

NEXUSOLAR

Residential Energy Solutions Product Manual

Save the Sun, Cut Your Bills, Secure Your Home



INTRODUCTION

For families who want lower bills, greater energy independence,
and reliable power every day.

Free Sunshine. Priceless Peace of Mind.

Turn your roof into a source of long-term savings and dependable energy for everyday life.



Why You Need It

Power Challenges in Southeast Asian Homes

1

Key Benefits

One System, Four Core Advantages

2

Real-Life Application

A Day with Clean Energy

3

Core Technology

Advanced Inverter & Storage Engine

4

Take Action

Turn Your Roof into a Cost-Saving Asset

5

CONTENT





Growing Home Electricity Demand

Electricity prices continue to rise while modern households rely more on high-consumption appliances.

Rising Electricity Costs

Electricity Rates in Southeast Asia Rise Every Year

Longer Cooling Demand

28–35°C year-round, AC & fridge 24h on

Growing Energy Needs

EVs & smart homes drive higher consumption

Hienergy





Growing Energy Challenges

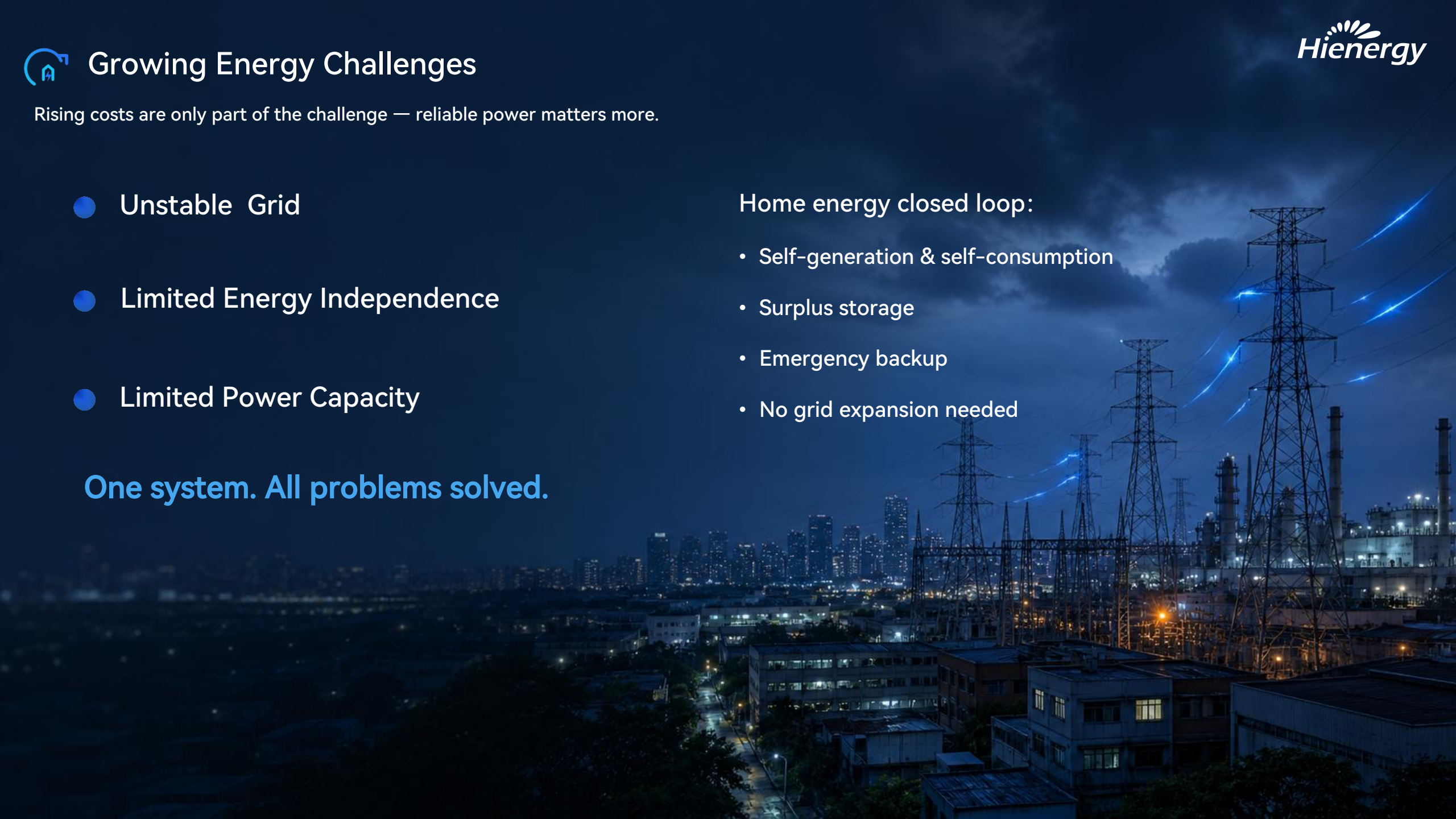
Rising costs are only part of the challenge — reliable power matters more.

- Unstable Grid
- Limited Energy Independence
- Limited Power Capacity

Home energy closed loop:

- Self-generation & self-consumption
- Surplus storage
- Emergency backup
- No grid expansion needed

One system. All problems solved.



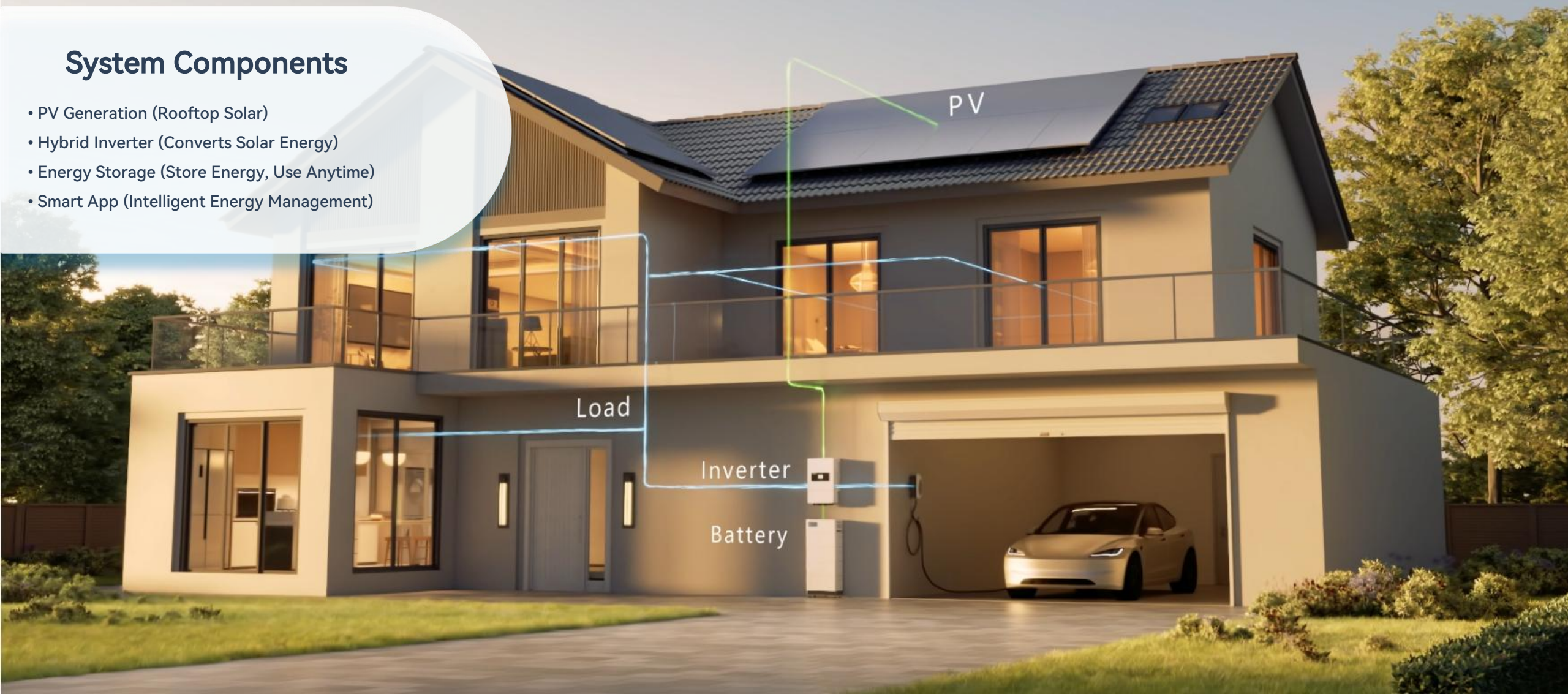
One System, Four Core Advantages

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Versatile Application Modes: Self-Consumption, On-Grid, Off-Grid and VPP.

System Components

- PV Generation (Rooftop Solar)
- Hybrid Inverter (Converts Solar Energy)
- Energy Storage (Store Energy, Use Anytime)
- Smart App (Intelligent Energy Management)



Key Value Propositions

24/7 Power Assurance: Empowering Homes with Independent Green Energy.



Cost Savings

Self-Generation for
Lower Bills.



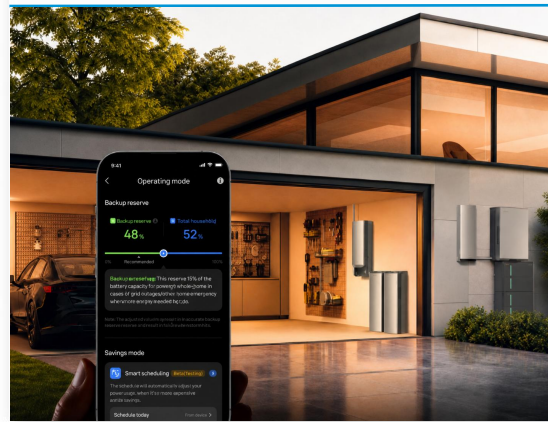
Reliability

Zero-Downtime Backup for
Essential Appliances.



Smart Control

Real-Time App Monitoring &
Energy Tracking.



Energy Independence

Virtual Capacity Boost without
Grid Upgrades.





A Day Powered by Sunshine



From morning routines to unexpected outages, reliable energy keeps life running smoothly.



Summer Comfort: Cool Without Limits

Solar powers your home by day and stores extra energy for peak hours, helping lower your electricity bill.



Storm Nights: Power Without Interruption

Keep your lights, refrigerator and Wi-Fi running even during storms or unexpected outages.



Future Ready: Energy That Grows With You

Expandable storage supports more appliances, EV charging and future home upgrades.

Residential Solar & Energy Storage Solutions

Flexible Solutions Designed for Every Home Energy Need.

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CHINT

 通威太阳能
TW SOLAR

1 Phase Hybrid

6.6kW 10kW

3 Phase Hybrid

10kW 15kW

51.2V Battery

5kWh 10kWh 16kWh

AC Charger

7kW 11kW

App Monitor

Real-Time Monitoring &
Control



Rooftop Solar Power: A 25-Year Yield Asset

One-Time Capital Investment for Long-Term Energy Returns.

Power Supply	System Configuration	Suitable Home Size	Compatible Appliances	Estimated Monthly Savings(USD)	Household Electricity Usage	Payback Period
Single-phase (220V)	8–16 modules + 6.6 kW hybrid inverter	100–200 m ²	2 × 2 HP wall AC / 1 refrigerator / 2 TVs / 1 washing machine	\$50–180	30–50 kWh/day	5–5.5 Year
Single-phase (220V)	16–24 modules + 10 kW hybrid inverter	200–400 m ²	2 × 2 HP wall AC / 1 central air conditioner / 2 refrigerators / 3 TVs / 1 washing machine	\$80–280	50–100 kWh/day	4.5–5 Year
Three-phase (380V)	16–24 modules + 10 kW hybrid inverter	200–400 m ²	2 × 2 HP wall AC / 1 central air conditioner / 2 refrigerators / 3 TVs / 1 washing machine	\$80–280	50–100 kWh/day	4–4.5 Year
Three-phase (380V)	24–36 modules + 15 kW hybrid inverter	400–600 m ²	4 × 2 HP wall AC / 1 central air conditioner / 2 refrigerators / 3 TVs / 1 washing machine	\$120–420	100–150 kWh/day	3.5–4 Year

*Estimated savings vary depending on local electricity tariffs, solar irradiation, system output, and self-consumption rate.



Solar Generation Module

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Built for Reliable Performance in Every Weather Condition.

01

Half-Day Installation
Minimal Impact on Your
Daily Life

Your Roof's Extra
Protection
Ready for Sun, Rain and
Harsh Weather

02

03

No More Roof Worries
Better Sealing, Better
Comfort All Year Round

04

Strong Against Wind and Rain,
Reliable Protection Through
Extreme Weather

05

Fits Different Rooftops
Flexible Design for Every
Home





Solar Generation Module

Engineered for Stable Mounting and Superior Roof Integration.

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Mid Clamp



Roof Hook

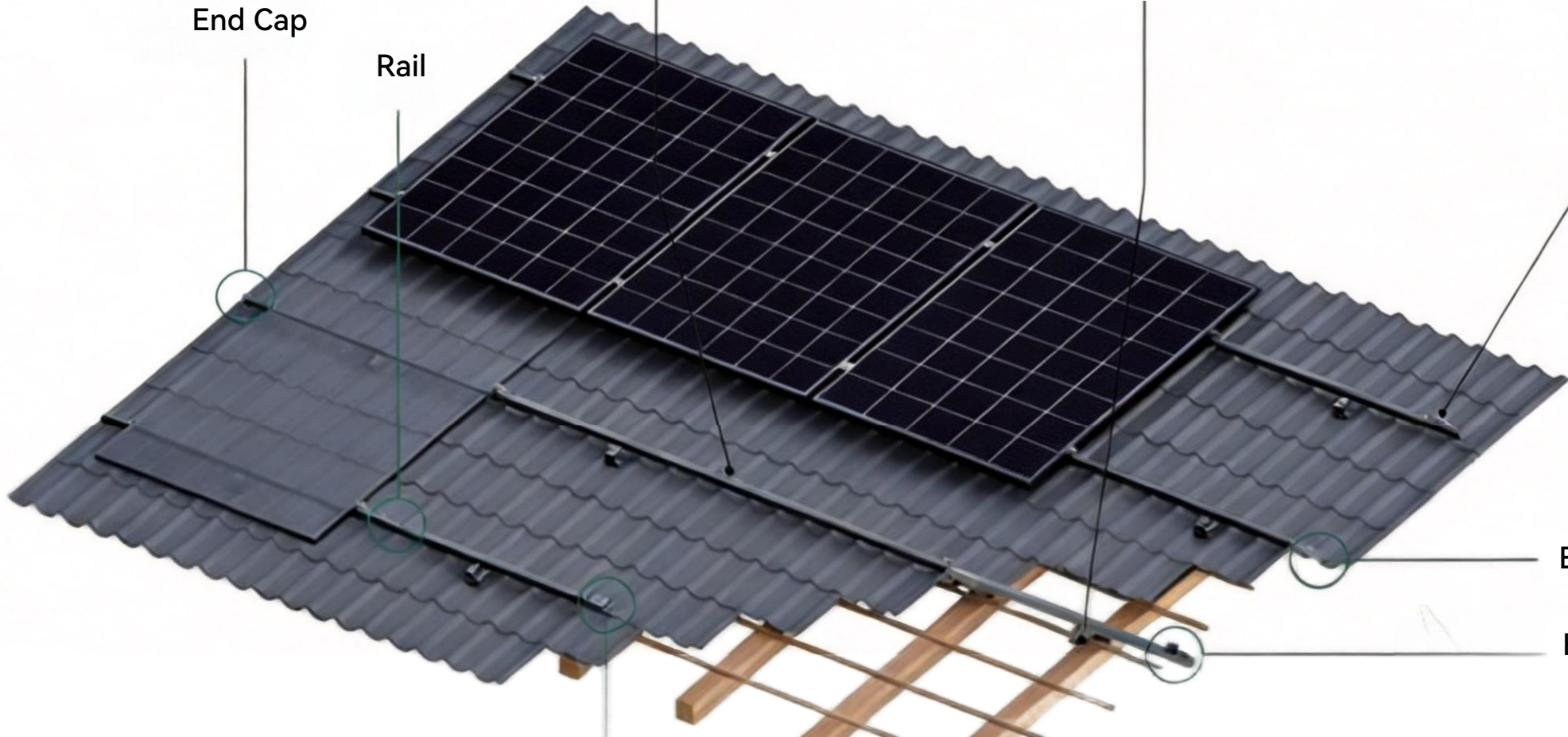


End Clamp



End Cap

Rail



End Cap

End Cap



Solar Generation Module

Premium Tier 1 Solar Modules from Globally Recognized Brands.

TOPCon Bifacial Dual Glass

EL Tested, Zero Micro-Cracks

Maximum Module Power Output	650W
Maximum Module Efficiency	23.3%
Performance Warranty	30 Years
Annual Degradation Rate After First Year	0.4%
Weight (kg)	32.5kg
Dimension [W / D / H]	2382*1134*30mm
Operating Temperature Range	-40~+85°C



Category	Parameter	Value
General Parameters	Dimension [W/D/H]	296 mm × 230 (460) mm × 490 mm
Performance	Rated AC V	380/400/415V, 220/230/240V, L1/L2/L3/N+PE
	Grid Max I	63 A
	Inv Max I	60 A
	Backup Max I	63 A
	Non-backup Max I	63 A
	LVRT	Surport
	Grid Switch Time	≤ 20ms (MAP0), ≤ 100ms (M1/MB0)
Measurement Range	Bypass Switch Mode	Manual
	Generator Mode	Remote Control
	Current Range	≤ 63 A
Operating Environment	Energy Measurement Accuracy	± 1%
	Cooling Method	Natural Cooling
	RH Range	5% ~ 95% RH (Non-condensing)
	Operating Altitude	4000m (Derating above 2000m)
	IP Rating	IP55
Operating Environment	Operating Temperature	-25°C ~ 50°C





Low-Voltage Hybrid Inverter

High-Efficiency Power Conversion for Reliable Home Energy.



General Specifications	Single-Phase 6.6 kW	Single-Phase 10 kW	Three-Phase 10 kW	Three-Phase 15 kW
Maximum Efficiency	97.6%			
Rated Power	6.6 kW	10 kW	10 kW	15 kW
Maximum Usable PV Power	9.6 kW	16 kW	16 kW	24 kW
Maximum Input Current	20+20 A	28+28 A	30+30 A	
Backup Overload Capability	2× for 10 s; 1.5× for 30 min	2× for 60 s; 1.5× for 30 min	1–1.2× continuous; 1.2–1.5× for 10 min; 1.5–2× for 1 min; 2× for 10 s	
MPPT Operating Voltage Range	90–425 V		200–700 V	
Cooling Method	Natural Convection Cooling		Intelligent Fan Cooling	



Product Highlights

Compact, quiet and powerful design that seamlessly integrates into modern homes.



Ultra-Slim

Just 20 cm deep

About the length of an adult hand—for seamless integration into any space.

Ultra-Quiet

Operating below 35 dB

As quiet as a library and barely audible from one metre away.

Ultra-Light

Weighing just 18 kg

Lighter than a standard 18.9 L water bottle—for easier handling and installation.

Ultra-Powerful

Delivers an extra 600 W of capacity

Enough to power a 3 L rice cooker, desktop computer, or household circulation pump.



Maximum Energy Yield

Generate More Solar Power—even in Low Light.

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200% PV Oversizing
33% more output in low light

80V Start-up Voltage

Dual MPPT

Wide MPPT Operating Voltage Range

Maximum Efficiency — Every Extra kWh Means More Savings

High Efficiency · High Power Capability · PV Oversizing · More Energy Yield



Comprehensive Safety

Multi-Layer Protection Against Electrical Faults and Surges, with Safe System Isolation.

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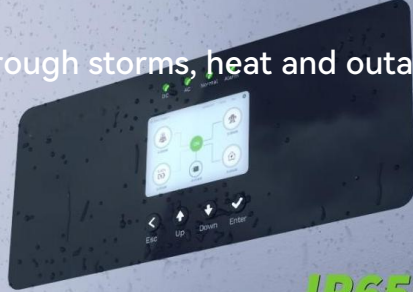
300% Surge Capacity Easily starts a 3 HP air conditioner

3× rated-power surge capacity handles the startup demands of air conditioners, water pumps, and refrigerators—without interruption.



All-Weather Protection

Reliable power through storms, heat and outages.



IP65 Whole-Unit Protection

Built to withstand rain, dust and harsh weather conditions.

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Type II SPD Surge Protection

Dual protection against lightning surges and electrical risks.

Built-in Isolation Transformer

Safe electrical isolation for worry-free daily use.

Smart Load Management: Dual independent outputs **prioritize critical loads**

Keep essential appliances powered when the grid goes down.



Smart Connectivity: Control

Connect and Control Multiple Battery Types
with Simple Plug-and-Play Setup.



BMS Auto-Matching for Lithium Batteries
Compatible with multiple battery types
plug and play



Smart Connectivity: Evolve

Expand Your Energy System as Your Power Needs Grow.

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Battery sharing **Parallel units** build a **microgrid**



Generator Ready

Keep your home powered through even the longest outages.

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*Generator Integration for PV-Storage-***Diesel Power**





Power Without Pause

Keep your computer, refrigerator, and other essentials running without interruption.

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*Grid/off-grid switching in **< 0ms***



Smart Connectivity: See

See How Your Home Generates, Stores, and Uses Energy—at a Glance.

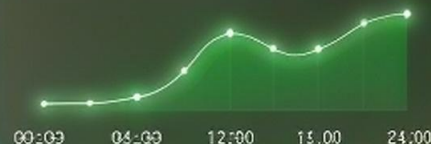
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1 Generation



Current Power
3.68 kW

Energy Today **18.72 kWh**



2 Consumption



Current Usage
2.48 kW

● Appliances 1.60 kW
● Living 0.88 kW
● Other 0.00 kW

Energy Flow



Solar



Generation
3.68 kW



Storage
1.20 kW



Consumption
2.48 kW



Grid

3 Device Status

Inverter

Running

Current Power
3.68 kW



Battery

Charging

Charge Power
1.20 kW



80%

Home Load

Running

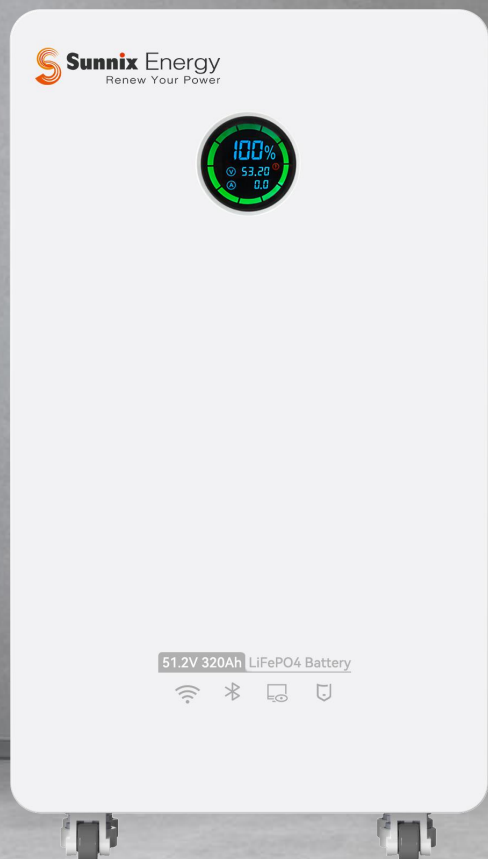
Total Power
2.48 kW





Energy Storage Products

Flexible Capacity. Reliable Power. Built to Last.



Item	Specifications		
Capacity	5 kWh	10 kWh	16 kWh
Protection Rating	IP21		
Weight	50 kg	85 kg	122 kg
Depth of Discharge (DoD)	90%		
Cycle Life	6000		8000
Installation	Wall-Mounted		Floor-Standing



Core Advantages of Energy Storage

Premium Battery Cells · Intelligent Safety Management · Reliable Performance in Every Scenario

100%

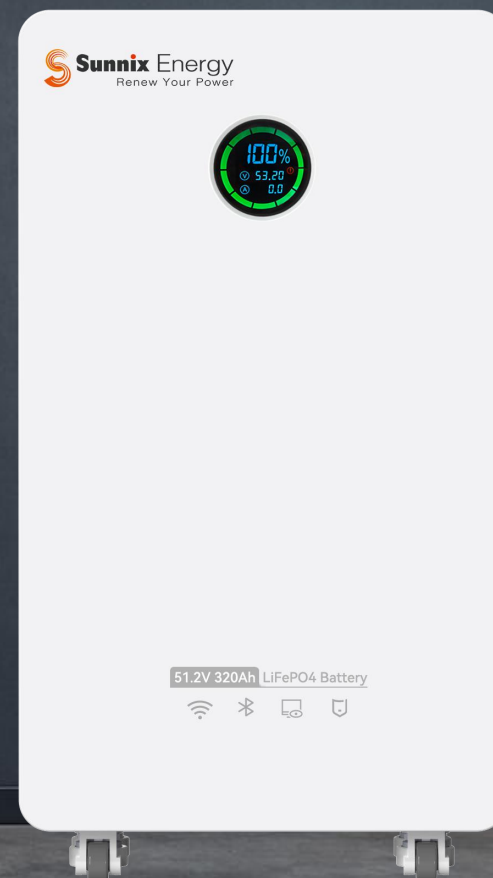
Grade A Cells

fully traceable quality
Safety & reliability ensured from the source
World Top 5 LFP safety cells

≤ 5 mV

Capacity Variation < 2%

Ultimate consistency
Highly uniform cells
Extended cycle life.



Core Advantages of Energy Storage

Multi-Layer Protection for Safer and More Reliable Energy Storage.

SIX-LAYER OVERCHARGE PROTECTION

· Software:

Power Derating, Communication Shutdown, Forced Disconnection

· Hardware:

PCS, Fuse, Circuit Breaker, Fire Suppression

SMART BMS

Over-current / short-circuit protection



AEROSOL FIRE SUPPRESSION

Rapidly Extinguishes Internal Fires at the Source

CELL-LEVEL MONITORING

· Built-In Temperature Sensors for precision monitoring

STRUCTURAL PROTECTION

750h salt spray test certified

Mg-Al-Zn coated enclosure

Corrosion-resistant for humid & coastal environments

Core Advantages of Energy Storage

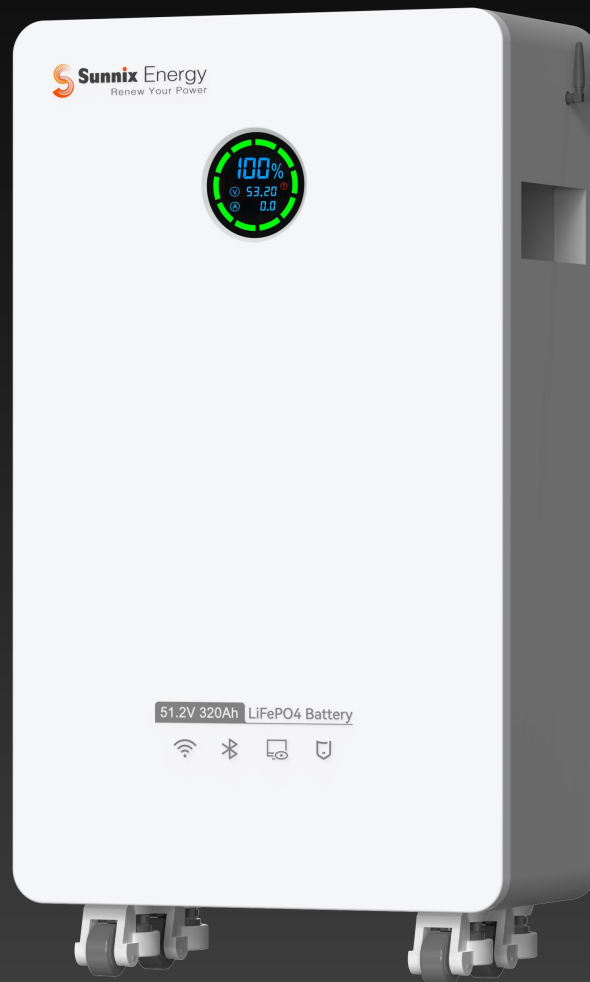
Plug-and-Play Deployment with Smart Dual-Mode Connectivity.

WI-FI + BLUETOOTH

Smart Dual-Mode Connectivity

REMOTE O&M

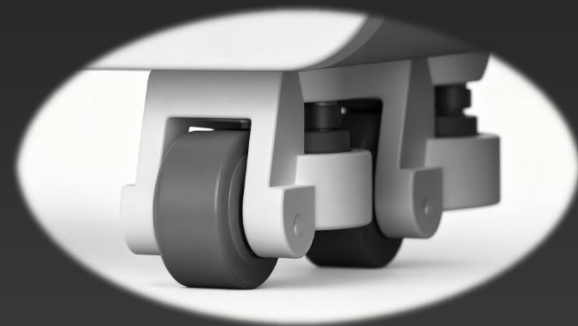
Remote real-time monitoring with proactive diagnostics



0 CONFIGURATION

Plug and Play

Modular design for fast installation & deployment



BUILT-IN OMNIDIRECTIONAL CASTERS

NEXUSOLAR

Let Every Ray of Sunshine Power Your
Family's Peace of Mind.

Together, We Build a Greener Energy Future

