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WE DO MORE THAN
STORE ENERGY
WE MAKE IT **SMART**

OUR VISION

- Become a world-leading green energy storage solution and service provider.
- Serve 100 million people over the next 10 years.

01

Our Story

02

Core Strategy

03

Residential Solutions

04

Commercial & Industrial
Solutions

05

Utility-Scale Solutions

CHAPTER

01

Our Story

“Make clean energy
accessible to everyone
in the world.”



Who We Are

AlphaESS is a leading global green energy storage solution and service provider. With expertise in BMS, EMS, PCS, system integration, and AlphaCloud monitoring platform, we excel in providing tailored solutions for a wide range of applications, including residential, commercial & industrial, and utility-scale projects.

AlphaESS has 60+ subsidiaries and branches worldwide, including China, Germany, Australia, the Benelux region, the UK, Italy, Spain, Singapore, Malaysia, South Africa, Nigeria, Kenya, Chile, and more. With over 300,000 systems actively running across 130+ countries, we have built a comprehensive global supply chain and logistics network.

 **130 +**
Countries & Regions

 **300,000 +**
Systems Installed Globally

 **14 +**
Years of Industry Experience

 **300 +**
Patents in the ESS field


TOP 1

Residential Energy Storage
Provider in Australia


TOP 1

Residential Energy Storage
Provider in the Netherlands


TOP 5

Residential Energy Storage
Provider in Germany


TOP 5

Global Residential
Storage Provider



Tier 1 Energy Storage
Manufacturer
by BloombergNEF



The Most Recommended
Brand in Germany



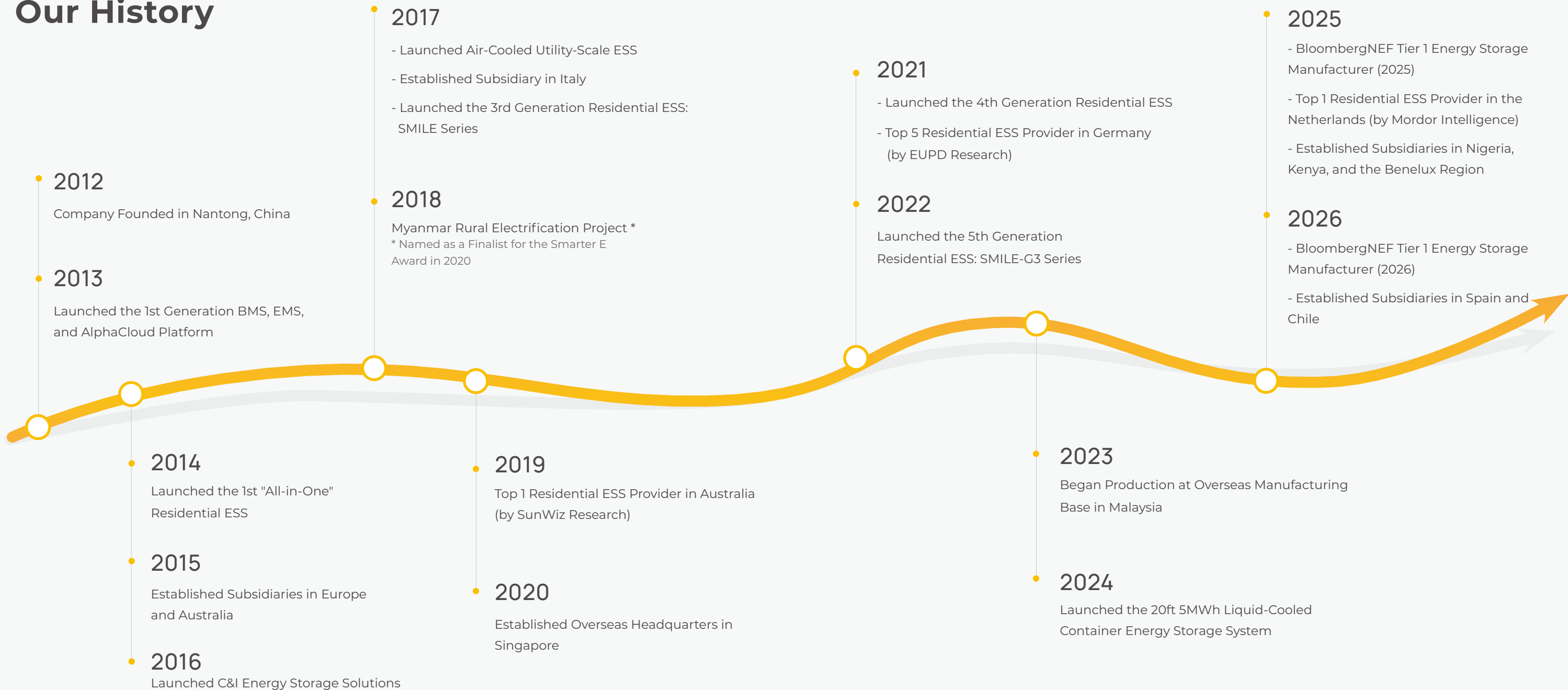
**GOOD
DESIGN
AWARD**

iF & Reddot & G-Mark
Design Award



TOP BRAND PV
(STORAGE & INVERTERS)

Our History



Global Presence



400+
Service Locations Worldwide

Key Networks

- Asia: China, Singapore, Malaysia, The Philippines, Myanmar, Indonesia, Uzbekistan, Japan, Thailand, Vietnam, Cambodia, Israel, Iraq
- Europe: Germany, United Kingdom, Italy, Benelux, France, Czech Republic, Spain, Estonia, Lithuania, Slovenia, Austria, Switzerland, Romania
- Oceania: Australia, New Zealand, Fiji, New Caledonia, Tonga
- Americas: United States, Guam, Hawaii, Colombia, Peru, Chile, Brazil
- Africa: South Africa, Kenya, Nigeria, Ghana, Sierra Leone, Uganda, Mauritania

60+

Subsidiaries

4

Manufacturing Bases

China: Nantong (Tongzhou & Qidong), Kunming
Malaysia: Kulim



5

R&D Centers

Nantong, Suzhou, Nanjing, Tianjin, Xi'an

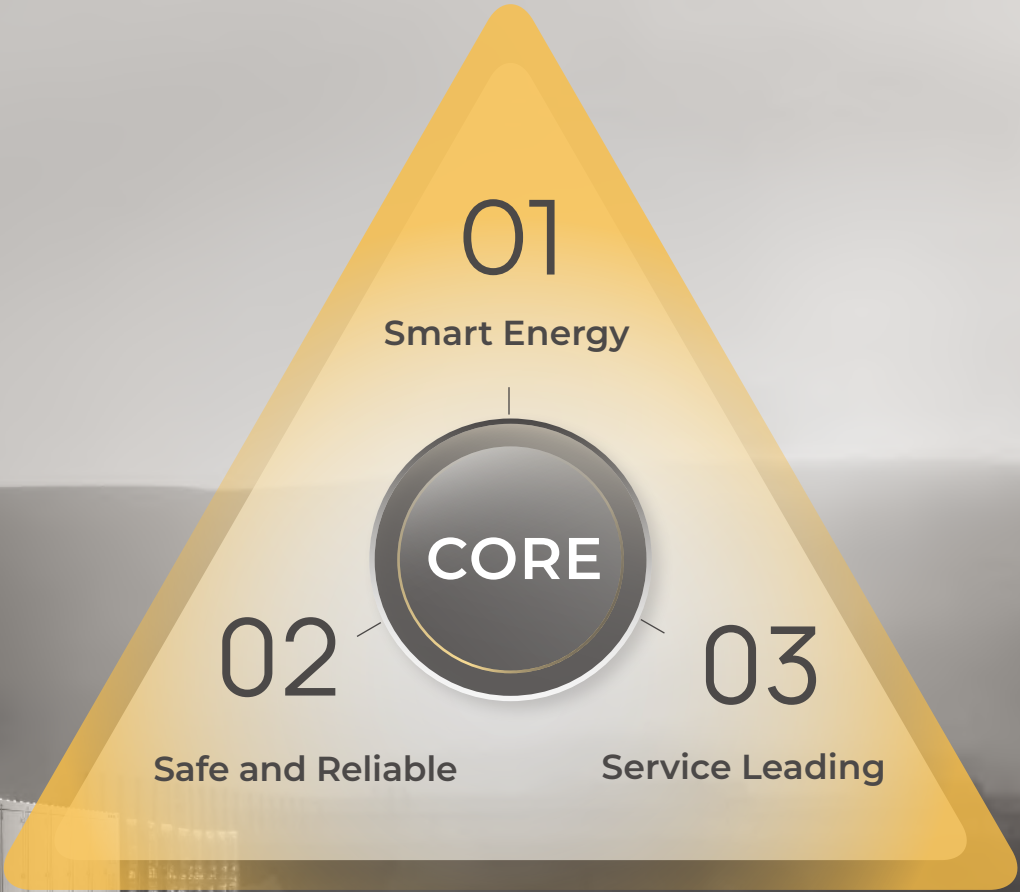
Headquarters Subsidiary Manufacturing Base

*China: Nantong (Tongzhou & Qidong), Suzhou, Nanjing, Beijing, Tianjin, Shenzhen, Guangzhou, Xi'an, Kunming, etc.

CHAPTER

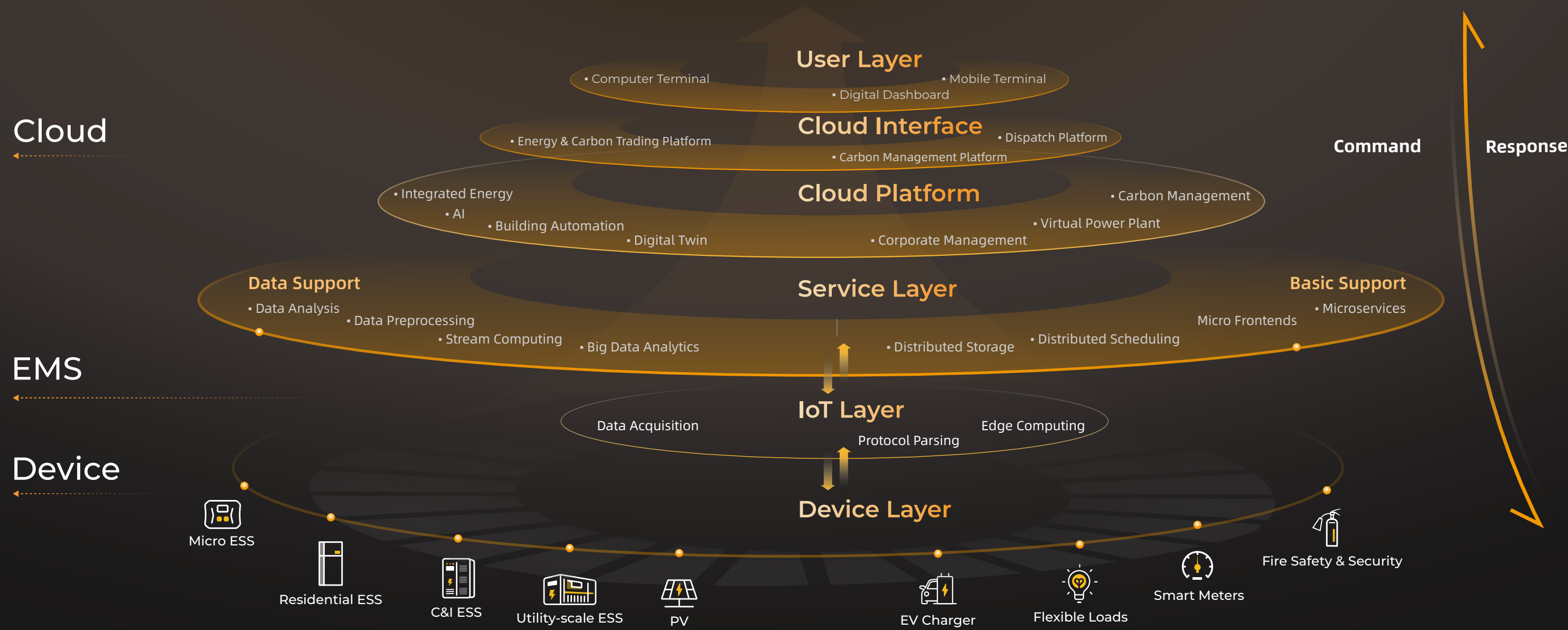
02

Our
Strategy



Smart Energy

Digital Intelligent Management Architecture

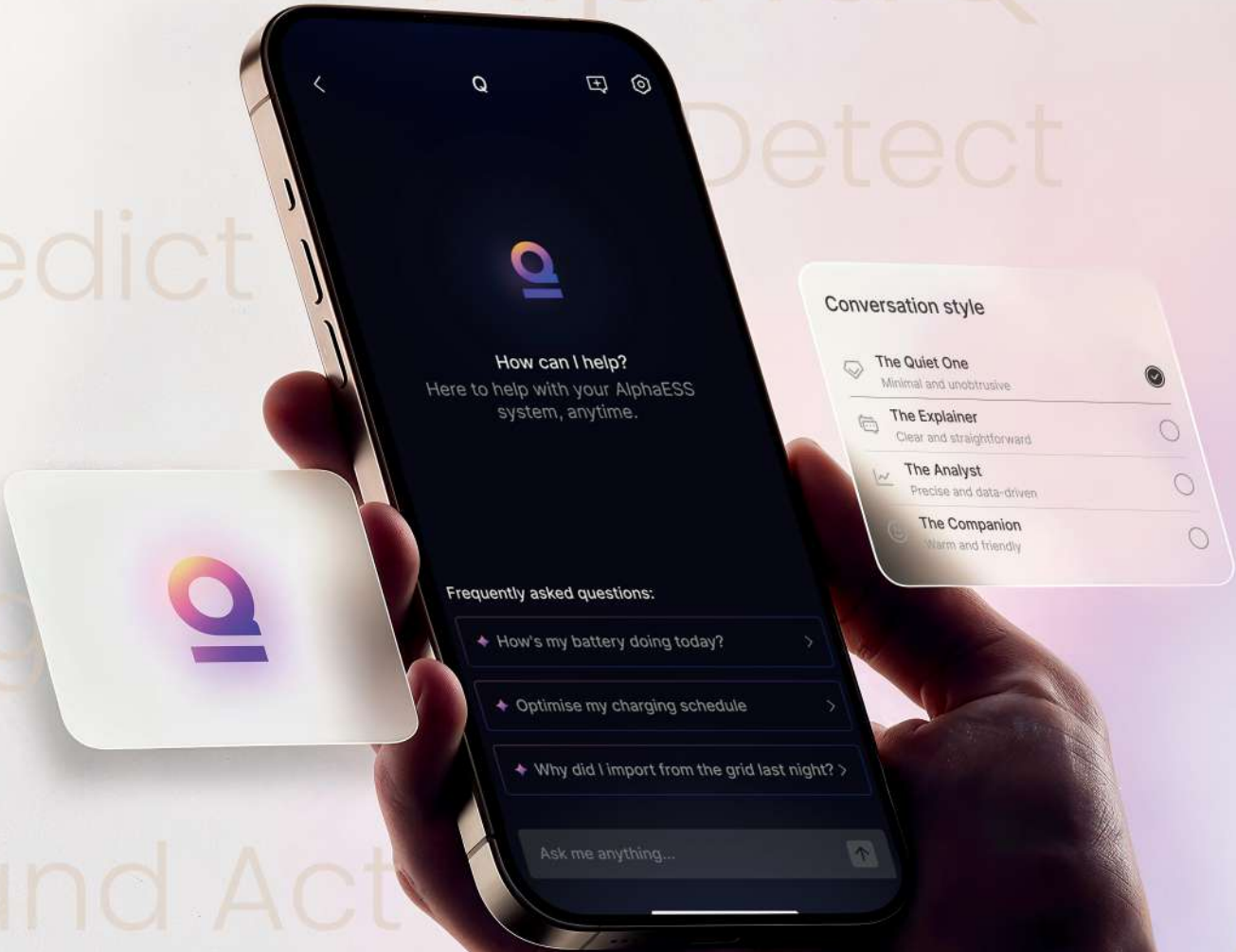


Smart Energy

AlphaQ

Your Personal Energy Assistant

Working for you 24/7



Your Energy, Your Rules

AlphaQ learns your preferences, understands your system, follows your routine, and adapts — making your energy experience truly personal.

Predict, Detect, and Analyze

It continuously evaluates operating conditions and selects the most efficient strategy, keeping your system at peak performance.

Schedule and Act

AlphaQ creates and executes a smooth, optimized energy plan, delivering an average of 23% in bill savings.

Continuous Learning

With a constantly updated knowledge library, AlphaQ gets better every day—bringing you a smarter, more sustainable home.

Safe and Reliable

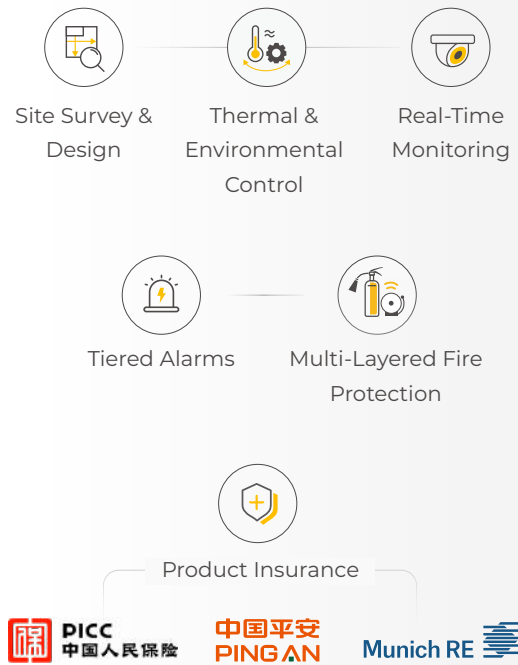
01 Material Safety

Secure the energy storage

Only first class, reliable
LiFePO₄ cells will be
used

02 System Safety

Secure the quality and performance



03 Workplace Safety

Secure the green, smart, and
sustainable future

- Integrate safety controls with intelligent devices to minimize human operation risks and enhance safe production
- EHS in practice with everyone involved: trainings, accountability, and occupational health
- Less emission with clean and efficient production

04 Testing Safety

Leave no stone unturned

Battery Safety

- Crush and Impact Tests
- Overcharge and Overdischarge Tests
- Short-Circuit Tests

EMS Safety

- EMC Tests
- Fault Waveform Recording Tests
- Hardware-in-the-Loop (HIL) Simulation

Structural Safety

- Structural Strength Verification
- Structural Simulation for Design Validation
- Short-Term and Long-Term Structural Validation

Electrical Safety

- Electrical Short-Circuit Tests
- Overload Temperature Rise Tests
- Dielectric Withstand Voltage Tests

Fire Safety

- Thermal Runaway and Propagation Tests
- Multi-Dimensional Fire Detection Tests
- UL 9540A Fire Test



Environmental Reliability

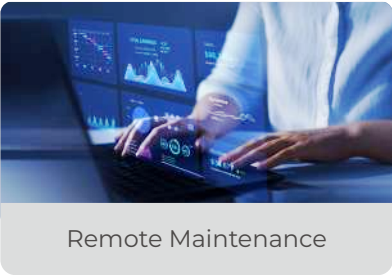
- Low Pressure Tests
- Salt Spray Tests
- Temperature Shock & Humidity Cycling Tests

Service Leading



Creating Value for Our Clients

We strive to provide our customers with seamless end-to-end services through our comprehensive localized service network, which offers convenient services including demand analysis, customized solutions, spare parts supply, professional training, warehouse management, fault analysis, and efficient maintenance. Our dedication lies in maximizing the utilization of our customers' systems and ensuring an exceptional service experience.



Remote Maintenance



Troubleshooting



Installation Training



Technical Support



Automatic Updates



Warranty Service



CHAPTER

03

Residential Solutions

SMILE Series

- S tronger Output
- M odular Configuration
- I ntelligent Management
- L ong Lifespan
- E fficient Operation

Smart Battery, Smarter Living

AlphaESS provides energy storage solutions ranging from 3.6 to 20 kW for households. With the AlphaCloud monitoring platform, users can fully enjoy the economic benefits and convenience of smart energy management.



SMILE-G3 Series

SMILE-G3-B5 | SMILE-G3-S3.6 / S5 / S8 | SMILE-G3-T4 / T5 / T6 / T10 | SMILE-G3-T12 / T15 / T20

The SMILE-G3 series offers single-phase solutions from 3.6 to 8 kW and three-phase solutions from 4 to 20 kW for residential energy storage. It supports both AC-coupled and DC-coupled configurations and covers a wide range of applications, including:

- Self-consumption
- Peak-valley arbitrage
- Diesel generator backup (Dual Power Supply)
- VPP (Virtual Power Plant) scheduling
- Solar-storage-charging integration
- Solar-storage-heating integration (heat pumps)

**More Energy.
Longer Lifespan.
Ultimate Safety.**



GOOD DESIGN AWARD



red dot design award

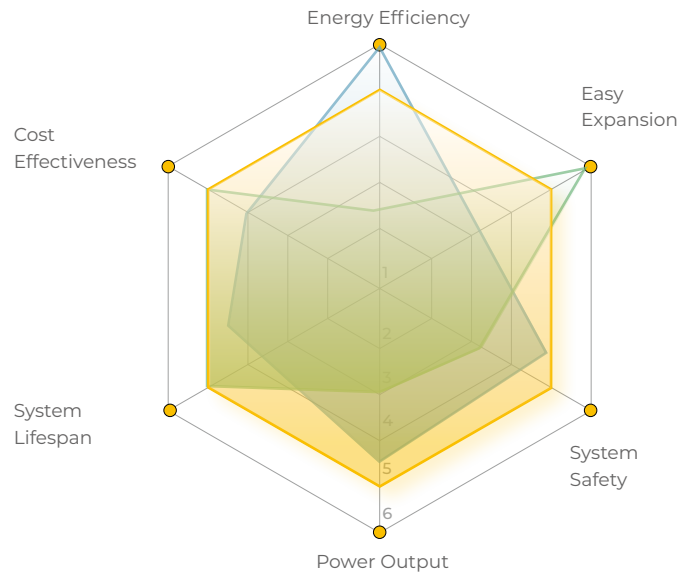


AlphaLinX Battery

The ultimate battery that does it all

When you can have both, why choose?

Traditional battery systems make you choose between high efficiency (series) and balanced capacity (parallel). AlphaESS AlphaLinX Technology changes the game by delivering both advantages in one system.



Feature	AlphaLinX Battery System	Traditional Series Battery System	Traditional Parallel Battery System
Increase system voltage and reduce energy losses	✓	✓	✗
Intelligently balance capacity across batteries	✓	✗	✓
Simplify current management, reduce load pressure, and lower the risk of overheating	✓	✓	✗
Minimal impact from small failures, with strong redundancy	✓	✗	✓
Enable selection of higher inverter power	✓	✓	✗
High expansion flexibility	✓	✗	✓

AlphaLinX Battery

Always performing at its best



More Solar Energy for Your Home

Get every possible watt from your solar panels. Our system delivers up to 15% more usable energy to your appliances compared to conventional systems.



No Interruption When Batteries Fail

Automatically isolates faulty modules without disrupting system operation, ensuring long-term reliability with hardware redundancy.



Every Cell Works at Its Full Potential

Smart balancing gives you 12% more usable capacity and extends battery life by 20% , preventing energy loss in weaker cells.



Grow Your System Anytime

Start with what you need now and expand later, even mixing older and newer batteries. Scale up to 111.6 kWh for whole-home backup.

Single-Phase Systems

SMILE-G3	B5	S3.6	S5	S6	S8
Rated Output Power	5 kW	3.6 kW	5 kW	6 kW	8 kW
Coupling	AC Coupling	Hybrid Coupling			
Capacity	3.65 – 14.6 kWh (1-4 × 3.65 kWh modules)				
	4.56 – 18.24 kWh (1-4 × 4.56 kWh modules)				
	9.3 – 37.2 kWh (1-4 × 9.3 kWh modules)				
Battery Chemistry	LFP (LiFePO ₄)				
PV Input	N/A	7.36 kW	10 kW		
Backup	10 ms				
Ingress Protection	IP65				
Warranty	10 Years				

Three-Phase Systems

SMILE-G3	T4	T5	T6	T8	T10	T12	T15	T20
Rated Output Power	4 kW	5 kW	6 kW	8 kW	10 kW	12 kW	15 kW	20 kW
Coupling	Hybrid Coupling							
Capacity	3.65 – 21.9 kWh (1-6 × 3.65 kWh modules)					7.3 – 43.8 kWh (2-6, 8, 10, 12 × 3.65 kWh modules)		
	4.56 – 27.36 kWh (1-6 × 4.56 kWh modules)					9.12 – 27.36 kWh (2-6 × 4.56 kWh modules)		
	9.3 – 111.6 kWh (1-12 × 9.3 kWh modules)					18.6 – 111.6 kWh (2-6, 8, 10, 12 × 9.3 kWh modules)		
Battery Chemistry	LFP (LiFePO ₄)							
PV Input	8 kW	10 kW	12 kW	16 kW	20 kW	24 kW	30 kW	40 kW
Backup	10 ms							
Ingress Protection	IP65							
Warranty	10 Years							

Blackout?

Your Lights Stay On.

Whole-Home Backup Solution



Backup Gateway-S
for Single-Phase



Backup Box Plus
for Three-Phase



SMILE-M Series

SMILE-M5-B | SMILE-M5-S | SMILE-M10-S

A modern two-story house at night. The house has a steep gabled roof covered in solar panels. The exterior is a mix of light blue and dark grey panels. Large windows and a glass-enclosed porch area are illuminated from within, showing a living room with a sofa. A white charging station is mounted on the side of the house near the driveway. The driveway is wet and reflects the lights. The sky is dark with some clouds.

Charge Forward,
Profit Returned.

What Makes SMILE-M Series Unique?



Built-in Aerosol Fire Suppression

Enhanced safety at cell level



5-Minute Commissioning, Quick Setup

Rapid Partner App commissioning with built-in CT & meter self-check



Up to 200% PV Input (SMILE-M5-S)

Maximize solar yield from existing roof space



Stackable Design

Install and connect in minutes



Model	SMILE-M5-B	SMILE-M5-S	SMILE-M10-S
Rated Output Power	5 kW		10 kW
Coupling	AC Coupling	Hybrid Coupling	
Capacity	5-30 kWh (1-6 × 5 kWh modules) 13.99-27.98 kWh (1-2 × 13.99 kWh modules)		13.99-27.98 kWh (1-2 × 13.99 kWh modules)
Battery Chemistry	LFP (LiFePO ₄)		
PV Input	N/A	Up to 10 kW, 2MPPTs	Up to 20 kW, 4MPPTs
Backup	UPS-Level Backup		
Ingress Protection	IP65		
Warranty	10 Years		

EV CHARGER & HEAT PUMP

User-Friendly

Multiple Charging Modes

Higher Profits

Quiet (≤ 50 dB)

Energy level (A+++)

Ultra Eco-friendly Refrigerant

Remote maintenance and data monitoring via AlphaCloud & App

AlphaCloud

Smart Energy. More Benefits

Home Energy Flow

Live Flow

Solar, home, EV, grid - live, in one screen.

Partner's VPP Plans

Wide Choice of VPP Plans

Explore 40+ VPPs, all in one App.

Energy Insights

Know Where Every kWh Goes

Load, solar, battery, grid - by day, month or year.

Storm Guard

Power Through Storms

Reads the forecast.
Pre-charges before it hits.

Self-Consumption

Time-Based Control

Dynamic Tariffs

Adaptive Running Modes

Control your battery based on demand, electricity prices, and time of day.





04

Commercial & Industrial Solutions

Powering C&I Businesses with Safe & Profitable Energy Storage

Maximize ROI

Optimize Investment

Highly integrated: smaller footprint, higher capacity

Flexible hybrid coupling supports diverse application scenarios

Simplified transportation and installation: pre-assembled cabinet or stackable deployment

Reduce O&M Costs

Smart thermal management – enhances system stability and extends lifespan

Intelligent EMS – ensures reliable operation and lowers labor costs

Boost Energy Profits

Active Balancing – extends usable battery capacity over lifetime

High system efficiency for maximum energy utilization

Multiple revenue streams: dynamic tariffs, energy trading, VPP-ready



Multi-Level Safety

Protection from Cell to System



*During rigorous testing, no thermal runaway propagation or significant deformation was observed, even under extreme temperature conditions (>800°C).



Three-Level Fire Protection Design



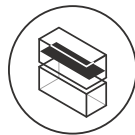
Cell Level

Real-time cell temperature monitoring via BMS, automatic power cut-off in case of short circuits, and aerogel insulation for thermal protection



Module Level

Integrated aerosol fire suppression system MSD for emergency physical isolation, ensuring maintenance safety



System Level

Smoke and heat detectors, coordinated water and aerosol fire suppression, and NFPA 68-compliant explosion venting



StaX-M30/50

Commercial Power Residential Ease

30-50 kW / 60.25-216.9 kWh

Stack & Play

Compact, easy-to-transport modules
with no complex wiring

Ultimate Safety

UL 9540A compliant

Silent Power

Fanless battery design

Smart Energy

Dynamic balancing and bypass

10 Years

System Warranty

≤ 10 ms

Switchover



Model	StaX-M30	StaX-M50
Rated Output Power	30 kW	50 kW
Energy Capacity	60.25-216.9 kWh	
Coupling	Hybrid Coupling (AC+DC)	
PV Input	3 MPPTs, 2 Strings 42 A Input Current 60 kW	4 MPPTs, 2 Strings 42 A Input Current 100 kW
UPS	10 ms	
Ingress Protection	IP66	
Fire Safety	Aerosol Suppression & Explosion Venting	
Warranty	10 Years	

STORION BESS Solution

STORION TB125 | STORION TB150

STORION TB150

Silent by Design. Powerful by Nature.

≤ 60 dB(A)

Operating Noise Level

Cell-level Active Balancing

12,000

Cycle Life *

≤ 20 ms

Switchover**

Fire Safety

UL 9540A & IEC 62933 Compliant

Smoke, Heat & Gas Detection

End-to-End Encryption

PV-BESS Applications



≤ 60 dB(A)*

> 75 dB(A)



Model	STORION TB125	STORION TB150
Rated Output Power	125 kW	150 kW
Energy Capacity	261.2 kWh 522.4 kWh with Expansion Cabinet	313 kWh
Coupling	AC Coupling	
Cycle Life	8000	8000 for Standard Version 12000 for Ultra Version
Cooling	Liquid Cooling	Full Liquid Cooling (PCS & Battery)
Noise	≤ 70 dB(A)	≤ 60 dB(A)
Ingress Protection	IP55	
Operating Temperature Range	-20°C – 50°C	-30°C – 55°C
Safety Configuration	Smoke and Heat Detectors, Aerosol + Water Sprinkler, Explosion Venting Panel	Smoke, Heat, and Gas Detectors, Aerosol + Water Sprinkler, Explosion Venting Panel, Explosion-Proof Ventilation Fan (Optional for Ultra Version)

STORION PV+BESS Solution

STORION H30 | STORION H50 | **STORION H125** | STORION H500

STORION H125



All-in-One Design

200%

200% PV Oversizing

≤ 20ms

Switchover**



AFCI Protection



Smart 3-in-1 Port
(Supports Connection
to Diesel Generator, PV
Inverter, or Loads)



Grid-Forming for
Sustainable Input

×6

Up to 6 Units in
Off-Grid Parallel

×25

Up to 25 Units in
On-Grid Parallel



Model	STORION H30	STORION H50	STORION H125	STORION H500
Rated Output Power	30 kW	50 kW	125 kW	500 kW
Energy Capacity	72.3 kWh 144.6 kWh with Expansion Cabinet	120.5 kWh 241 kWh with Expansion Cabine	261.2 kWh 522.4 kWh with Expansion Cabinet	1.04-2.08 MWh
Coupling	Hybrid Coupling (AC+DC)			
PV Input	4 MPPTs, 2 Strings 40 A Input 60 kW	4 MPPTs, 2 Strings 40 A Input 80 kW	5 MPPTs, 2 Strings 42 A Input 250 kW	577.5 kW / 825 kW
Cooling	Air Cooling		Liquid Cooling	
Ingress Protection	IP55			IP54
Safety Configuration	Smoke and Heat Detectors Aerosol Fire Suppression		Smoke and Heat Detectors Aerosol + Water Sprinkler Fire Suppression	
Warranty	5 Years Product Warranty, 10 Years Battery Performance Warranty			

2 MW / 4 MWh

16 STORION TB125 units form a mega system to maintain grid frequency stability
Estonia, Europe



2.5 MW / 5.52 MWh

Peak-Valley Arbitrage, Demand Charge Management, Grid Ancillary Services
Jiangsu, China



1 250 kW / 522.4 kWh

Seamless Off-Grid Backup: Ensuring Critical Processes Continue Without Interruption
Netherlands, Europe

2 250 kW / 940 kWh

Delivering a high-capacity solar & storage system with advanced DC coupling
UK, Europe

3 50 kW / 192 kWh

Secure school power, stop load shedding, slash monthly bills by 80%
South Africa, Africa

4 100 kW / 250 kWh

Off-grid solar & battery system for oil beam pump
Australia

05

Utility-Scale Solutions

All-Scenario Friendly, All-Value Synergized

All-Scenario Friendly

Grid-Friendly

Provides strong inertia response and black-start support, ensuring grid stability even with high penetration of renewable energy.

Eco-Friendly

Features a full-lifecycle green and low-noise design, minimizing environmental impact with EU-standard liquid cooling technology.

O&M Friendly

Implements prefabricated cabin design and smart alerts, transforming hassle-free O&M from "reactive repair" to "predictive maintenance".

All-Value Synergized

Investment-Friendly

Pursues the optimal Levelized Cost of Storage (LCOS), maximizing returns through multiple revenue streams to value every investment.

Service Value Synergy

Rooted locally to provide full-lifecycle support through expert local teams, long-term training, and fast dispatch.

Social Value Synergy

Transcending business interests to act as an emergency backup during extreme weather or disasters, safeguarding community lifelines and grid security.



Utility-Scale Solution Highlights

RELIABILITY & QUALITY

- **NFPA 69-Compliant** Explosion Protection Design
- **100% Factory Acceptance Tested** — Over 40 Tests on Functionality, Performance, and Capacity



PCS COMPATIBILITY



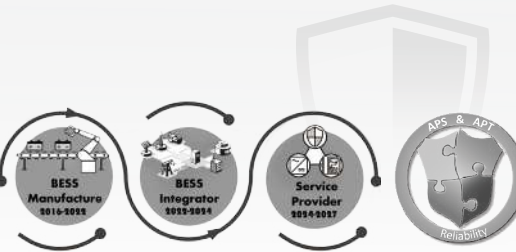
GLOBAL COMPLIANCE

- Certified to Global Energy Storage Standards, Easily Scalable
- Ideal for C&I and Utility-Scale Projects



SERVICE LEVEL AGREEMENT

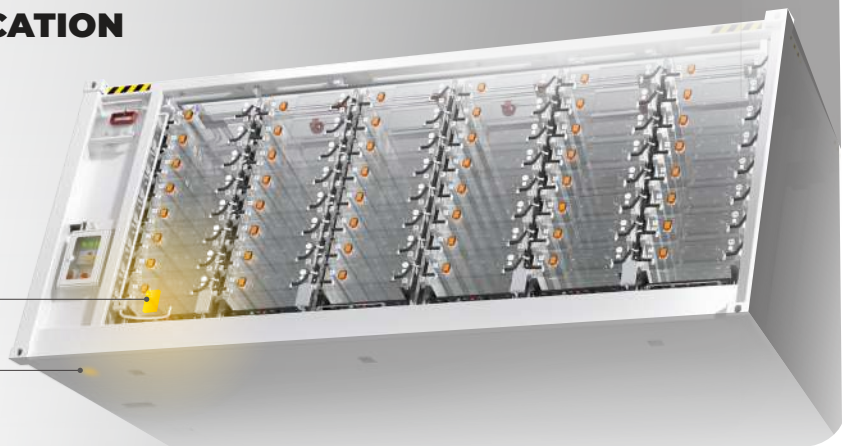
- Optional:
- LTSA (Long-Term Service Agreement)
 - After-Sales Certification Training



ACTIVE DEHUMIDIFICATION

Dehumidifier

Drain Trap



AEROSOL + WATER SPRINKLER FIRE SUPPRESSION

Aerosol

Water Sprinkler



STORION LC 836

1500V Liquid-Cooled ESS | 835.99-6687.92 kWh

- 1-8 Cabinets

Flexible Capacity Expansion
- Plug & Play

Effortless On-Site Cabling
- Front Cable Access

Eliminates Complex Foundations and Civil Works
- Dual Shut-Off Valves

O&M-Friendly Liquid Cooling Pipes
- Active Balancing Strategy

Ensures Cell Consistency and Longer Lifespan
- Comprehensive Safety

Multi-Point Detection, Proactive Venting, and Fire Suppression



Model	STORION LC 836 for EU		STORION LC 836-OF for AMEA
Nominal Capacity	835.99 kWh		
DC Voltage Range	1123.2 – 1497.6 V		
Rated Power	0.5P		
Battery Type	LFP (LiFePO ₄)		
Fire Detection System	Smoke, Heat, and Combustible Gas Detectors		Smoke and Heat Detectors
Fire Suppression System	Aerosol + Water Sprinkler (Explosion Venting Panel as Standard)		
Safety & Compliance	IEC 62619, IEC 62477, IEC 61000, IEC 60730, IEC 62933, IEC 62443, UL 9540A, UL 1973, UN38.3, UN3480		IEC 62619, IEC 61000, UN38.3

ASTER 5000

1500V Liquid-Cooled ESS | 5015.96 / 4597.96 / 4179.96 / 3761.97 kWh

Highly Integrated Layout	Front Access Design, Back-to-Back Battery Layout
Up to 3000m	High-Altitude Operation
5-Year Maintenance-Free	Liquid Cooling with Automatic Coolant Replenishment
Active Balancing	Extends System Lifespan by up to 10%
Cloud-Based BMS	Real-Time Monitoring and Diagnostics
4-Level BMS	Configurable for Long-Duration Storage
Thermal Safety	Multi-Point Detection and Fire Suppression
Electrical Safety	Module-Level MSD and Multi-Node Fuse Protection



Model	ASTER 5000 for EU		ASTER 5000 for MEA & ROA	
Nominal Capacity	3761.97 / 4179.96 / 4597.96 / 5015.96 kWh			
DC Voltage Range	1123.2 – 1497.6 V			
Rated Power	0.5P			
Battery Type	LFP (LiFePO ₄)			
Fire Detection System	Smoke, Heat, and Combustible Gas Detectors		Smoke and Heat Detectors	
Fire Suppression System	Aerosol + Water Sprinkler (Explosion Venting Panel as Standard)			

ASTER 6260

1500V Liquid-Cooled ESS | 6261.96 / 5479.22 / 4696.47 kWh

Up to 420 kWh/m ²	Ultra-High Energy Density
Active Balancing	8× Balancing Capacity for Longer Lifespan
Cluster-Level Isolation	Millisecond-Level Isolation, Zero Downtime, Increase Revenue
Ultra-Low Noise Design	≤ 70 dB(A) @ 1 m (0.5P) , 60 dB(A) @ 1 m (0.25P)
All-Weather Reliability	IP55 -40 °C – 50 °C Multi-Scenario Ready
Fiber Optic Communications	Reliable Long-Distance Transmission with High Noise Immunity
Inertia Response	150% Overload for 10s to Stabilize the Grid
Black Start	Autonomous Self-Start Capability for Off-Grid Sites



Model	ASTER 6260
Nominal Capacity	6261.96 kWh
DC Voltage Range	1000 – 1500 V
Rated Power	0.5P
Battery Type	LFP (LiFePO ₄)
Fire Detection System	Smoke, Heat, and Combustible Gas Detectors
Fire Suppression System	Aerosol + Water Sprinkler (Explosion Venting Panel as Standard)

220 MW / 440 MWh

Peak Shaving and Frequency Regulation
Ulanqab, Inner Mongolia



120MW / 240MWh

Peak Shaving and Frequency Regulation
Kubuqi, Inner Mongolia, China



160 MW / 320 MWh

One of the Largest Energy Storage Power
Station Projects
Czech Republic



1



2



1

2.5 MW / 5 MWh

Lingen municipal energy
storage project
Germany, Europe

2

1.8 MW / 7.3 MWh

National healthcare
electrification project in
sierra leone
West Africa

3

30MW / 60MWh

One of Austria's largest
battery energy storage
systems in the logistics
sector
Austria, Europe

4



4

42.5 MW / 130 MWh

Lithium-ion battery and
supercapacitor hybrid
standalone energy
storage project
Shanxi, China