud Platform
Power characteristics	Power Consumption:	Standby Power ⩽ 50 W
	Operating Voltage	220 V AC, 50 Hz

Intelligent photovoltaic module

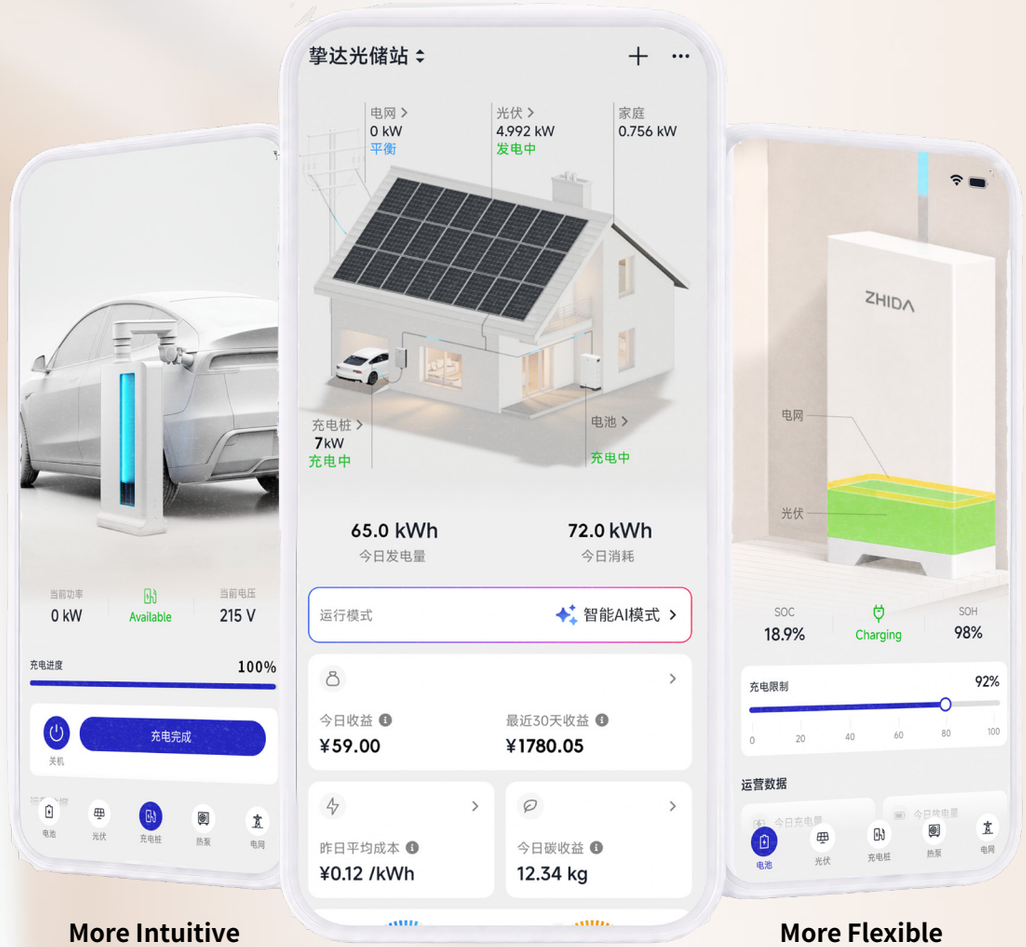
High power means capturing more light energy.

455W-600W

Gain more sunlight

Home Energy User Interface

Energy at a Glance, Power Within Reach



More Intuitive

AI Insights: Review the System's Decision-Making Logic Over the Past 24 Hours

Forecast: Preview the AI Plan 24 Hours in Advance

AI Assistant: Natural Language Interaction, Your Energy Analyst

Smarter

Energy Flow Map: Track the Full Journey of Every kWh, Covering 6 Energy Sources and 5 Loads

Battery Green Energy Mix: Real-Time View of Energy Composition and Carbon Emissions

More Flexible

Fine-Tuned Strategy Settings: Customize Charging/Discharging Periods and Electricity Price Preferences

Multi-Dimensional Report Export: Daily / Monthly / Annual Energy Reports

Load-Level Energy Sources: Energy Mix Analysis for Each Device

Home Energy Management Platform

Power the Future, Take Control of Clean Energy

FULL-STACK VISIBILITY

- Real-Time Visibility Across 6 Energy Sources and 5 Loads, with 10 ms-Level Data Acquisition, Covering PV / Energy Storage / Grid / Loads / EV Chargers / Heat Pumps
- Dual-Channel Cloud + Edge Architecture, Traceable Energy Flow and Full Device-Level Visibility

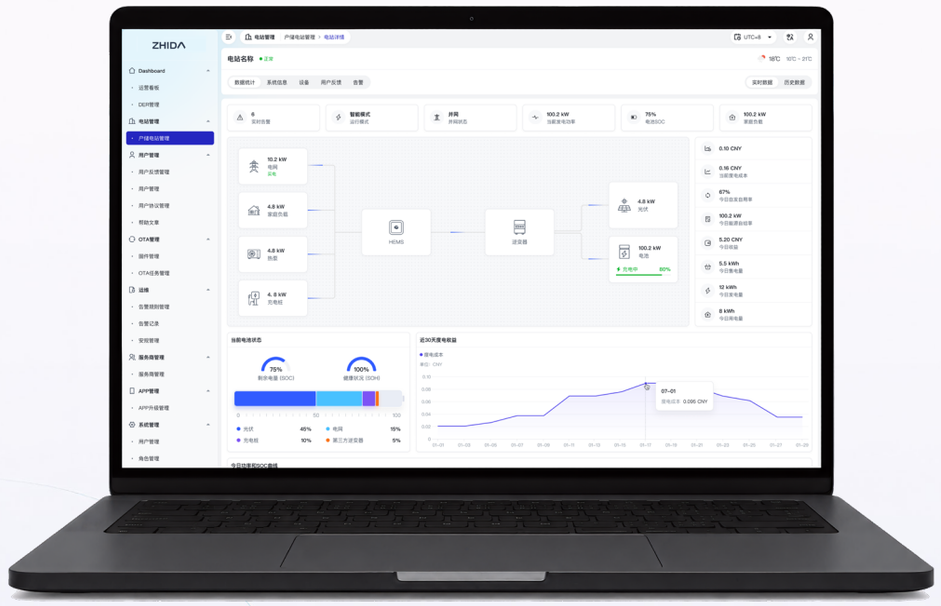
AI PRECISION ENGINE

- Integrated Weather Forecasting, Time-of-Use Pricing, and Load Behavior Models Enable Multi-Model Prediction, with ⩾ 92% Accuracy for 48-Hour PV Generation / Energy Consumption / Electricity Price Forecasts
- Reinforcement Learning Continuously Optimizes Energy Strategies, Learning Your Home Better Over Time

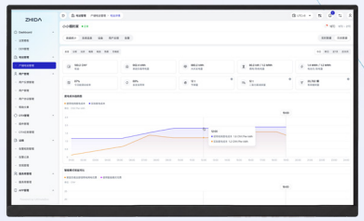
SMART DISPATCH

- Second-Level Command Dispatch + Edge Autonomous Execution, Automatically Matching Charging/Discharging Strategies to Time-of-Use Electricity Prices
- Seamless Switching Among Smart AI / Self-Consumption / Peak Shaving & Valley Filling / Backup Power Modes. Control Continues Offline, with Automatic Backup Power Switching During Extreme Weather

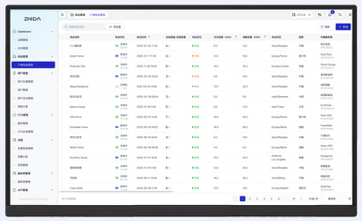
Globalization
Digitalization
Intelligence



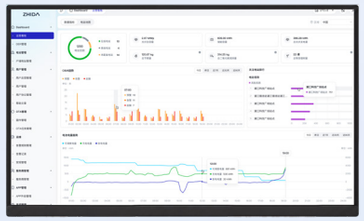
Visual Real-Time Monitoring



Intelligent scheduling for efficiency improvement



User reservoir management



AI data statistics



Full-process traceability

Global Presence

30
Countries

5
Overseas manufacturing center

Operational: Thailand (Southeast Asia)
Under Construction: Saudi Arabia (Middle East， Germany (Europe)， United States (North America)
Planned: Brazil (South America)





Anhui Xuancheng Factory



Chonburi Factory, Thailand



Ningbo Charging Machine Factory

United by Purpose
Empowering the World