MORE SAFETY, MORE POWER

Upgrade Existing PV System with Smart Energy Storage

TSUN PowerTrunk

MAU5000 & MAU8000 & MAU10000 & MAU16000



TSUNESS Co., Ltd www.tsun-ess.com

Micro AC Coupled Unit (MAU5000)

Smarter Storage for Existing PV Systems

Easy PV Retrofit
Add energy storage while keeping your existing PV system.

Smarter Energy Use
Store surplus solar energy and use it when needed.

Backup Power Support
Keep essential household loads powered during grid outages.



Micro AC Coupled Unit (MAU5000)

PowerTrunk



5.43 kWh
Battery Capacity

2,500 W
Rated Output Power

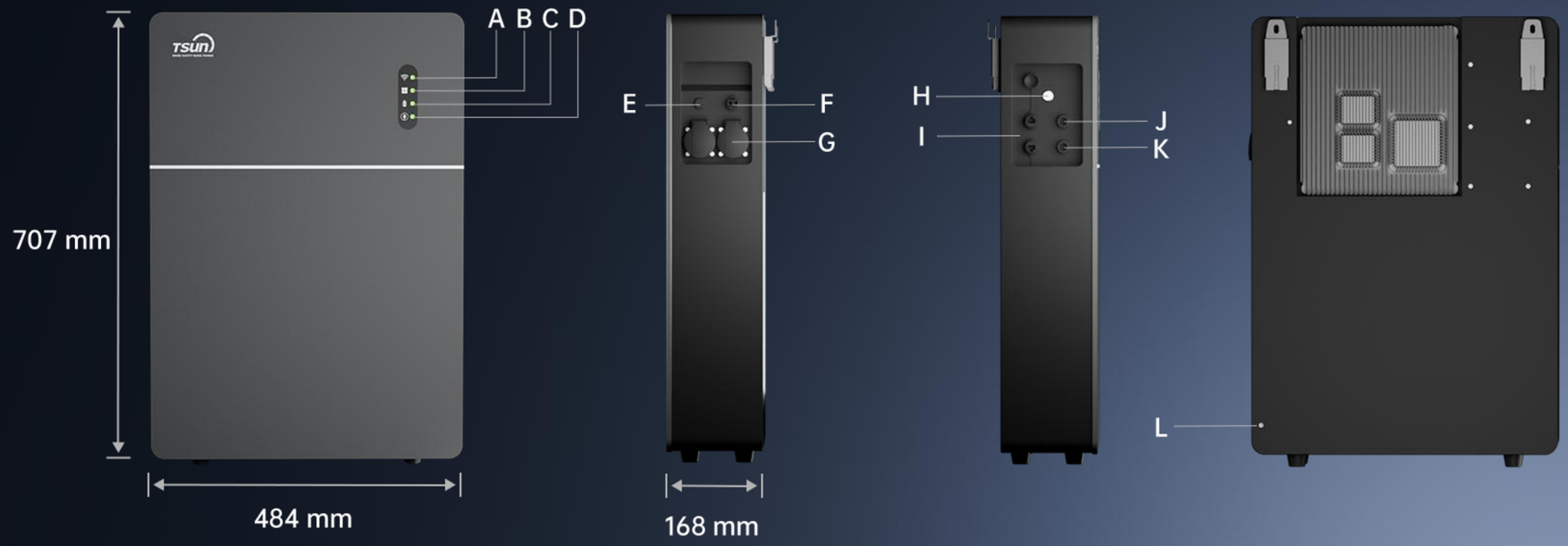
6,000
Cycle Life

IP65
Ingress Protection

MAU5000

- AC-Coupled
- Retrofit-Friendly
- −20°C to +55°C
- Smart Energy Management

Product Interface Overview



A: Wi-Fi Indicator	B: System Indicator	C: Charge/Discharge Indicator	D: Fault Indicator	E: Pressure Relief Valve	F: Grid-Tied Port
G: Off-Grid Port	H: Power Button	I: Parallel Port	J: Meter RS485 Port	K: Dispatch RS485 Port	L: Ground Terminal

Micro AC Coupled Unit (MAU8000)

More Storage for Every Needs

Easy PV Retrofit
Add high-capacity storage to your existing PV system without replacing the inverter.

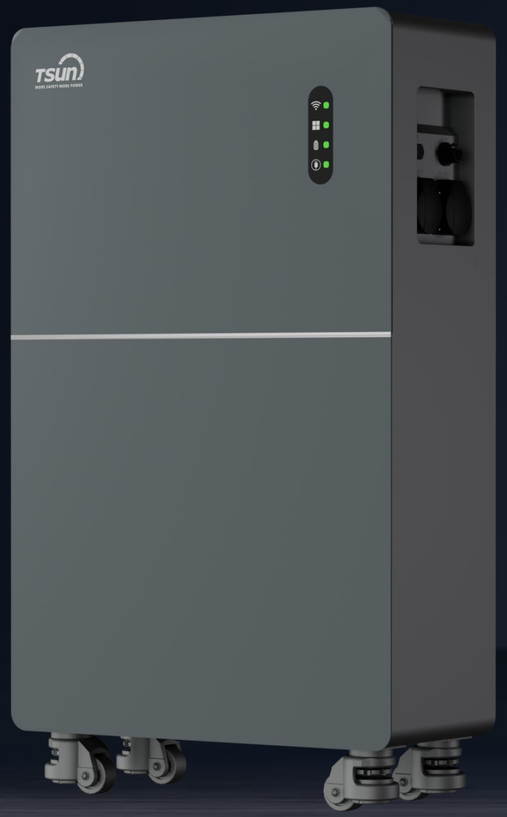
Larger Storage Capacity
Store more solar energy with 7.68kWh capacity to meet higher household energy demands.

Smart Energy Management
Optimize energy use with time-of-use scheduling and dynamic tariff management.



Micro AC Coupled Unit (MAU8000)

PowerTrunk



MAU8000

7.68 kWh
Battery Capacity

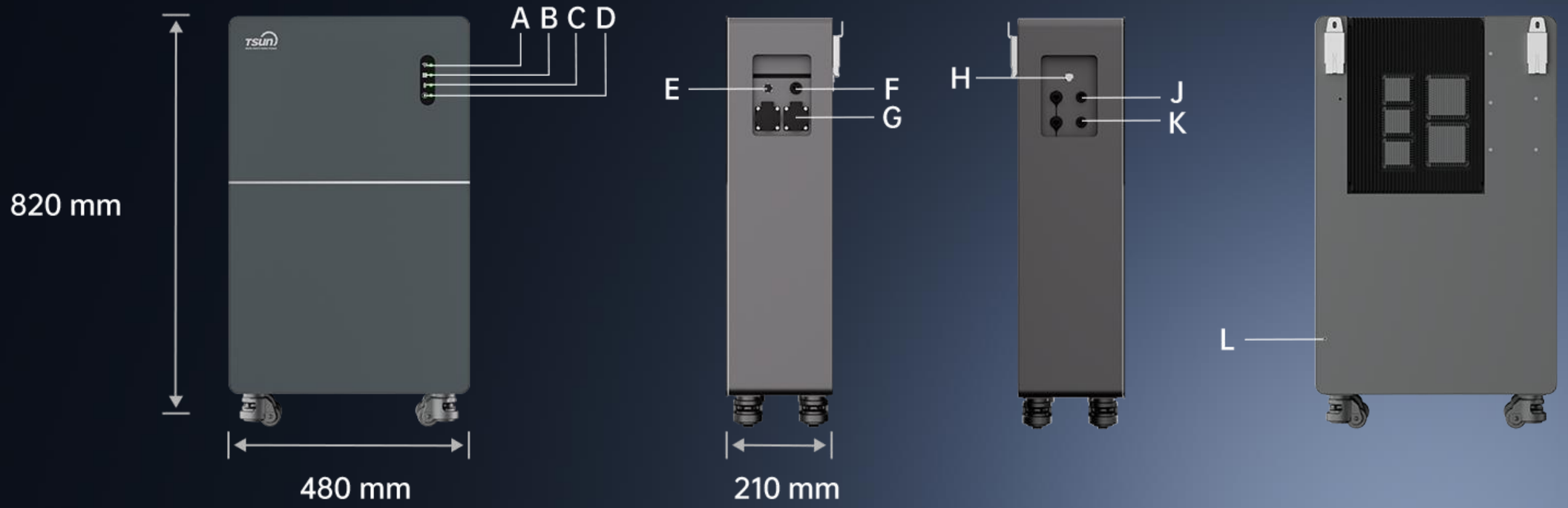
3,600 W
Rated Output Power

6,000
Cycle Life

IP65
Ingress Protection

- AC-Coupled
- Retrofit-Friendly
- 10 ms Switch Time
- Wi-Fi / RS485

Product Interface Overview



A: Wi-Fi Indicator	B: System Indicator	C: Charge/Discharge Indicator	D: Fault Indicator	E: Pressure Relief Valve	F: Grid-Tied Port
G: Off-Grid Port	H: Power Button	J: Meter RS485 Port	K: Dispatch RS485 Port	L: Ground Terminal	

Micro AC Coupled Unit (MAU10000)

Smarter Energy Independence

for Modern Homes

Seamless Solar Retrofit
Add storage to existing PV systems without replacing the original installation.

Grid-Forming Backup
Maintain power supply during grid outages with compatible grid-tied inverters.

Flexible System Expansion
Expand up to 41.4 kWh (single-phase) or 62 kWh (three-phase).



Micro AC Coupled Unit (MAU10000)

PowerTrunk



MAU10000

10.34 kWh
Battery Capacity

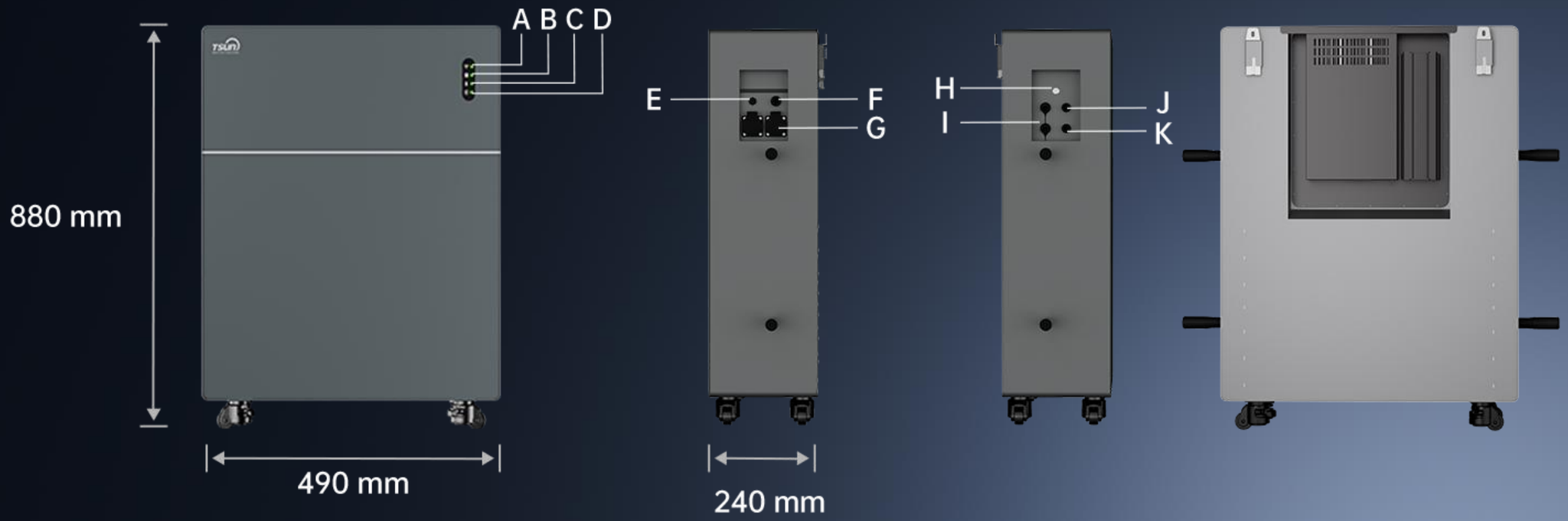
5,000 W
Rated Output Power

6,000
Cycle Life

IP65
Ingress Protection

- AC-Coupled
- Retrofit-Friendly
- −20°C to +55°C
- Smart Energy Management

Product Interface Overview



A: Wi-Fi Indicator	B: System Indicator	C: Charge/Discharge Indicator	D: Fault Indicator	E: Pressure Relief Valve	F: Grid-Tied Port
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Micro AC Coupled Unit (MAU16000)

Ultimate Storage for High-Demand Homes

Easy PV Retrofit
Add high-capacity storage to your existing PV system without replacing the inverter.

Massive Storage Capacity
Store abundant solar energy with 16.08kWh capacity to support whole-house energy consumption.

Reliable Whole-Home Backup
Deliver strong backup power to run multiple essential household loads simultaneously during grid outages.



Micro AC Coupled Unit (MAU16000)

PowerTrunk



MAU16000

16.08 kWh
Battery Capacity

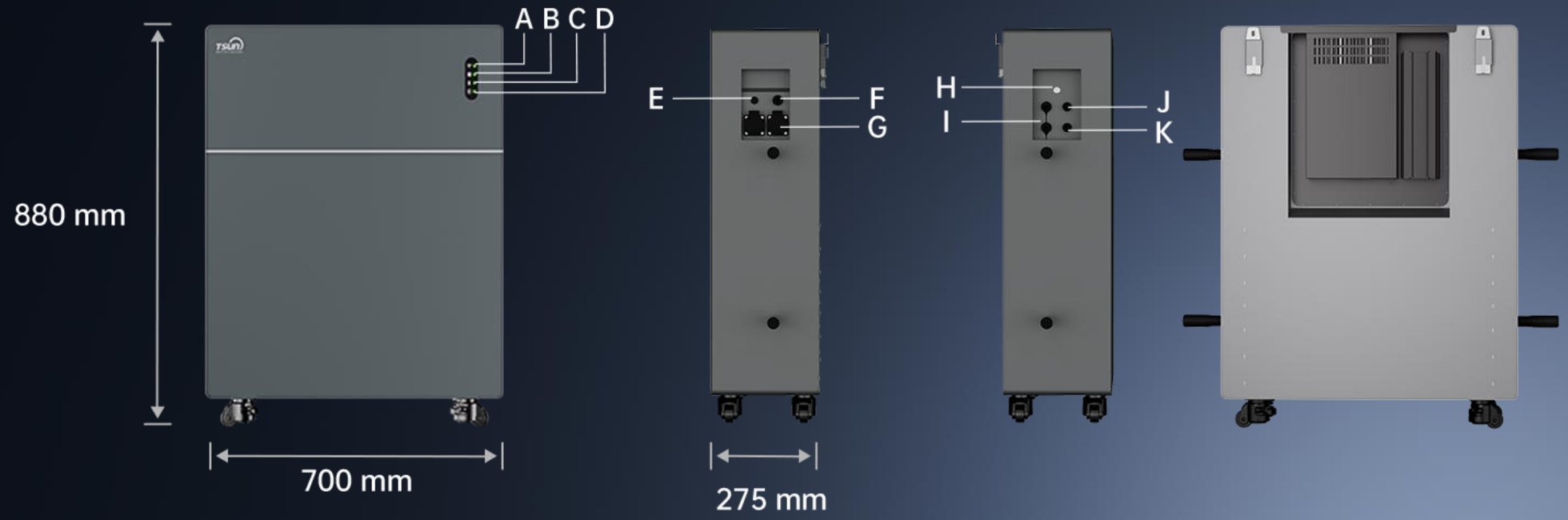
6,200 W
Rated Output Power

10,000
Cycle Life

IP65
Ingress Protection

- AC-Coupled
- Retrofit-Friendly
- −20°C to +55°C
- Smart Energy Management

Product Interface Overview



A: Wi-Fi Indicator	B: System Indicator	C: Charge/Discharge Indicator	D: Fault Indicator	E: Pressure Relief Valve	F: Grid-Tied Port
G: Off-Grid Port	H: Power Button	I: Parallel Port	J: Meter RS485 Port	K: Dispatch RS485 Port	

Product Advantages



	TSOL- MAU Series	VS	Competitor MXXXXXX
Ports	Off- grid ports x2 RS485 x2 Parallel ports x2		Off-grid port x1, RS485 x1
Parallel Method	Wi-Fi Parallel Operation	✓	Additional junction box required ✗
Parallel Qty.	Up to 4 units (single-phase) Up to 6 units (three-phase)	✓	Single phase: 3 units Three phase: 6 units ✗
Compatible Meters	Shelly, EcoTracker, Tibber Pulse, PowerFox and more	✓	Shelly, Ecotracker, P1 ✗
Microinverter Compatibility	Microinverter Integration During Backup	✓	Cannot connect directly to microinverters ✗
TOU Smart Tariff Control	Up to 96 scheduled control periods	✓	Up to 10 controls ✗



Product Advantages

Single- Phase Parallel



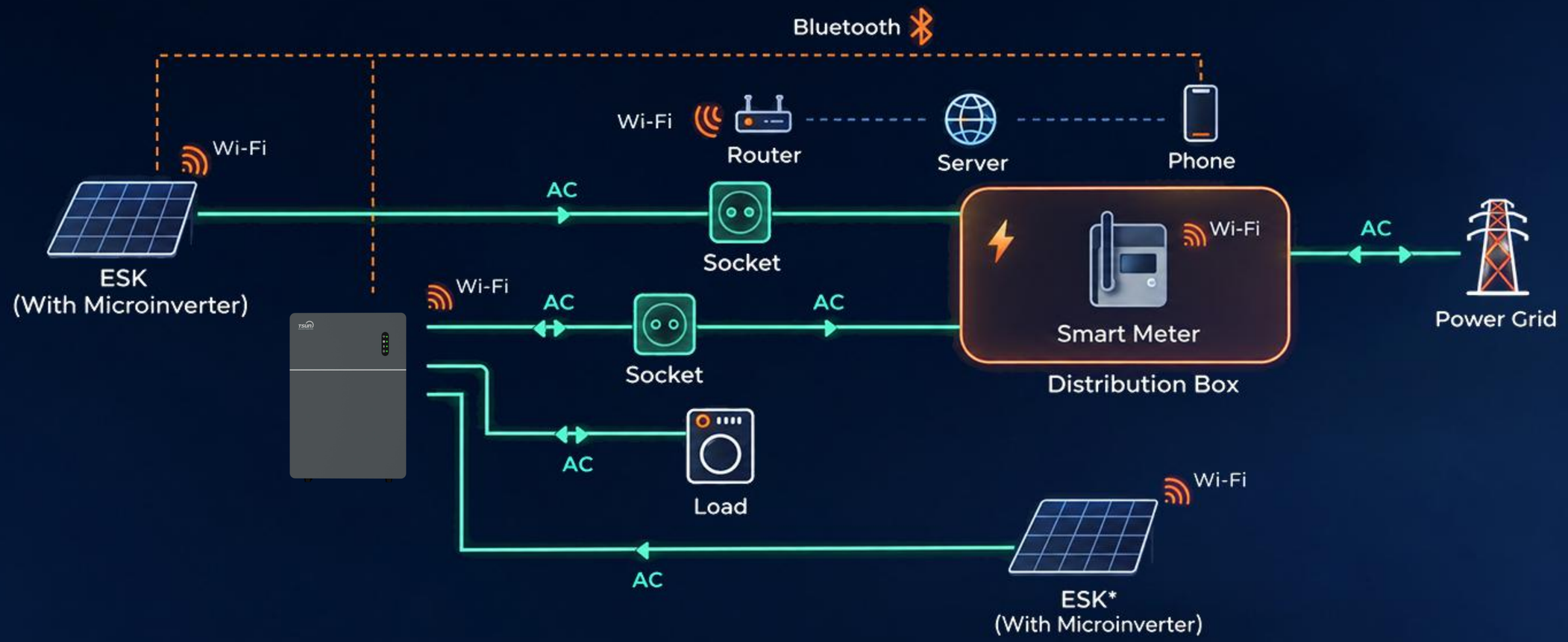
Three- Phase Parallel



Supports parallel operation via Wi- Fi or RS485: up to 4 units in single phase and 6 units in three phase. No additional junction box is required; plug and play.

Traditional solutions require an added junction box for parallel operation, increasing construction work and cost.

How It Works?



With grid- forming capability the system allows grid-tied inverters to connect to the off-grid side, forming a stable microgrid that maintains PV generation and load power during outages.

Working Mode

Time- of- Use Control

Up to 96 programmable time slots for optimized charging and discharging based on household energy consumption.



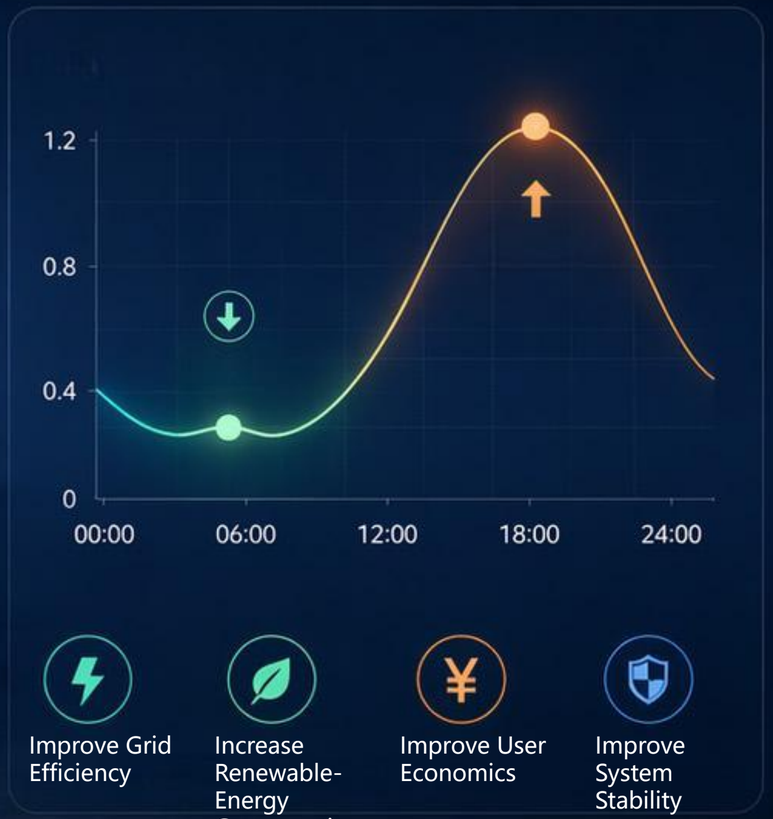
Smart Plug Support

Connect up to 5 smart plugs to schedule appliance operation and optimize household energy usage.



Dynamic Tariff Support

Automatically charge when electricity prices are low and discharge when prices are high to reduce energy costs.



Anti- backflow for effortless zero export

Compatible with third- party meters, meter readers, and smart plugs

Anti- Backflow Function

Broad Compatibility

Easy to Use





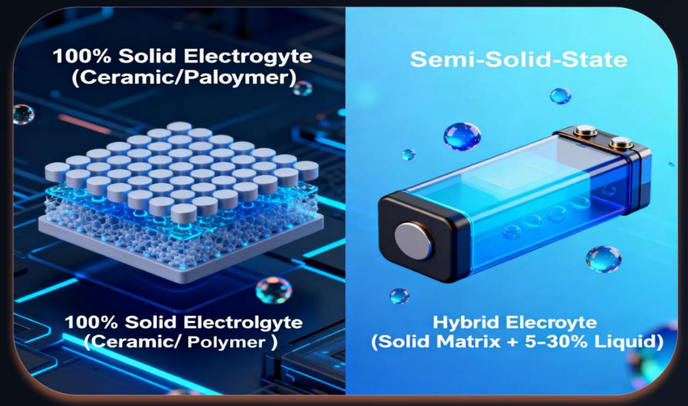
Easier Retrofit for Existing Installations

Only one AC cable is required

Replace the meter and bind the device

Set zero-export mode to enable zero export

Why Semi-Solid-State Technology?



01 Advanced Electrolyte Design

Incorporates solid components into the electrolyte to reduce reliance on conventional liquid electrolyte systems.

02 Improved Safety Potential

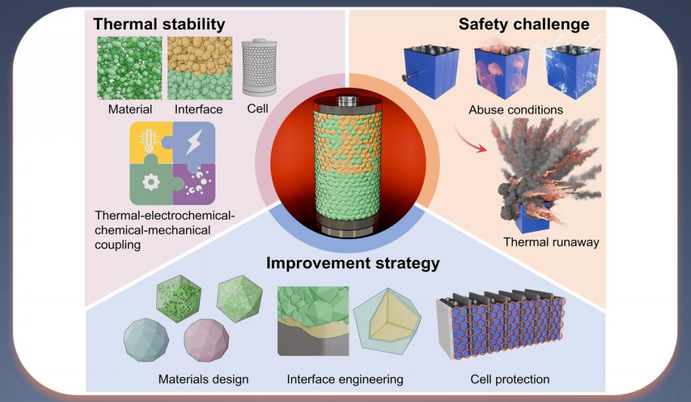
Designed to improve electrolyte stability and reduce certain thermal risks, subject to cell design and validation.

03 Balanced Performance

Potential to balance energy density, cycle life and operating performance.

04 Designed for Home Energy Storage

Supports the development of reliable residential energy storage solutions.







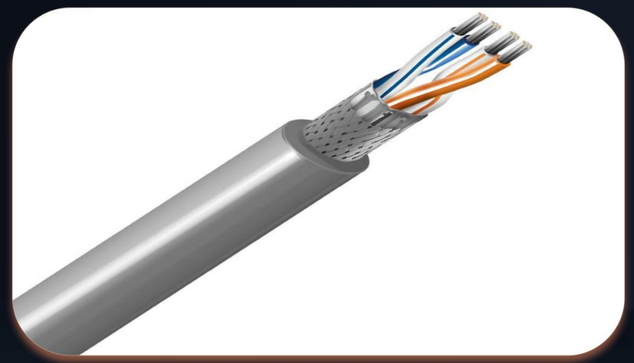
Flexible Communication for Every Installation

One System. Three Communication Options. Greater Installation Flexibility.



Wi-Fi Communication

- Wireless connection with existing home networks.
- Fast data transmission for real-time system monitoring.
- Easy setup with no additional communication cables.



RS485 Communication

- Wired communication for consistent data transmission.
- Strong resistance to electromagnetic interference.
- Supports multi-device networking over longer cable distances.



LoRa Communication

- Extended wireless coverage across larger properties.
- Better signal penetration through walls and obstacles.
- Low-power communication for energy-efficient data transmission.

AI-Powered Energy , Effortless Savings.

Save More. Worry Less. Stay Protected.

Peak Pricing
Discharge when electricity prices are high.

Off-Peak Pricing
Charge when electricity prices are low.

Negative Pricing
Optimize charging when prices turn negative.

Smart Integration
Coordinate connected energy devices.

Protection Mode
Monitor system status and send alerts when anomalies are detected.



How to Choose the Right Home Battery

Find the Right Battery for Your Home



Solar Surplus

How much excess solar energy is available during the day?



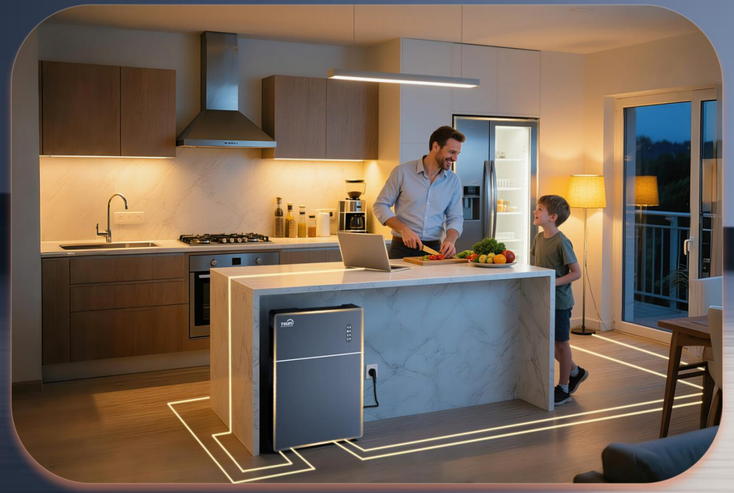
Evening Consumption

How much electricity does the household use after sunset?



Storage Capacity

How much energy needs to be stored for later use?



Backup Needs

Which essential appliances need power during an outage?

***The Key Principle:** Size the battery around usable energy demand—not household size alone.

Which MAU Battery Fits Your Home?

One Home. One Right-Fit Solution.



5.43 kWh

Suitable for households with relatively low evening consumption and moderate storage needs.

7.68 kWh

Suitable for households with greater evening consumption and more excess solar energy to store.

10.34 kWh

Suitable for households with substantial evening consumption, a generous solar surplus and increased storage requirements.

16.08 kWh

Suitable for households with high energy consumption, substantial solar surplus and greater storage requirements.

Power Through the Outage

Reliable Backup Power for Everyday Essentials.

What Can You Keep Running?



Refrigerator

Generally suitable

Typically 100–300 W while running; compressor startup may require more power.



Lights & Wi-Fi

Generally suitable

Low power consumption, ideal for essential backup loads.



Air Conditioning

Depends on model

Check rated input power, compressor startup current and other simultaneous loads.

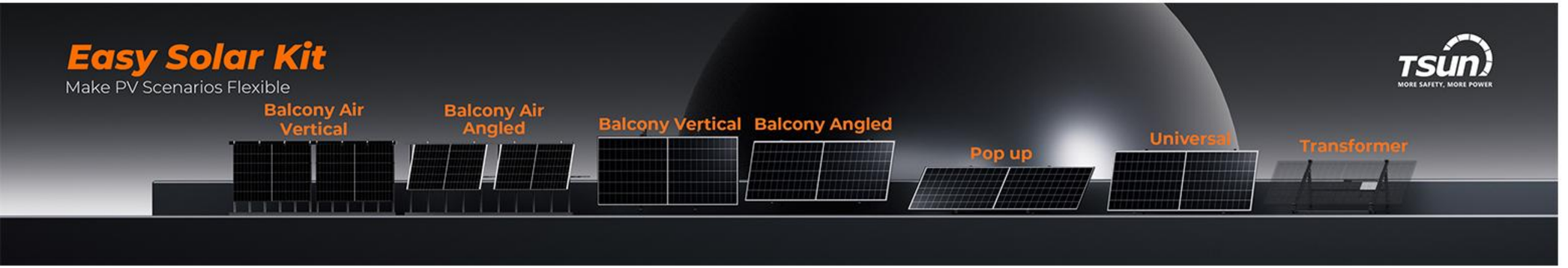


Washing Machine

Depends on model

Heating cycles can significantly increase power demand. Check the appliance rating.







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