

Disclaimer:

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LITHT^{TECH}

Wall Mount Residential Energy Storage Solution

Scenario-ready / Inverter-compatible / Built for safety





Scan the QR code to access our website


 Shenzhen Lithtech Energy Co.,Ltd

 <https://www.ltc-energy.com/>

 info@lith-tec.com

 +86 (1) 916-8535-039

 **Office:** 14F, Block D, Central Avenue, Baoyuan Road, Xixiang Sub-district, Bao'an District, Shenzhen City, Guangdong Province, China

 **Factory:** 1F, Building 1&6F, Building 2, Min' gang High-tech Industrial Park, No. 96 Qingbin East Road, Qingxi Town, Dongguan City, Guangdong Province, China

LITHTECH ENERGY



100+
Global Partners



150M+
Global User



25%
R&D investment ratio



400+
Internation Cert.

Shenzhen Lithtech Energy Technology Co., LTD. (Lithtech) was established in 2018, with the mission of "safeguarding sustainable energy ecology", focusing on the five core areas of Marine energy, industrial and commercial energy storage, household energy storage, AI big data energy and intelligent machine energy, and continue to provide the best solution of safety, environmental protection and intelligent integration. We are committed to becoming the world's leading supplier of new energy system integration solutions.

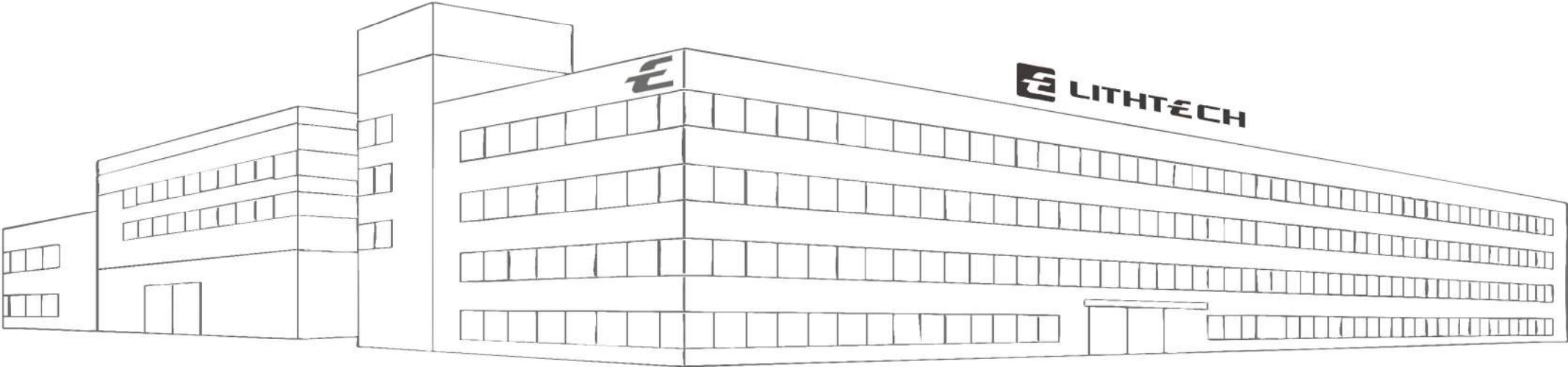
With technology integration and innovation as the core, the company independently develops sea-level high-precision BMS (battery management system) technology, realizes intelligent monitoring and dynamic optimization of the energy system through AI intelligence, and creates a full-scene safe, full-cycle efficient energy management system. The product adopts intelligent modular design and multi-level protection mechanism, introduces new material technology for fire protection to meet the safety needs in extreme environments, and helps customers realize green energy transformation through low-carbon materials and high-efficiency conversion technology.

Adhering to the strategic layout of globalization, the company has set up overseas subsidiaries in Frankfurt, Germany, Los Angeles, the Middle East, Saudi Arabia and Nigeria, Africa, to build a global network covering research and development, production and service. Our products are fully certified by the European Union CE, the United States UL, the Middle East SASO and other international certifications, providing "zero distance" support for 100+ countries and regions around the world.

In the future, Lithtechi Energy will continue to deepen the integration of new energy technologies and scenario-oriented applications, promote the evolution of the energy system to "safer, more inclusive and smarter" with intelligent and sustainable energy ecology, and drive the harmonious coexistence of human beings and nature.

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LITTECH ENERGY GMBH

Stephanshügel 16, 65549 Limburg a. d. Lahn

R&D , Warehouse



DONGGUAN LITTECH TECHNOLOGY

1F, Building 1806F, Building 2, Min gang High-tech Industrial Park, No. 96 Qingxin East Road, Qingxi Town, Dongguan City, Guangdong Province, China

Manufacturing, Warehouse



LITTECH ENERGY CO.,LTD

14F, Block D, Central Avenue, Baoyuan Road, Hailing Subdistrict, Bao'an District, Shenzhen City, Guangdong Province, China

Headquarters, R&D

SUNION ENERGY INC

1045 SANSOME ST STE 402,SAN FRANCISCO, CA 94111

R&D , Warehouse



*The background image shows Littech's fully automated production line, located at the Dongguan manufacturing base.

Development History

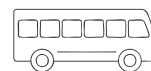
Independent innovation, leading development.

2018



- Littech Energy was established
- 12V/24V series and Telecom series were successfully launched;
- Expanding overseas.

2019



- Launched residential storage series and entered the home storage market;
- Rapid expansion in European and American markets.

2020

- Passed CE, UL international standard certificates;
- Rewarded as a "National High-tech Enterprise";
- The Marine Battery series were successfully developed.

2022



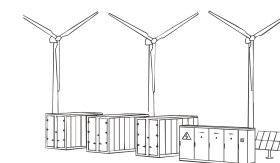
- Headquarters expanded and moved to Qianhai, Shenzhen;
- The production base in Qingxi, Dongguan started produce
- The industrial and commercial BESS series products were successfully developed

2021



- Obtained the world's most authoritative DNV certification;
- Breakthrough in the new energy market for Marine ESS in Northern Europe and Norway.

2024

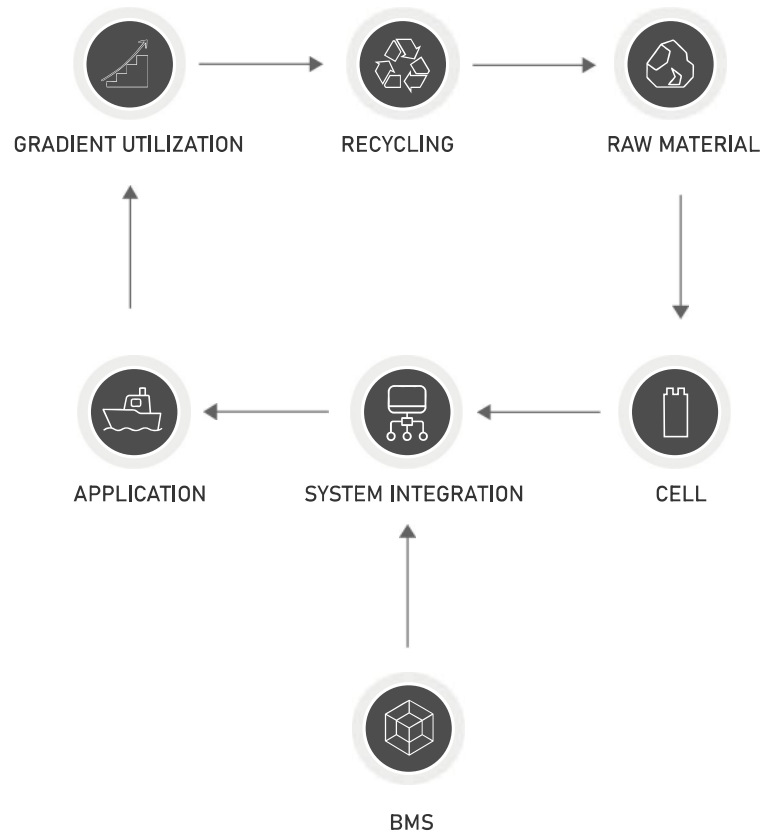


- The industrial and commercial ESS projects have been implemented in China, Europe and Indonesia;
- Formed a strategic partnership with European Ter1 in the field of Marine ESS ;
- New products updating for Residential ESS series and RV power ESS series.

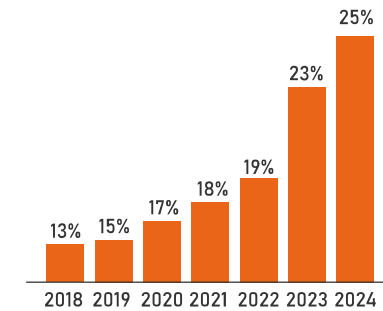
R&D Strategy

Pushing the Boundaries of Innovation

Building the Future Landscape



Prioritizing R&D, uniting world-class expertise



Research and Development Costs (% of Revenue)

78 Engineers

6 PhD Holders

24 Master's Degree Holders

48 Bachelor's and Above

BATTERY TECHNOLOGY

- High Performance Battery
- Solid-state Battery
- Hydrogen Fuel Cell

CONTROL TECHNOLOGY

- BMS
- EMS
- Cloud Platform

INTEGRATION TECHNOLOGY

- Safety
- Intelligentization
- Unmanned

The Role and Significance of Home Energy Storage

From household efficiency to a cleaner energy future

As the global transition toward carbon neutrality accelerates, more households are choosing energy storage systems to reshape the way they consume electricity. Whether it's storing solar power during the day or keeping essential devices running during nighttime peaks, home energy storage puts energy control back into the hands of everyday users. It's not just about saving on electricity bills or ensuring backup during outages—it's a conscious shift toward a cleaner, low-carbon lifestyle.

When deployed across thousands of homes, these systems form a flexible, distributed energy network that eases strain on the power grid, smooths out demand fluctuations, and makes it easier to integrate solar, wind, and other renewable sources. As the global energy system moves toward renewables, household storage plays a vital role in making the grid more responsive, stable, and resilient. It breaks the old model of centralized energy and enables dynamic interaction between supply and demand.

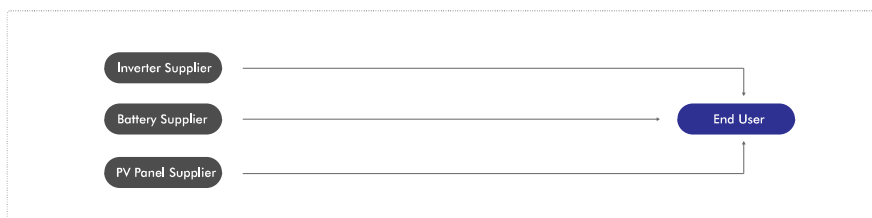
Across the world, home storage is becoming a practical solution in both developed and developing regions—empowering families, improving energy access, and supporting national energy security. From cities to remote areas, this quiet transformation is redefining how energy is produced, shared, and consumed. And as green becomes the new normal in everyday life, home by home, the global shift to a sustainable energy future becomes not only possible—but unstoppable.

Business Models Behind Home Energy Storage

From user-owned systems to aggregated energy services

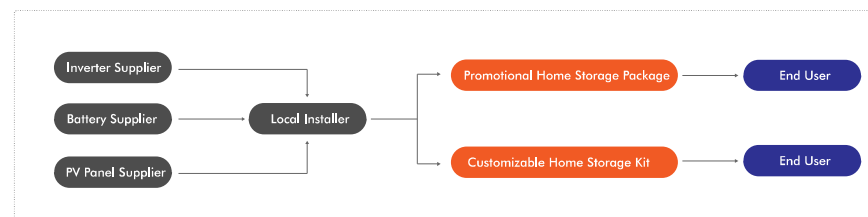
The business logic behind home energy storage is diversifying into three typical models. Some users choose the DIY route—purchasing solar panels, batteries, and inverters separately and assembling them on their own. Others prefer installer-packaged solutions that combine components into ready-to-use systems. More recently, fully integrated, manufacturer-delivered all-in-one solutions have emerged, offering plug-and-play convenience and faster deployment. Each model reflects different levels of technical involvement, customization, and service integration.

1 DIY Model – Self-Purchased, Self-Assembled



In the traditional model, homeowners purchase solar panels, inverters, and lithium battery systems separately, assembling them into a custom solution. This approach offers flexibility and cost control but requires a high degree of technical knowledge, as users must handle system integration, compatibility, and installation on their own.

2 Installer-Driven Model – Tailored Packages



Here, professional installers bundle components into ready-to-use solutions. Customers can choose from pre-designed packages or request custom setups. This model balances ease of use with a degree of personalization, and often includes services like permitting, grid connection, and maintenance support.

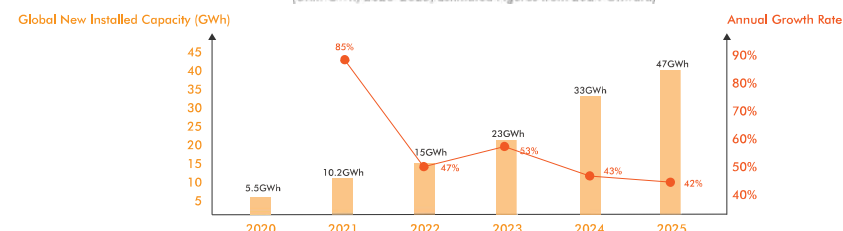
3 One-Stop Model – Prepackaged from Source



As an integrated solution provider, Littech combines batteries, inverters, and PV panels into a fully prepackaged system. Customers receive a turnkey solution that is factory-tested, seamlessly compatible, and tailored to their specific needs. This model shortens installation time, simplifies deployment, and ensures reliable performance with a single point of responsibility.

Global Annual Residential Storage Installations & Growth Rate

(Unit: GWh, 2020–2025, Estimated Figures from 2024 Onward)



* Data based on industry estimates and public sources as of 2023. Figures for 2024 and 2025 are projections.

Littech Stackable Energy Solutions for All Scenarios

From off-grid cabins to EV-ready homes — scalable, safe, and intelligent power for every lifestyle.

1. Off-Grid / Weak-Grid Solution for Standalone Homes

Remote mountainous areas, islands, and pastoral zones without or with weak grid access;
High-latitude or resource-limited regions requiring stable energy storage for self-built systems.

User Pain Points:

- 1 No stable grid connection
- 2 Power supply relies on diesel or solar, but is intermittent
- 3 Poor energy reliability, frequent equipment shutdowns

Solution Value:

Build an integrated energy hub combining solar, storage, and inverter. Store solar energy during the day and discharge at night to replace diesel. Wind or hydro power can be integrated to create a micro home energy



Smart Campus



Remote Areas



Backup Power
for Urban Homes



EV-integrated
Homes



Energy-efficient
Smart Homes



Zero-carbon
Smart Community



Distributed
Energy Applications



Microgrid / Residential
Energy Hub

2. Grid-Tied Energy Optimization Solution

Homes with solar PV systems;
Regions with large peak-valley electricity price gaps (e.g. Germany, Japan, California);
EV owners with V2H (Vehicle-to-Home) needs.

User Pain Points:

- 1 Solar generates more power during the day, but demand peaks at night
- 2 High electricity costs during peak hours, excess solar cannot be used in real time
- 3 Reduced incentives for feeding excess solar back to the grid

Solution Value:

Store daytime solar energy for night-time use to improve self-consumption;
Shift usage to off-peak hours and cut electricity bills;
Enable smart energy management by coordinating with heat pumps and EVs through EMS.

3. Backup Power & Energy Security Solution

Areas with frequent blackouts (e.g. Texas, Southern California, the Philippines);
Homes with critical loads like remote workstations or medical devices;
Households with zero-tolerance for power outages.

User Pain Points:

- 1 Sudden power outages due to extreme weather or grid failures
- 2 Disruption to internet, work, or medical equipment
- 3 No lighting or device usage at night

Solution Value:

Build an integrated energy hub combining solar, storage, and inverter. Store solar energy during the day and discharge at night to replace diesel. Wind or hydro power can be integrated to create a micro home energy

Operation Modes of Home ESS

Optimizing Energy Use with Littech High-Voltage Storage

As residential energy storage systems gain traction worldwide, energy usage patterns continue to vary significantly across regions and households. To fully realize the economic and functional potential of energy storage, users must adopt tailored operation strategies based on local electricity pricing, grid stability, solar availability, and consumption structure.

The role of residential energy storage has evolved far beyond backup power. Today, it plays a critical part in reducing electricity costs, maximizing solar self-consumption, participating in energy markets, and optimizing overall household energy management.

Drawing on global application experience and a flexible high-voltage stackable design, Littech solutions are well-suited for the following six mainstream operational strategies—each addressing a distinct use case in mature and emerging markets:

1 Time-of-Use (TOU) Arbitrage

In markets with TOU electricity pricing, users can charge batteries during low-cost nighttime hours and discharge during expensive peak periods to significantly reduce utility bills. This model is especially effective in countries with wide price gaps such as Germany, Japan, and California, where the payback period typically ranges from 2 to 6 years.

2 Solar Self-Consumption Optimization

When paired with rooftop solar, the storage system stores excess daytime generation for evening or cloudy-day use—raising the self-consumption rate and avoiding low feed-in tariffs. Littech's stackable design supports a wide range of system sizes, making it ideal for regions where self-use is more valuable than grid export.

3 Backup Power & Outage Protection

In areas prone to natural disasters or grid instability, the system functions as a household-level UPS, ensuring uninterrupted power to critical loads like lighting, refrigeration, communication, or medical devices. Littech's high-voltage architecture ensures smooth and rapid switchover during outages.

4 Virtual Power Plant (VPP) Participation

In markets with grid service compensation mechanisms, storage systems can be aggregated into VPPs to provide grid frequency and load balancing services. Littech systems support industry-standard communication protocols and are VPP-ready, enabling users to monetize storage assets.

5 Smart Energy Scheduling

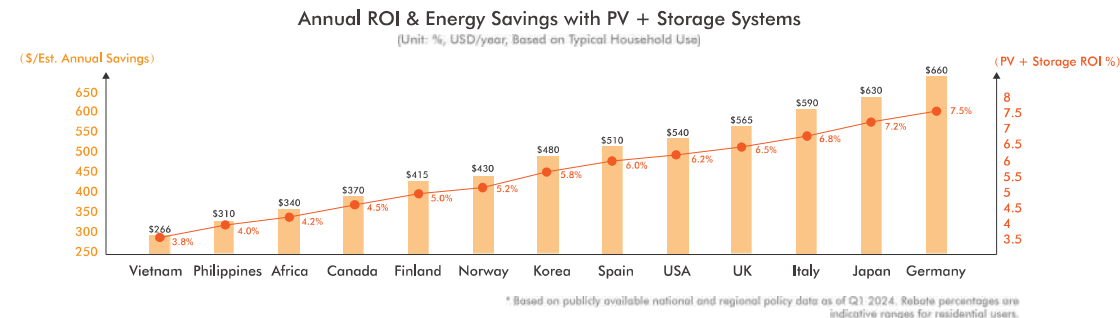
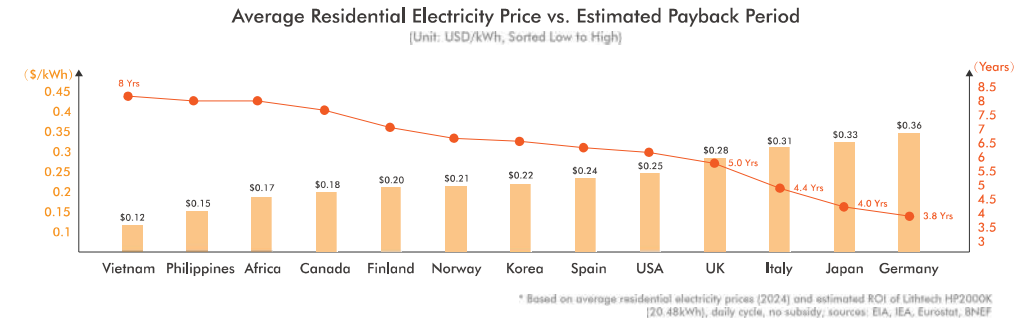
By integrating with a Home Energy Management System (HEMS), the storage unit can interact with EV chargers, heat pumps, HVAC, and smart appliances to optimize energy usage by time and priority. Littech solutions offer open control interfaces and smart scheduling compatibility for full-household energy orchestration.

6 Off-Grid Independent Operation

For homes in remote or off-grid locations, energy storage—combined with solar or wind generation—can form a standalone micro-energy center. Littech's high-voltage, modular systems are already deployed in remote villages, islands, cabins, and mobile living scenarios, delivering stable, autonomous power around the clock.

Operation Modes of Home ESS

Optimizing Energy Use with Littech High-Voltage Storage



Littech Wall-Mount Residential Energy Storage Solution

1 On-grid Mode

The battery system prioritizes home use, with surplus solar fed to the grid for savings via peak shaving and feed-in tariffs.

Best for areas with stable grid and time-of-use electricity pricing.

2 Off-grid Mode

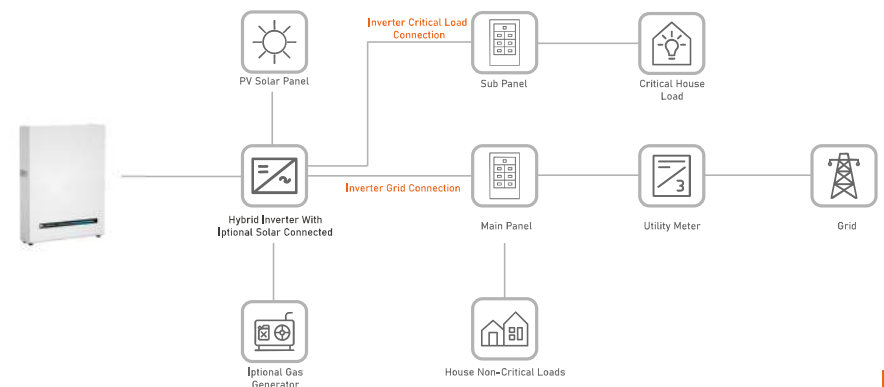
Runs fully off-grid using solar and batteries, with black start to restore power even after total blackout.

Designed for remote or disaster-prone regions with no reliable grid access.

3 Hybrid Mode

Prioritizes grid use for savings, and auto-switches to battery backup during outages to keep critical loads running.

Perfect for households needing continuous power during grid instability.

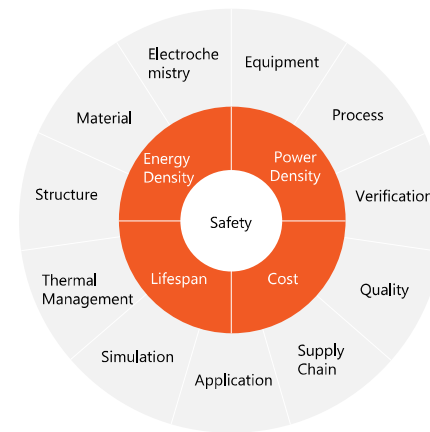




Product Safety Design

Littech Stackable Residential Energy Storage Solution

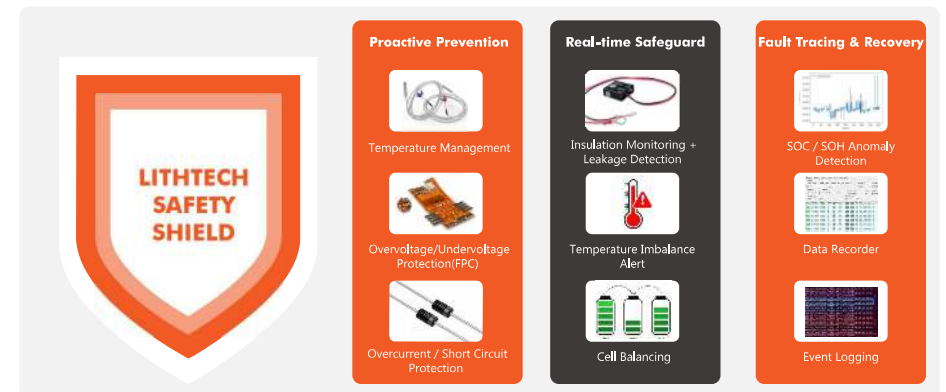
Cell-level safety design



System-level design ensures safety

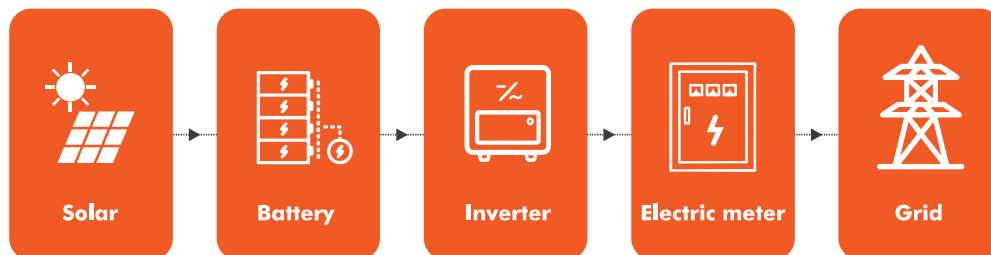


Multi-layer safety protection design



Littech One-Stop Home ESS

Smart solar-to-grid solution for lower bills and power security.



Littech One-Stop Residential ESS

Smart solar-to-grid solution for lower bills and power security.



SAFETY

Littech's home energy storage systems prioritize safety and reliability. With 20+ years of battery experience and global project know-how, we ensure strong product support and dependable service.

Our smart cloud platform monitors system and battery status in real time. Early warnings and regular reports help prevent issues before they arise, ensuring safe daily operation.



SIMPLICITY

Littech systems support full remote monitoring and control via 2.4G Wi-Fi. Once connected, users can access real-time data, adjust system parameters, and even power the system on or off—anytime, anywhere, as long as there is signal coverage.

With intelligent remote diagnostics, parameter settings, and performance tracking all accessible through a user-friendly interface, managing your energy system has never been easier.



AI-DRIVEN

With rich experience in home energy storage, Littech systems adapt intelligently to on-grid, off-grid, and hybrid operation modes. Built-in smart algorithms optimize energy usage and system responsiveness in real time.

An integrated AI control chip enables early fault detection and sends timely alerts with actionable suggestions. The system supports undervoltage warnings, overtemperature and undertemperature alarms, ensuring safe and reliable operation in all conditions.

Residential ESS



Cabinet



Wall-Mount



Stacked



UPS



All-in-One

Smart Adaptation, Hassle-Free Installation

Littech's residential ESS lineup is not just diverse—it's smarter by design. From rack-mounted, wall-mounted, and stackable systems to UPS and all-in-one models, each series is engineered for flexibility and long-term reliability.

Specifically, our stackable battery series features auto-address recognition—no DIP switches, no manual setup. You can stack modules in any order, and the system automatically assigns addresses.

Our intelligent PDU (Power Distribution Unit) also adapts to the actual number of battery modules—no configuration needed, even if the battery count changes. Just connect and go.

Certificates



MSDS



UN38.3



Excellent Safety System

AI-powered safety with automatic fault detection and early alerts.

- 1). Over 200 safety design measures and more than 1,300 quality control checkpoints are implemented from the cell to the module and system level.
- 2). Comprehensive safety is built into every detail—from electrical principles, structural design, and thermal management to fire suppression and functional safety, ensuring overall system reliability and protection.



A-Grade LFP Cell CATL/Gotion/EVE

- High-Safety LFP Chemistry
- Protected by patented gel flame-retardant electrolyte technology.
- Certified to global standards including GB, UL, IEC, UN38.3, MSDS, and RoHS.



Automotive BMS: BCU + BMU Design

- Real-time monitoring of voltage, temperature, and insulation with accurate data processing
- Supports emergency recharge when battery is fully depleted (Force Charge)
- Compatible with major inverter brands and protocols

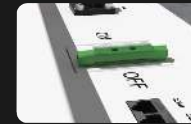


AI-Powered Safety Response

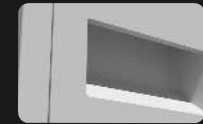
- Predicts overcharge risks in advance to assist BMS response
- Triggers early warnings with response time under 30 ms
- Enhances system safety with proactive fault prevention



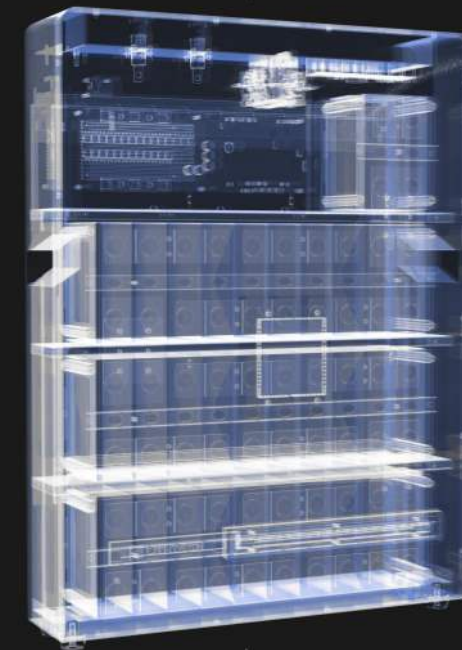
TERMINAL PANEL



EMERGENCY BREAKER



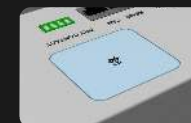
RECESSED HANDLE



COLORFUL INDICATOR



BLUETOOTH TRANSMITTER



WATERPROOF CONNECTOR



Wall-Mount Series Next-Gen Residential Battery System

- **Residential homes:** Villas, houses, and suburban users with rooftop solar and backup power needs.
- **Home solar + storage:** For PV households aiming for self-consumption and energy independence.
- **TOU pricing regions:** Markets with peak-valley tariffs (e.g., Italy, Spain, Japan) to reduce bills.
- **Unstable grid areas:** Rural, island, or overseas users facing frequent power outages.
- **Off-grid scenarios:** Cabins, RVs, or remote homes needing fully off-grid solar + storage systems.



Model	TR4000WX	TR6000WX	TR8000WX	TR8500WX	TR6000WXPRO	TR8500WXPRO
Normal Voltage	51.2V					
Nominal Capacity	100Ah	200Ah	280Ah	314Ah	200Ah	314Ah
Charge&Discharge Current	100A	200A	200A	157A/200A	200A	200A
Energy	5.12kWh	10.24kWh	14.336kWh	16.076kWh	10.24kWh	16.07kWh
Max Parallel Q'ty	15	15	15	15	15	15
Chemistry	LiFePO ₄					
Cycle Life	6000 Times					
Rated Output Power	5kW	10kW	10kW	10kW	10kW	10kW
Bluetooth/Wi-Fi	Optional					
Communication	RS485, RS232, CAN					
Waterproof	IP20	IP20	IP20	IP20	IP66	IP66
Noise Level	<10dB					
Charge Temperature	0°C to 55°C (32°F to 131°F)					
Discharge Temperature	-20°C to 60°C (-4°F to 140°F)					
Storage Temperature	0°C to 35°C (32°F to 95°F)					
Altitude	≤3000m					
Warranty	10 Years					
Certification	CE,UN38.3,IEC62619,IEC62477,RoHS,UL1973					
Dimensions[L*W*H]	50*60*16.7cm	65*85*16.7cm	65*85*24.5cm	65*85*24.5cm	82*62*17.9cm	85*65*23cm
Weight	≈53.5kg	≈99.5kg	≈132.5kg	≈135.5kg	≈99.5kg	≈135.5kg

6kw 10.24kWh Residential ESS

Standard Combo 1



TR6000WX-PRO X 1



Inverter 6kW X 1



580W PV Panel X 11

1.Power generation & efficiency

With 11 × 580 W solar panels (total capacity of about 6.38 kW), the system can produce around 20.4 kWh of usable electricity per day based on 4 peak sun hours and 80% overall system efficiency.

2.Daytime & nighttime power allocation

During the day, solar power first charges the 10.24 kWh battery to full, with the remaining ~10.2 kWh directly supplying household loads. At night, the battery powers essential appliances such as lighting, refrigerators, TVs, and air conditioners.

3.Fast switching & reliable supply

In the event of a grid outage, the system can switch to battery power within milliseconds, ensuring uninterrupted operation of critical equipment. It also supports peak shaving and valley filling to use low-cost off-peak electricity during expensive peak hours, reducing energy bills.

Battery	Inverter	PV Panel Spec	No. of Panels	Total PV Power (DC)	System Efficiency
10.24 kWh	6 kW	580 W/Panel	11 Pcs	≈6 kW	80 %
Peak Sun Hours	Efficient Output (AC)	Daily Generation	Battery Charging	Daytime Direct Load	DC / AC Ratio
4 h/Day	5.1 kW	20.4 kWh/Day	10.24 kWh/Day	10.2 kWh/Day	1.06



10kw 20.48kWh Residential ESS

Standard Combo 2



TR6000WX-PRO X 2



Inverter 10kW X 1



580W PV Panel X 18

1.Power generation & efficiency

With 18 × 580 W solar panels (total capacity of about 10.44 kW), the system can produce around 33.4 kWh of usable electricity per day based on 4 peak sun hours and 80% overall system efficiency.

2.Daytime & nighttime power allocation

During the day, solar power first charges the 20.48 kWh battery to full, with the remaining ~12.9 kWh directly supplying household loads. At night, the battery powers essential appliances such as lighting, refrigerators, TVs, and air conditioners.

3.Fast switching & reliable supply

In the event of a grid outage, the system can switch to battery power within milliseconds, ensuring uninterrupted operation of critical equipment. It also supports peak shaving and valley filling to use low-cost off-peak electricity during expensive peak hours, reducing energy bills.

Battery	Inverter	PV Panel Spec	No. of Panels	Total PV Power (DC)	System Efficiency
20.48 kWh	10 kW	580 W/Panel	18 Pcs	≈10.44 kW	80 %
Peak Sun Hours	Efficient Output (AC)	Daily Generation	Battery Charging	Daytime Direct Load	DC / AC Ratio
4 h/Day	8.35 kW	33.4 kWh/Day	20.48 kWh/Day	12.9 kWh/Day	1.04



20kW 16.07kWh Residential ESS

Standard Combo 3



1.Power generation & efficiency

With 28 × 580 W solar panels (total capacity of about 16.24 kW), the system can produce around 52.0 kWh of usable electricity per day based on 4 peak sun hours and 80% overall system efficiency.

2.Daytime & nighttime power allocation

During the day, solar power first charges the 16.07 kWh battery to full, with the remaining ~35.9 kWh directly supplying household loads. At night, the battery powers essential appliances such as lighting, refrigerators, TVs, and air conditioners.

3.Fast switching & reliable supply

In the event of a grid outage, the system can switch to battery power within milliseconds, ensuring uninterrupted operation of critical equipment. It also supports peak shaving and valley filling to use low-cost off-peak electricity during expensive peak hours, reducing energy bills.

Battery	Inverter	PV Panel Spec	No. of Panels	Total PV Power (DC)	System Efficiency
16.07 kWh	20 kW	580 W/Panel	28 Pcs	≈16.24 kW	80 %
Peak Sun Hours	Efficient Output (AC)	Daily Generation	Battery Charging	Daytime Direct Load	DC / AC Ratio
4 h/Day	13 kW	52 kWh/Day	16.07 kWh/Day	35.9 kWh/Day	0.81



Global Case Studies

Showcasing representative projects from around the world



Australia TR6000WX-PRO

- 10.24 kWh residential energy storage system
- 8 kW residential inverter
- off-grid

October 2024



Canada TR6000WX-PRO

- 10.24 kWh residential energy storage system
- 6 kW residential inverter
- off-grid

December 2024



UK TR8500WX-PRO

- 16.07 kWh residential energy storage system
- 8 kW residential inverter
- on/off-grid

February 2025



New Zealand TR8500WX-PRO

- 32.14 kWh residential energy storage system
- 12 kW residential inverter
- on/off-grid

April 2025



Ireland TR8500WX

- 16.07 kWh residential energy storage system
- 5 kW residential inverter
- on-grid

June 2025



Singapore TR8500WX-PRO

- 16.07 kWh residential energy storage system
- 8 kW residential inverter
- off-grid

August 2025

Service and Support

Littech is committed to providing professional after-sales solutions for users worldwide

1.SERVICE TEAM:

Five local after-sales teams in the United States, China, Germany, South Africa, and Vietnam, supported by a **global network of FAE engineers for on-site assistance**.

2.COMPLAINT HANDLING:

Feedback within 24 hours, a temporary solution within 48 hours, and a complete solution within 5 working days. All requests are tracked and managed through our official **after-sales ticketing system** at www.ltc-energy.com/support.

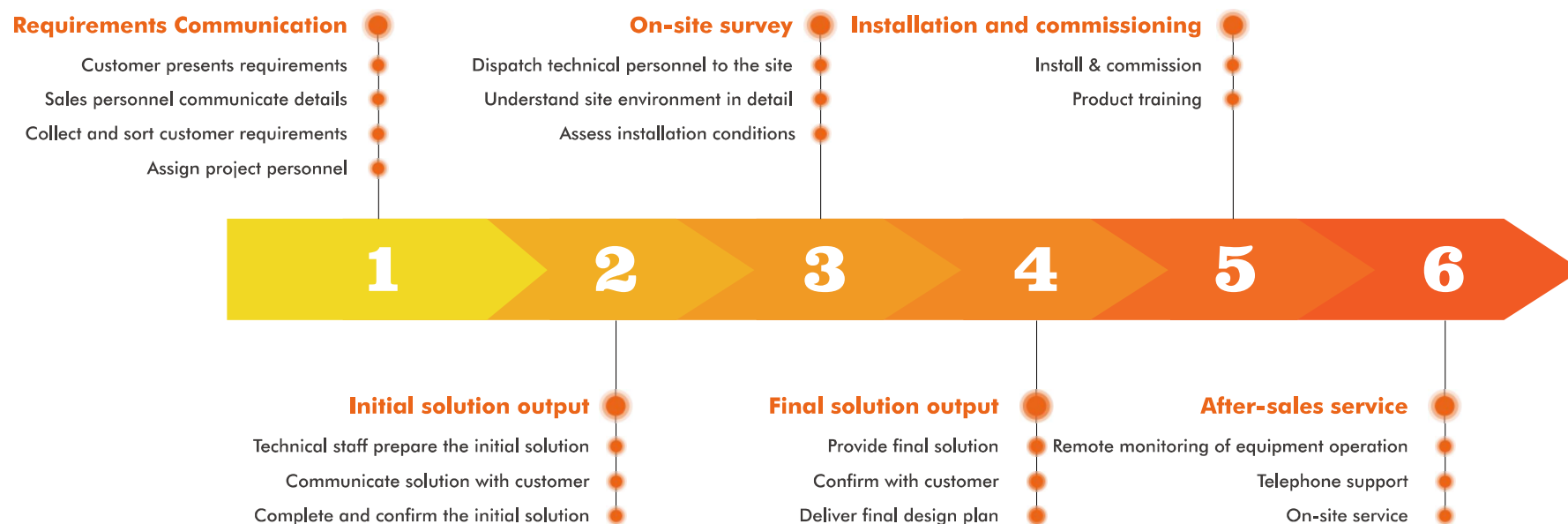
3.VIP SERVICE:

On-site factory support and priority **technical assistance for VIP clients**.

4.SYSTEM SERVICES:

Professional training materials, on-site repair, self-maintenance enablement, tool support, and **free regular inspections** during the warranty period. **Emergency technical support** is available to ensure minimal downtime.

Tailored project solutions





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