AlphaESS Asia Pacific

AlphaESS
your smart energy

AlphaESS

Alpha ESS Co., Ltd.

Email: philippines@alpha-ess.com   **Website:** www.alphaess.com

f @AlphaESS   X @AlphaESS   @AlphaESS   in @AlphaESS   www.alphaess.com

YOUR SMART
ENERGY

01

ABOUT
ALPHAESS

· Who We Are

"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, system integration, and cloud monitoring, we excel in providing tailored solutions for a wide range of applications, including residential, commercial & industrial, and utility-scale projects.

AlphaESS has 40+ subsidiaries and branches worldwide, including China, Germany, Australia, Italy, the United Kingdom, South Africa, Singapore, Malaysia, and more. With over 200,000 systems actively running across 130+ countries, we have built a comprehensive global supply chain and logistics network.

130 +
Countries & Regions

200,000 +
Systems Installed Globally

13 +
Years of Industry Experience

250 +
Patents in the ESS field

Discover more: www.alphaess.com

TOP 1

Residential Energy Storage
Provider in Australia

TOP 5

Residential Energy Storage
Provider in Germany

TOP 5

Global Residential
Storage Provider

NPS 92,3%
NET PROMOTER SCORE

The Most Recommended
Brand in Germany

iF & Reddot & G-mark
Design Award

TOP BRAND PV
(STORAGE & INVERTERS)

Global Production Bases

Powering Efficient Markets Worldwide

4

Production Centers

Tongzhou, China

Qidong, China

Ulanqab, China

Kulim, Malaysia

ALPHAESS MALAYSIA SDN. BHD.

Global Presence

Driving Production and Service Excellence

300+

Global Service Network

40+

Subsidiaries

4

R&D Centers

UK

Germany

Italy

Republic of Korea

Japan

United States

Global Headquarters - China

Cayman

Malaysia

Overseas Headquarters - Singapore

South Africa

AlphaESS Australia

New Zealand

Service Leading

Asia Pacific Premium Service Plan

10+

Dedicated Local
Service Experts

1 on **1**

Group Support

15 min

Fast Responds*

3-Day

Fast RMA**

Monthly
Technical Training

On Site
Service Support

* Response time extends to one hour during non-business hours

** Return Material Authorization

AlphaCloud

A lifetime-free energy management and monitoring platform for all AlphaESS systems.

○ 10-Second Real-Time Data Monitoring

○ Open API Protocol

AlphaPartner

Exclusive service platform for AlphaESS' parnters.

○ **Installtion Self-Testing**

Streamlined verification of meter and CT installation, battery power cables, and communication cables.

○ **Commisioning Tool**

Optimized first-installation commissioning process for efficiency.

02

Residential ESS

4kW - 20kW

· SMILE-X Series
· SMILE-G3 Series

AlphaESS provides energy storage solutions for households.

With the AlphaCloud monitoring platform, users can fully enjoy the economic benefits and convenience of smart energy management.

SMILE-X Series

Single Phase: 6kW / 12kW | 8-16kWh / 15-90kWh

Empowering Homes with Adaptive, Resilient Energy

• All-Scenario Zero-Export Control

The SMILE-X Series leverages All-Scenario Zero Export Control to eliminate reverse billing and keep every watt you generate.

• Uninterrupted Performance in Unstable Grids

Its advanced ride-through capability handles grid voltage and frequency swings without ever load degrading—ensuring uninterrupted, full-power delivery.

• Reliability Even in Rainy Seasons

Paired with dual backup function and ultra-low standby consumption, the SMILE-X Series offers smart, flexible load management to extend runtime for your most critical circuits.
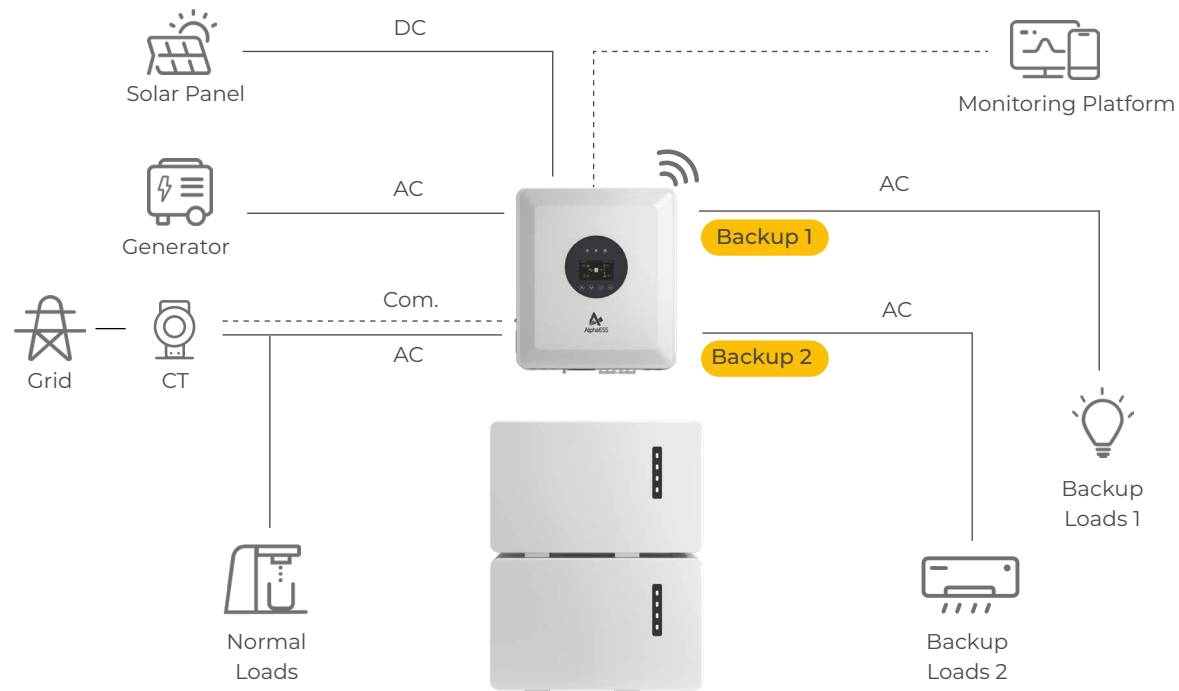
System Power

6 kW / 12 kW

Max 200% overload, 10s

Battery Module

8 kWh, 25.6V, 314Ah

15 kWh, 48V, 314Ah

System Configuration

8 - 16 kWh (8kWh module)

15 - 90 kWh (15kWh module)

PV

166% PV oversizing

6kW: Two 16A input MPPTs, each MPPT has one string

12kW: Two 32A input MPPTs, each MPPT has two string

Operating Condition

-25℃ ~ 60℃

IP21

Warranty

5 years for system
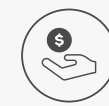
10 years for battery

One System for Every Scenario

Adapts to Any Setup

Support AC, DC, and Hybrid coupling

Prevents Reverse Power Flow
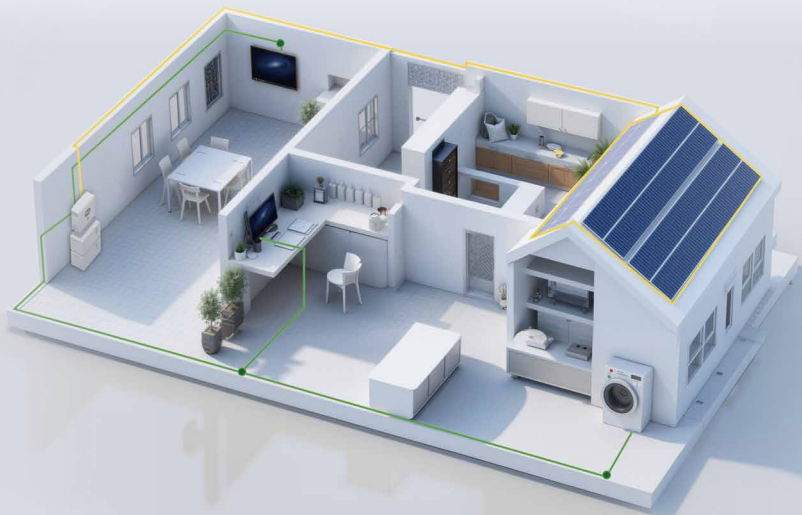
Zero feed-in control eliminates unexpected grid charges

Grid Fluctuations Adaptability

No load degrading during voltage or frequency instabilities

Off-Grid
Peace of Mind

<10ms

Seamless Switching When Blackouts

Ensures Reliability in Rainy Seasons

Dual Backup Design & Ultra-low Standby Power

Charges Rapidly with Solar

166% PV Oversizing & Wide MPPT Voltage

Handles Heavy Loads with Ease

200% Overloading for 10S

User-Friendly Touchscreen

Empowering Every Step, From Setup to Daily Use

Streamlined Setup

Pre-set parameters and step-by-step instructions for a hassle-free start.

Instant Insights

Real-time status, history statistics, and alerts at a glance

Intuitive Navigation

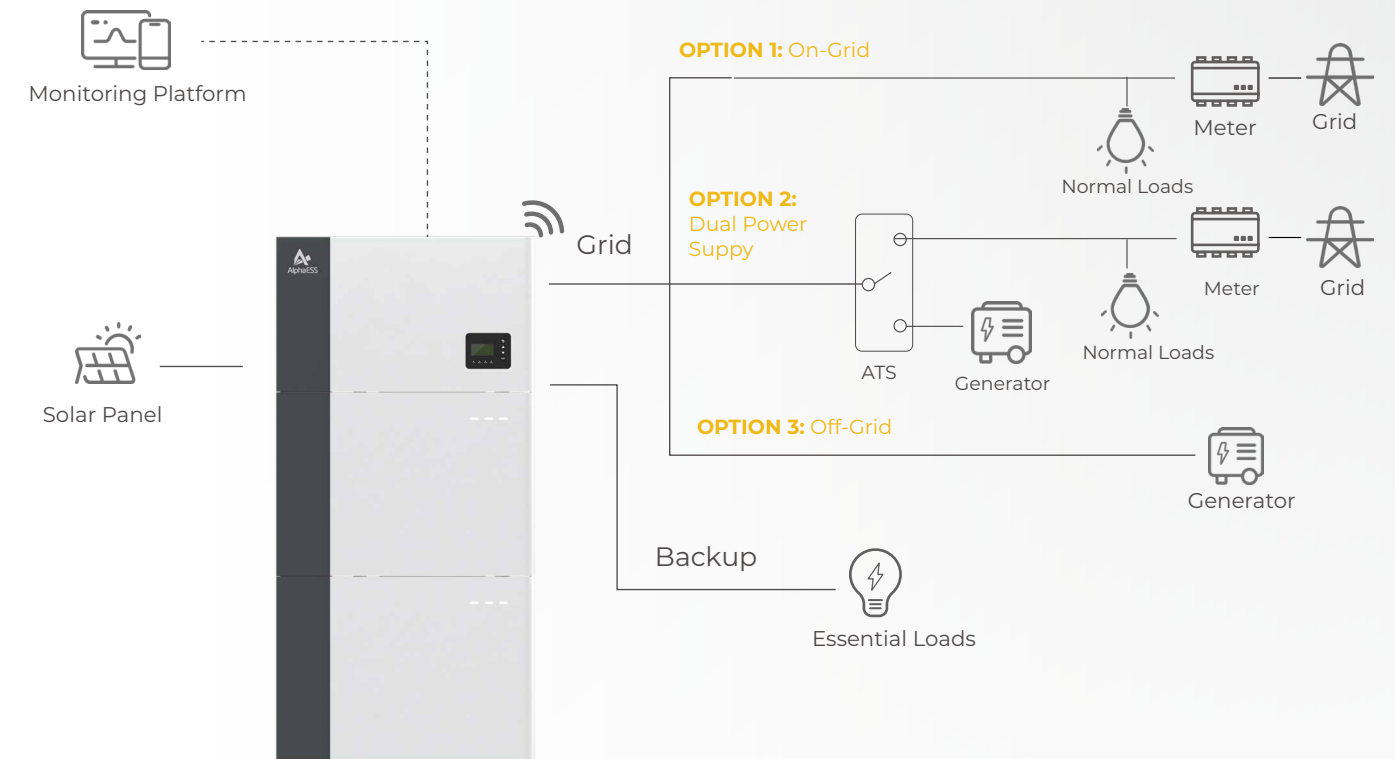Simple menus and logical icons, making quick access to all settings.

02 SMILE-G3 Series

Single Phase: 5kW | 3.8-15.2kWh / 9.3-37.2kWh
Three Phase: 4-20kW | 3.8-22.8kWh / 9.3-55.8kWh

All-in-One Design ESS

Monitoring Platform

Solar Panel

Grid

OPTION 1: On-Grid

Meter

Grid

Normal Loads

OPTION 2: Dual Power Suppy

ATS

Generator

Meter

Grid

Normal Loads

OPTION 3: Off-Grid

Generator

Backup

Essential Loads

SMILE-G3-S5
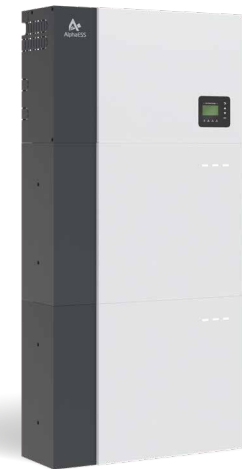
System Power

5kW, single phase

Max 200% overload@ 0.5s;

150% overload @30s

Battery Module

3.8kWh, 96V

9.3kWh, 96V

System Configuration

3.8 - 15.2 kWh (3.8kWh module)

9.3 - 37.2 kWh(9.3kWh module)

Max.3 inverter in parallel

PV

2MPPTS, 2 strings, 16A Max. input current per MPPT

200% PV oversizing

Operating Condition

-25℃ ~ 60℃

IP65

Warranty

5 years for system

10 years for battery

SMILE-G3-T4~T20

System Power

4 - 20kW, three phase   150% unbalancing per phase

SMILE-G3-T4~T10: Max 200% overload@1s; 150% overload@30s

SMILE-G3-T12~T20: Max 150% overload@10s; 120% overload@10mins

Battery Module

3.8kWh, 96V

9.3kWh, 96V

System Configuration

3.8 - 22.8kWh (3.8kWh module)

9.3 - 55.8 kWh (9.3kWh module)

Max.3 inverter in parallel

PV

200% PV oversizing

SMILE-G3-T4~T10: 3MPPTS, 3 strings, 16A Max. input current per MPPT

SMILE-G3-T12~T20: 3MPPTS, 3 strings, 18A Max.input current per MPPT

Operating Condition

-25℃ ~ 60℃

IP65

Warranty

SMILE-G3-T4~T10: 10 years

SMILE-G3-T12~T20: 5 years for system & 10 years for battery

SMILE-G3-T12~T20

SMILE-G3-T4~T10

Reliable & Safety

• Fast-suppression aerosol fire defense

• Bypass tech: Auto-Isolate fault units

More Profits

• 200% PV Input

• Active balancing boots battery life

Energy Independence

• UPS Power: <10ms switching, 200% overloading

• Dual power supply (grid & denerator)

User-Friendly

• 7/24 Remote monitoring and mangement
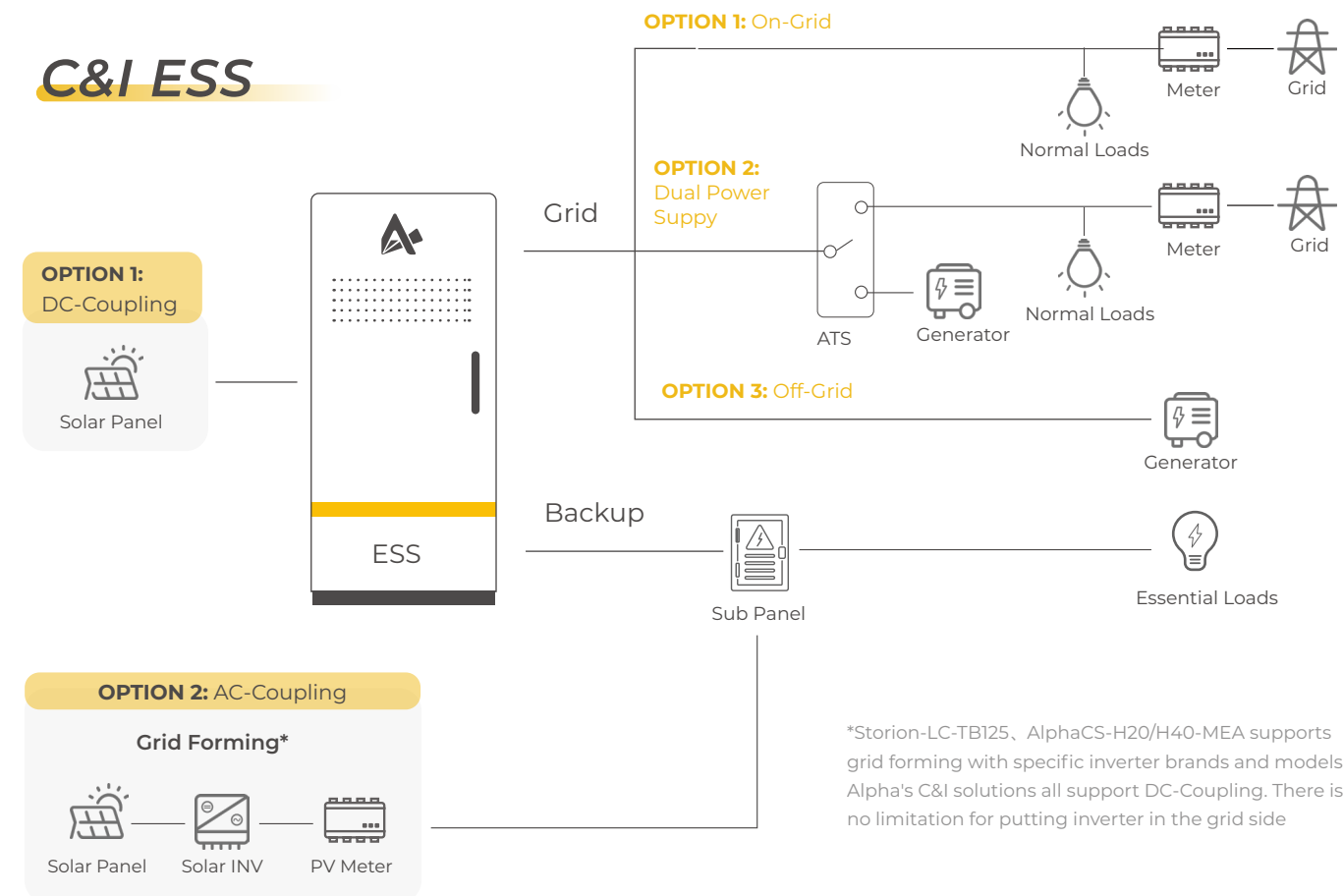
• Max.28 time slots - flexible scheduling

03

C&I and Utility ESS

50kW - 5000kW

- STORION-M50
- STORION-LC-TB125-EX
- AlphaCS-H20/H40-MEA
- AlphaCS-H20-DC-LC-EX

C&I ESS

OPTION 1: On-Grid

OPTION 2: Dual Power Suppy

OPTION 3: Off-Grid

OPTION 1: DC-Coupling

Solar Panel

Grid

ESS

Backup

Meter — Grid

Normal Loads

Meter — Grid

Normal Loads

ATS — Generator

Generator

Sub Panel

Essential Loads

OPTION 2: AC-Coupling

Grid Forming*

Solar Panel — Solar INV — PV Meter

*Storion-LC-TB125、AlphaCS-H20/H40-MEA supports grid forming with specific inverter brands and models. Alpha's C&I solutions all support DC-Coupling. There is no limitation for putting inverter in the grid side

Max Self-Comsumption	Feed-in Control	Timed Charging & Discharging	Generator Control	Backup

STORION-M50

50kW | 108.45 - 217.04kWh

World's First C&I Stackable Energy Storage System

Powered by World's first Stackable Battery and Unique BMS functionality, the M50 series gives end to end customers with stability and more possibilities to handle varied needs. The modular design can easily fit into different site requirements with a simple stack and start installation.

- **Effortless Installation with Modular Design**

  The modular design ensures seamless adaptation to various site requirements, enabling a simple stack-and-start installation process.

- **Advanced Software for Maximum Efficiency**

  Our cutting-edge software protects against profit loss by addressing key challenges:

  · Prevents capacity degradation due to SOC differences.

  · Avoids system shutdowns caused by a single battery failure.

 · Enhances savings on electricity bills with a more flexible EMS strategy.

Stackable Design

System Power	Battery Module	System Configuration
50kW	12.06kWh	108.45 ~ 217.04kWh
160%, 10s overload capacity	38.4V	
100% unbalance output	314 Ah	

PV	Operating Condition	Warranty
4MPPT 8 string	-25℃ ~ 60℃	5 years for system
40A input current	IP66	10 years for battery
200% PV oversizing		

Streamline Every Step, from Convenient Transport to Effortless Scaling

Flexible Transport

Truck, train, ship, or helicopter—choose your ideal logistics route.
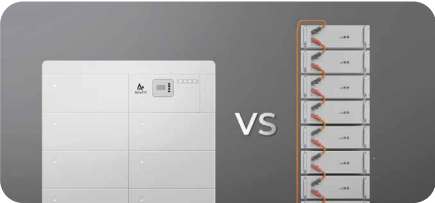
Quick Installation

No battery rack and cable needed — just stack and start.

Reliable Operation

AutoPilot BMS Technology ensures continuity by isolating faults.

Boost Lifetime Output

Automated diagnostics & calibration for SOC consistency.

Easy Expansion

Free you from time-consuming SOC balancing.

02 STORION-LC-TB125-EX

Hybrid   Option   STS

System Power

125 kW, 400V / 3P4W

110% long term, 120% 1 min overload capacity

100% Unbalance output

Battery Module

52.25 kWh

166.4 V

314 Ah

System Configuration

On grid: 24 in parallel

Dual power: 5 in parallel

DC coupling PV

4 MPPT with 50A input

200% PV oversizing

Operating Condition

-20℃ ~ 60℃

IP55

Warranty

5 years for system

10 years for battery

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03 AlphaCS-H20/H40

System Power

187.5 - 1000 kW, 400V / 3P4W

150%, 200ms overload

100% Unbalance output

Battery Module

235.1 kWh

748.8 V

314 Ah

System Configuration

20FT: 705 - 1411 kwh

40FT: 1646 - 2351 kWh

PV

DC couple: Max 3*400KW DCDC

AC couple: SG125K or GW 50/60K

Operating Condition

-25℃ ~ 60℃

IP54

Warranty

5 years for system

10 years for battery

Flexible configuration

- Support backup(20ms switching)
- Support AC/DC coupling
- Support 2h-4h system requirement

All in one design

- Battery, PCS, EMS, heat management device, Fire-fighting device in one cabinet

Easy Installation

- Pre-wired design
- Eliminating internal wiring for batteries and inverters
- Turnkey solution

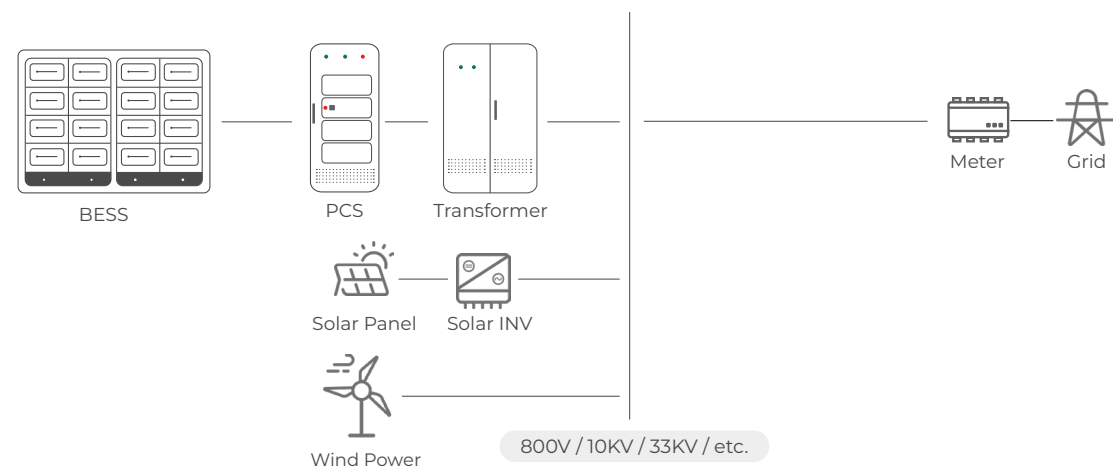### Safety Design

- 3-level battery monitoring
- Smoke & heat detection
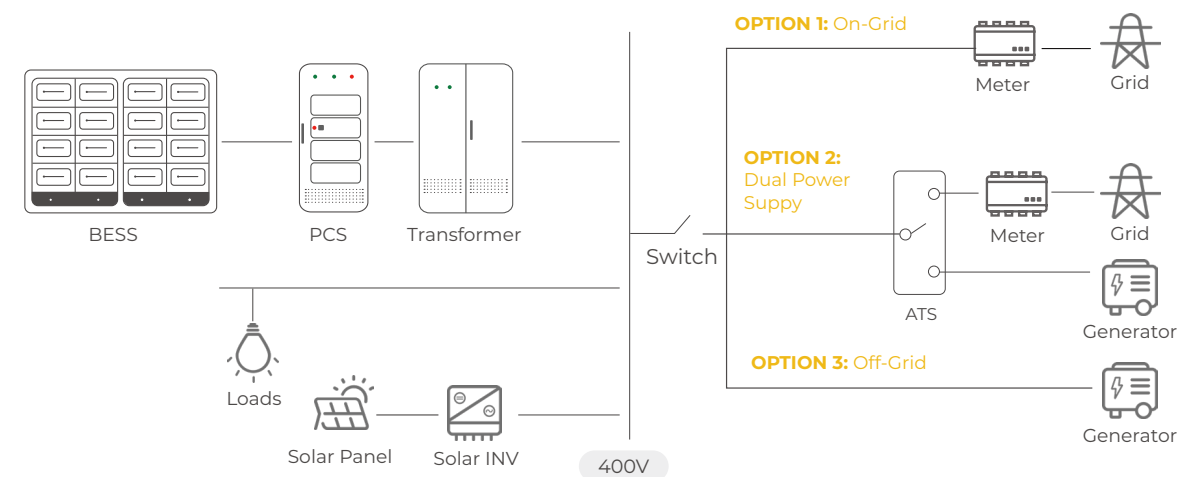- Aerosol and water fire fighting device

AlphaCS-H20-DC-LC-EX

Solution for Power Plant

BESS — PCS — Transformer — Meter — Grid

Solar Panel — Solar INV

Wind Power

800V / 10KV / 33KV / etc.

Solution for Consumer Project

BESS — PCS — Transformer — Switch

OPTION 1: On-Grid
Meter — Grid

OPTION 2: Dual Power Suppy
Meter — Grid
ATS — Generator

OPTION 3: Off-Grid
Generator

Loads

Solar Panel — Solar INV

400V

Battery Module

372.5 kWh / 417.9 kWh

1331.2 V

280 / 314 Ah

Capacity Configuration

2609 - 3354 kWh

4179 - 5015 kWh

PCS Power

1075 - 5000 kW

AC 690 V / 3P3W

PV

AC couple solution

Operating Condition

-35℃ ~ 60℃

IP54

Warranty

5 years for system

10 years for battery

High Energy Density

• Max. 5015.9 kWh in 20Ft container

Safety Design

• 3-level battery monitoring

• Smoke & heat detection

• Aerosol and water fire fighting device

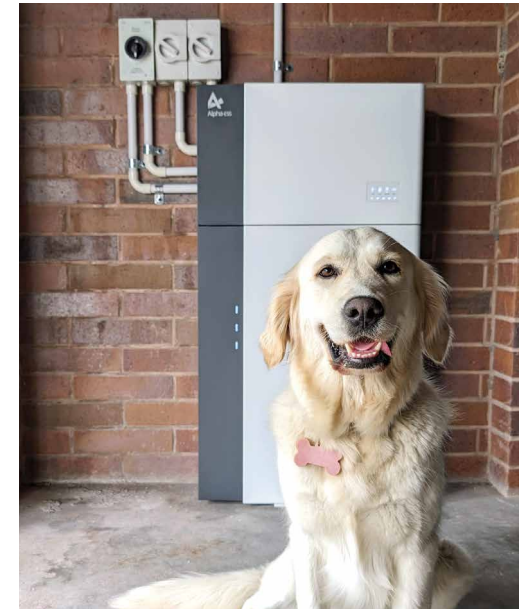**Back-to-Back Installation to Improve Site Utilization**

04

CASE STUDIES

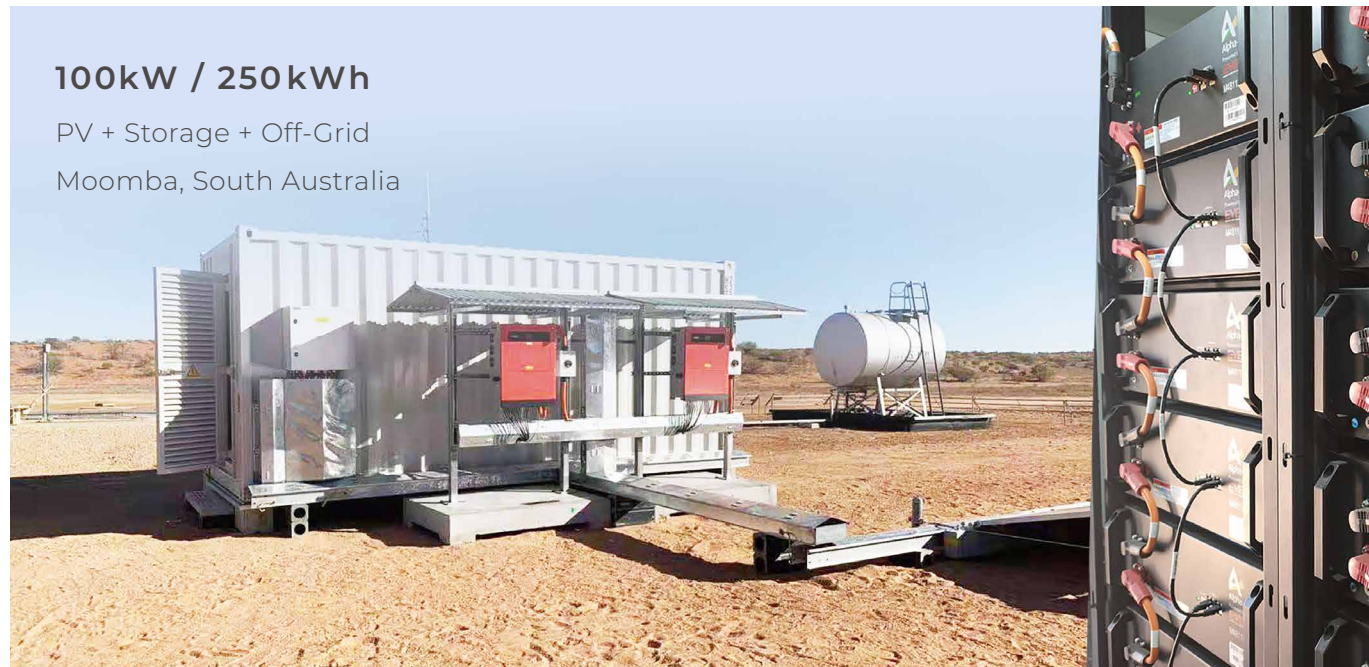· Residential ESS

· C&I and Utility ESS

140MW / 280MWh + 80MW / 160MWh

Peak Shaving and Frequency Regulation
Inner Mongolia, China

100kW / 250kWh

PV + Storage + Off-Grid

Moomba, South Australia

100kW / 670kWh

PV + Storage + Microgrid

Fremantle, Western Australia

1

2

3

4

1 **50kW / 200kWh**

PV + Storage
Perth, Western Australia

2 **50kW - 100kW / 100kWh - 300kWh**

Solar-Battery-Diesel
Microgrid System
Myanmar, Southeast Asia

3 **100kW / 206kWh**

PV + Storage + Genset
Abu Dhabi, UAE

4 **500kW / 1MWh**

PV + Storage + Genset
Zimbabwe, Africa

Scan the QR code
for more details