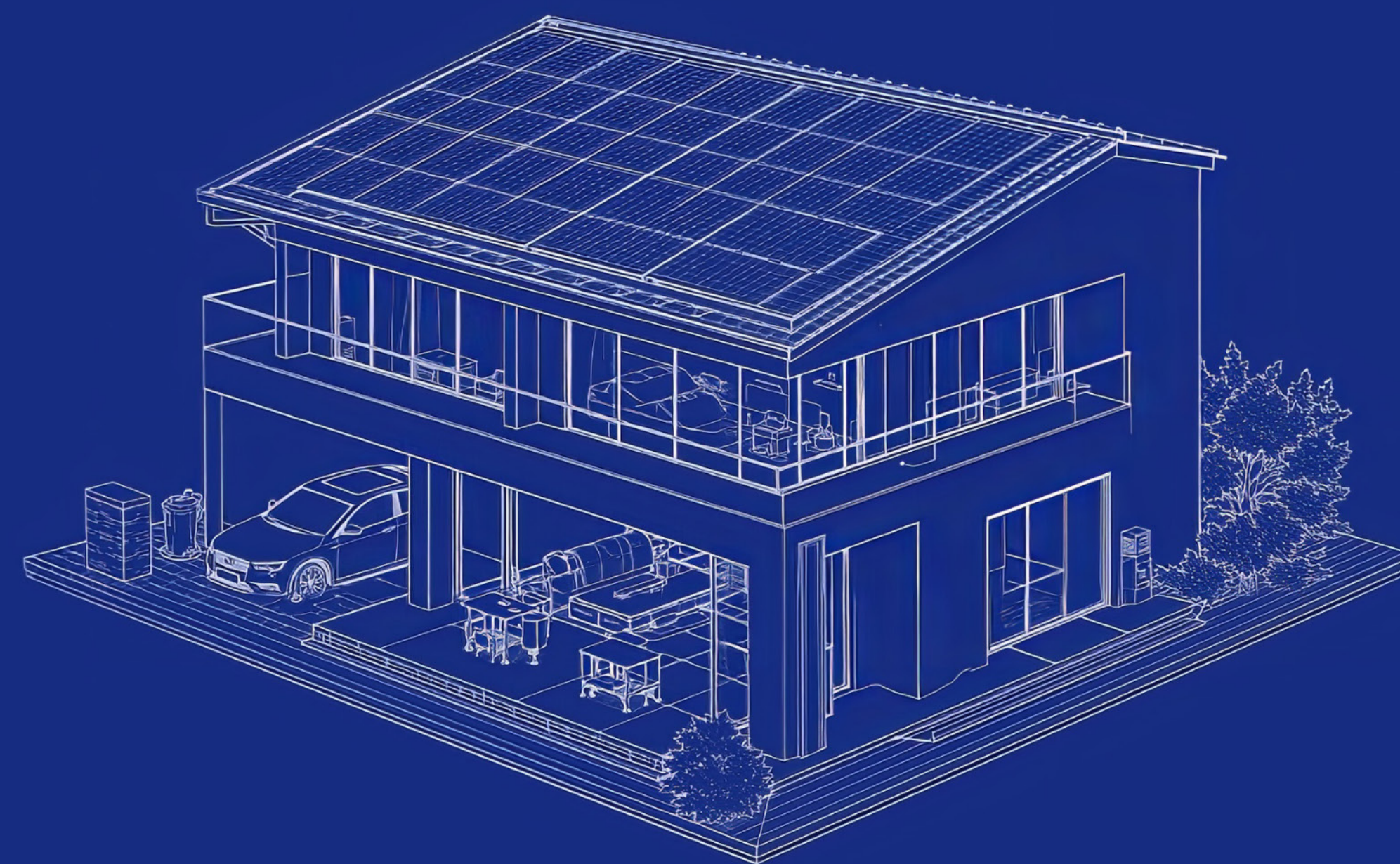




ePowerHEMS Home Energy Management Solution



Green | Smart | Care | Value-adding

Ver: AEHS202509A01EN

Angile Energy

Striving for the "zero carbon" energy
use future for human beings

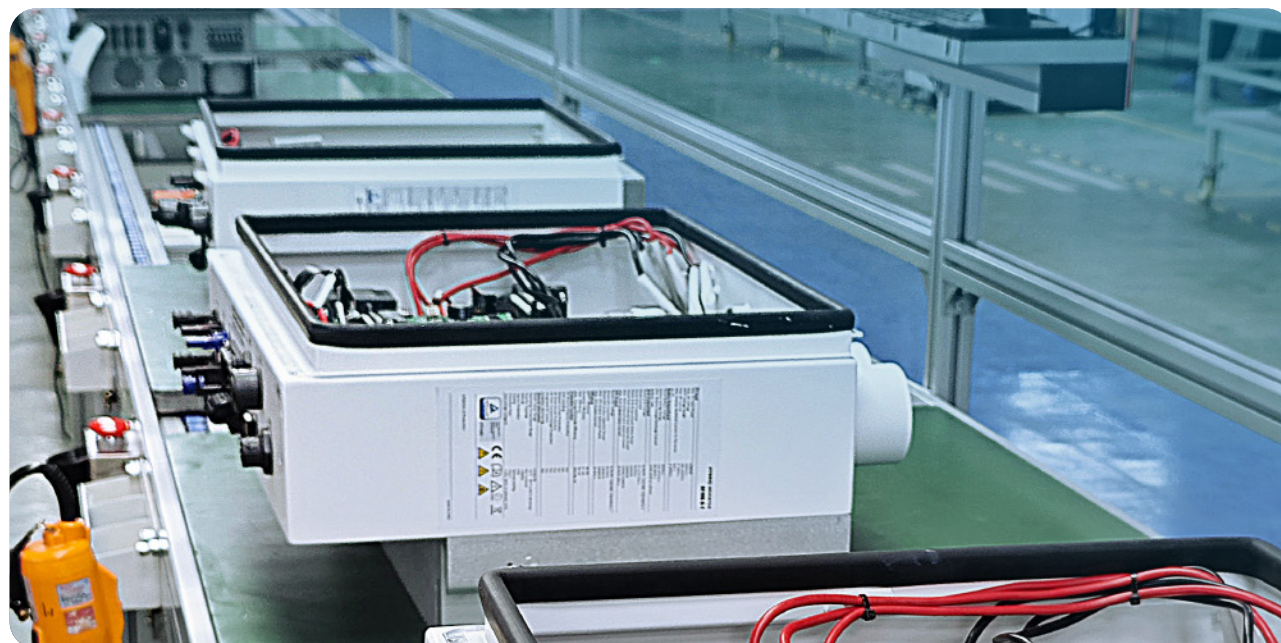
Qingdao Angile Energy Tech Co., Ltd. was officially established in 2021. The founder and the core technology R&D team are all from Tsinghua University, with extensive R&D and application experience in power systems, power electronics, lithium battery management, energy storage technology and other fields. Angile Energy focuses on the R&D and application of new smart and clean power energy technologies. With energy storage technology as the core platform to connect diversified new renewable energy sources such as solar, wind and potential energy (hydropower). By incorporating cutting-edge artificial intelligence (AI), flexible power allocation, virtual power plant and other technologies, we further improve the energy utilization and help global consumers use electric energy in a safe, efficient and low-carbon manner.



Ecosystem advantages and development

01 Professional

We have an independent technology R&D team (with members from Tsinghua University) and a grid-level engineering and construction team to empower the product, design and construction to the greatest extent. We provide you with professional quality and safety through commercial standards and grid-level technology.



02 Technically-proven

Our residential PV-ESS products have been widely used in Europe, Asia-Pacific regions and Africa. The products have successively been certified and listed by TUV, Intertek, SGS, ICE and other institutions as well as VDE Germany, G98/99 UK and Ireland, CEI Italy, AREA Romania and other organizations. In Europe, we have deployed more than 500 systems, generating more than 5MWh of green electricity.



03 Experienced

We have rich experience in island micro-grids and PV energy storage and charging low-carbon parks, and have cooperated with State Grid and China Southern Power Grid to implement a number of government-enterprise power grid projects. At present, we have delivered and undertaken the operation and maintenance of more than 100 projects in China.





ePowerHEMS Smart Home Energy Management System

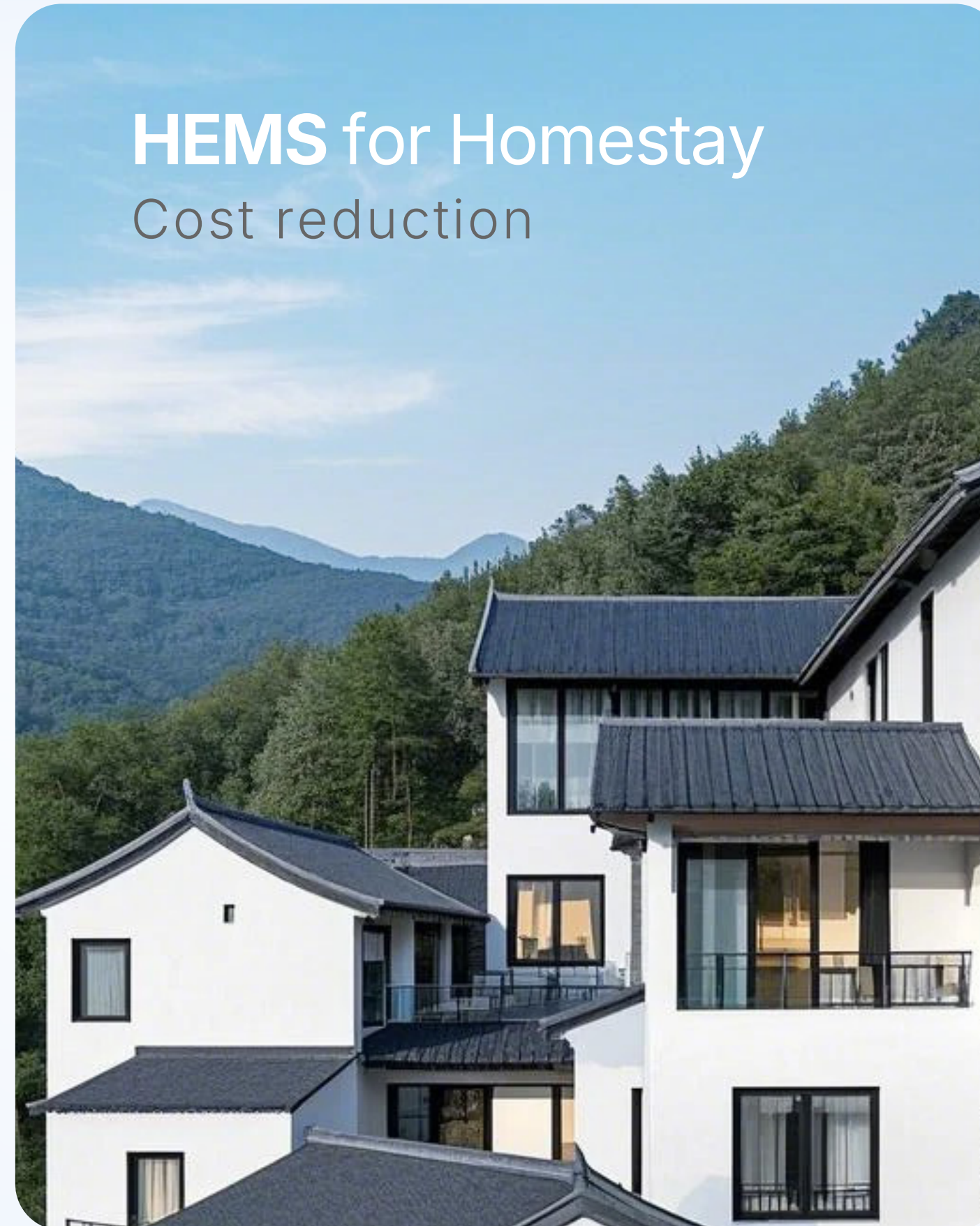
Smart home energy management system, i.e. household green electricity, is a comprehensive energy solution for modern household users to realize self-generation and consumption and intelligent dispatching of green electricity by installing a complete new household micro-grid composed of solar system, household energy storage system, charging set and smart energy management system. Angile Energy smart home energy management system (hereinafter referred to as "ePowerHEMS") can not only improve energy utilization efficiency and reduce electricity bills, but also enhance the independence and security of household energy and reduce the risks caused by grid fluctuations.

ePowerHEMS Applications

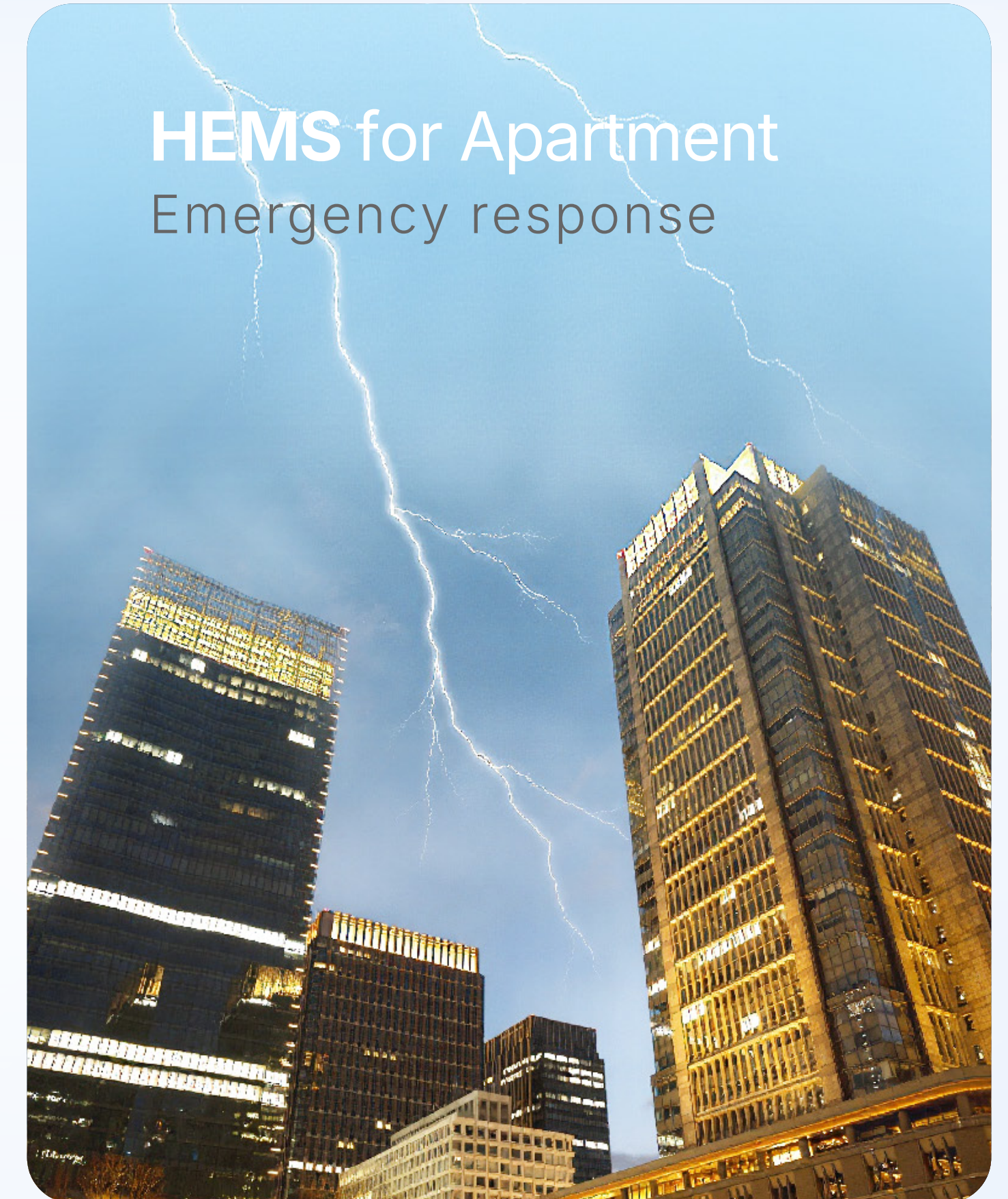
HEMS for Villa
Green & smart



HEMS for Homestay
Cost reduction



HEMS for Apartment
Emergency response



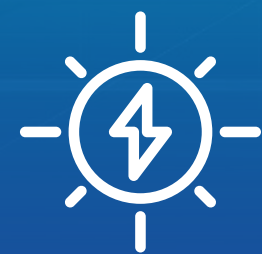
ePowerHEMS

Features of Smart Home
Energy Solutions

Low-carbon & energy efficient and increasing revenues

PV power generation + energy storage, realizing self-generation
and feeding surplus electricity into the grid

100%



**Unlocking solar
power potential**

Surplus electricity stored
in energy storage system to
avoid waste

30%



**Max. reduction
of electricity bills**

ePowerHEMS
Help users reduce electricity bills
by up to 30%

20%



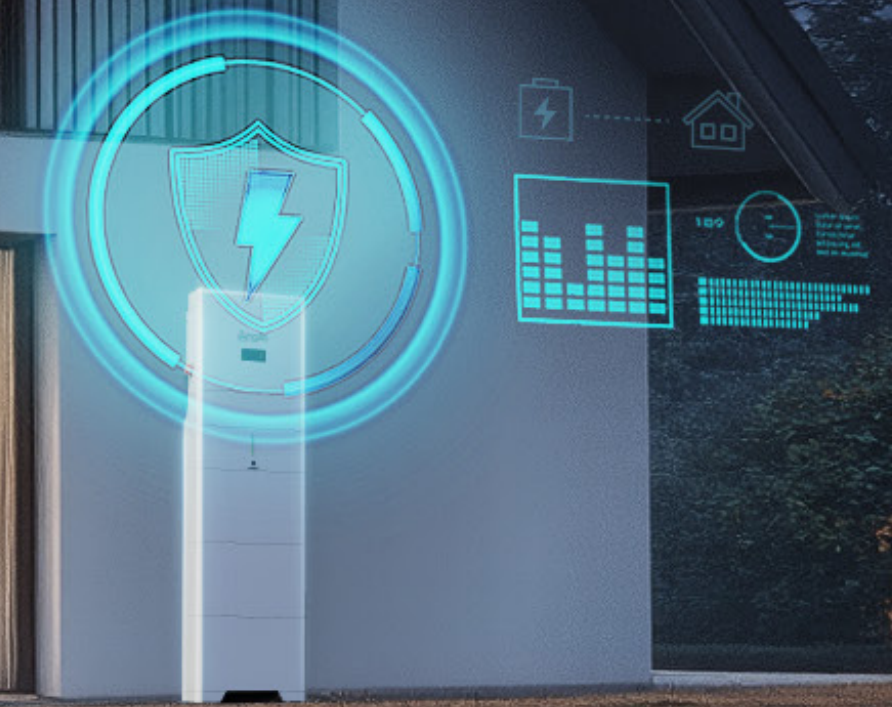
**Electricity sales
revenue increase**

Surplus electricity
Fed to the grid to generate
revenues

*The data presented here were obtained under controlled laboratory conditions at Angile Energy. Please note that actual results may vary depending on the user's operating environment.

Respond to contingencies

UPS realizes seamless switching
in millisecond to eliminate the power outage crisis



Constant fresh air supply in all seasons

Keep your home always at the most
comfortable temperature



Heated swimming pool

Comfortable exercise in winter



Temperate-controlled wine cellar

Escort your collection



Fish pond ecosystem

Maintain ecological balance
without oxygen deficiency



Refrigerators and cold storage

Keep food fresh without deterioration



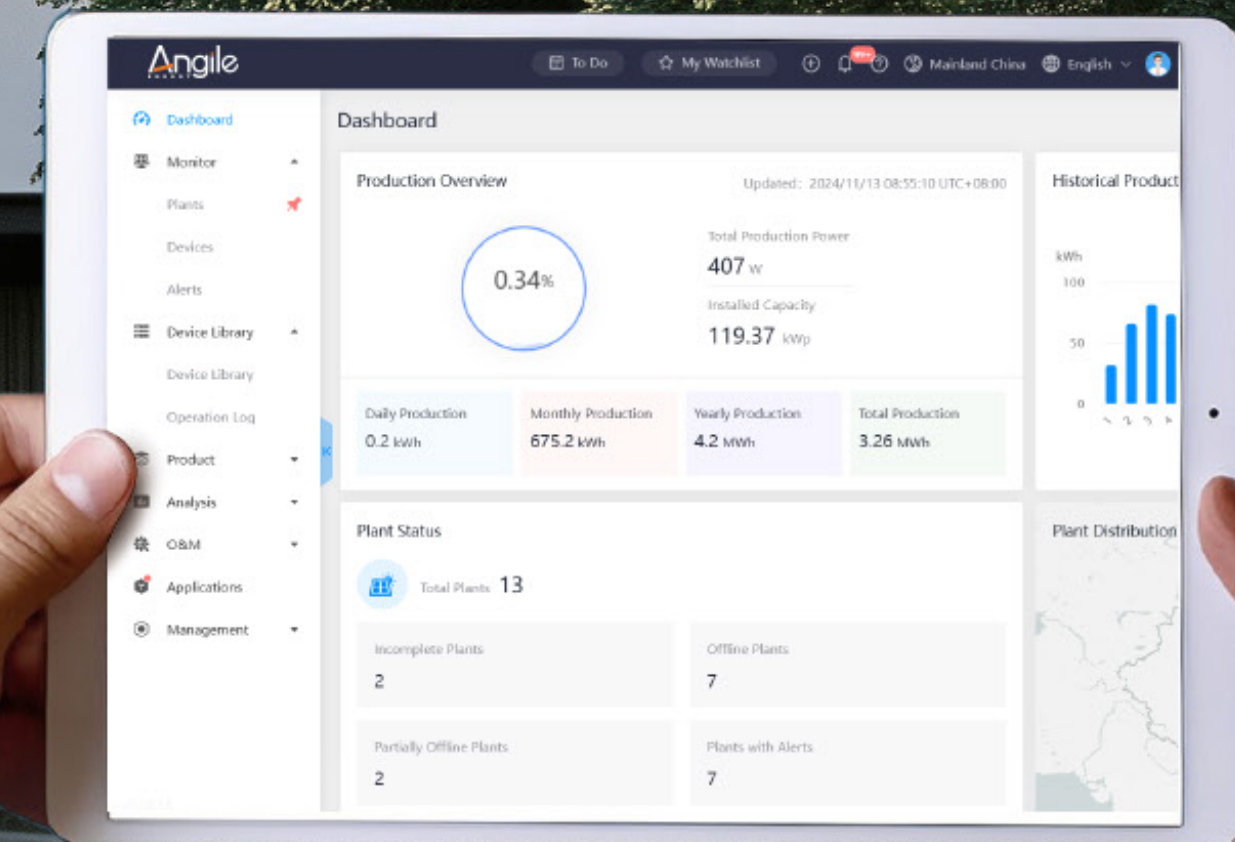
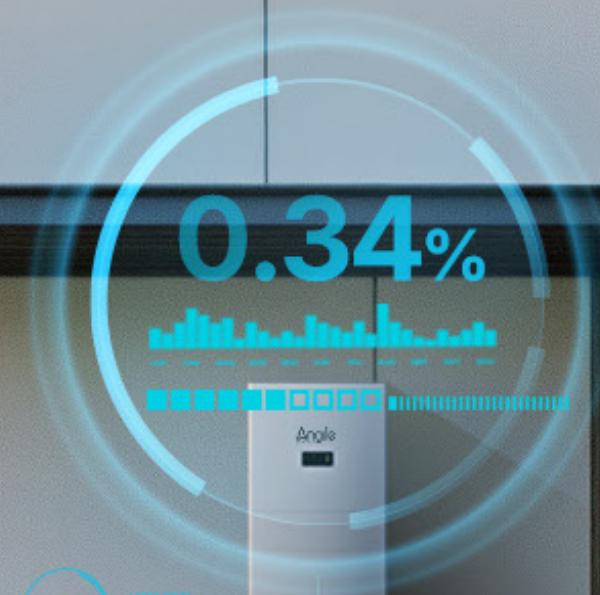
24/7 security

Security coverage around the clock

*The data presented here were obtained under controlled laboratory conditions at Angile Energy. Please note that actual results may vary depending on the user's operating environment.

Smart and linking the future

Real-time power monitoring
ensures uninterrupted operation
of smart home appliances



01 Visualized power management

Traditional power systems rely on monthly meter-based billing with no demand-side control. ePowerHEMS features dedicated smart meters enabling real-time electricity monitoring on mobile phones/PCs



02 Integration with smart home ecosystems

Delivers uninterrupted power for smart home appliances, enabling household circuit control and 24/7 monitoring and giving alerts for whole-house electricity generation/consumption

*The data presented here were obtained under controlled laboratory conditions at Angile Energy. Please note that actual results may vary depending on the user's operating environment.

Aesthetic integration with the building

Upgraded frameless black components
to protect facades and the roof from sun exposure

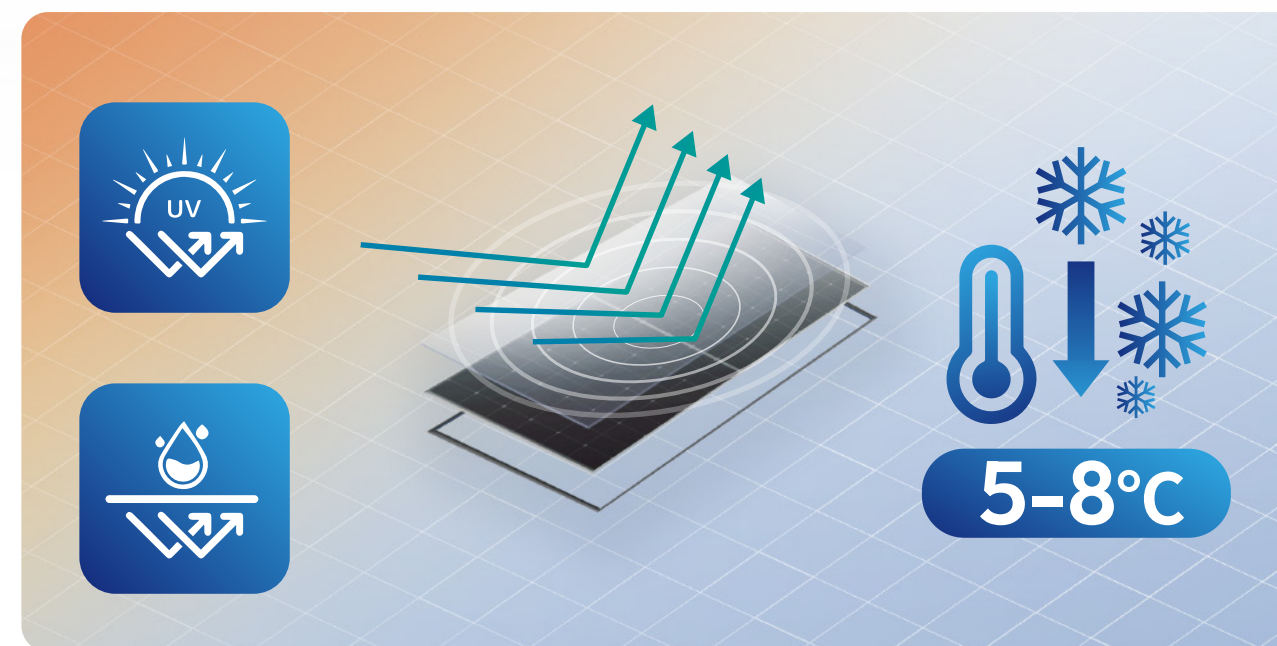
More space

Build a semi-open balcony, ventilated and shaded from the sun and rain



Retarding aging

Block the sun's rays, lowering the average temperature of your roof by 5–8°C. Protect your building from the weather and help keep the exterior facade looking new



Aesthetic upgrade

Adopt modern frameless components with a sense of technology to enhance the value of the whole house



*The data presented here were obtained under controlled laboratory conditions at Angile Energy. Please note that actual results may vary depending on the user's operating environment.

ePowerHEMS

Smart Home Energy Product Platform



 **ePowerCUBE**
Residential energy storage system

 Smart
photovoltaic modules

 Smart EV-Charger

 **EMS**
Energy management system

ePowerCUBE

household energy storage system



Full-stack technology

The hybrid inverter and the battery system are independently developed by the Tsinghua technical team to ensure the best compatibility and efficiency



Flexible expansion

The system is scalable, supporting up to 6 hybrid inverters connected in parallel, and the battery system capacity is up to 180kWh



Efficient conversion

The system energy conversion efficiency is up to 98%, no energy is wasted



Modular design

The whole series adopt the modular design, ensuring the inverter and battery system easily connected



Global certification

Our household energy storage systems are widely deployed in European markets and are well received among users



Slim cube

Integrated design reduces space occupation by 10%



Safety certification offers multiple guarantees

01 5-Layers guarantee

3-layers hardware + 2-layers software protection, self-developed millisecond-level arc protection, automatic power-off and voltage reduction in case of emergency, built-in fire-retardant foam to quickly contain fire hazards.



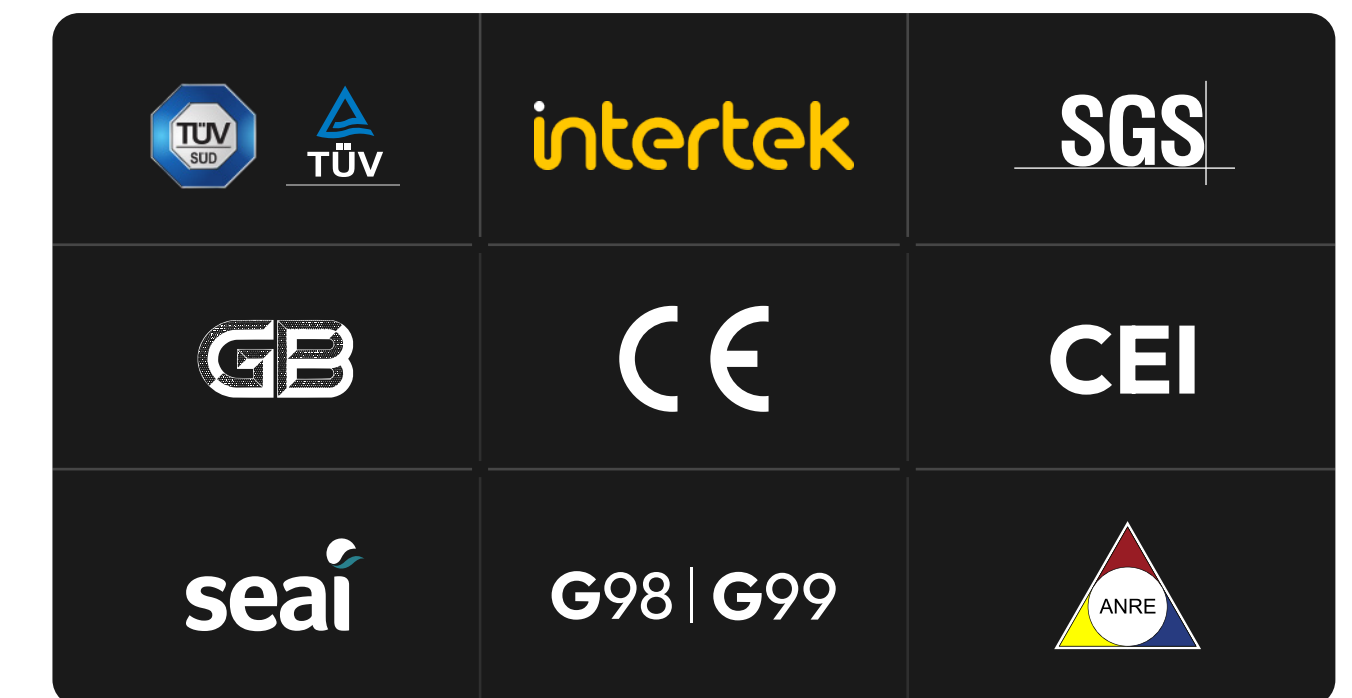
02 Professional protection

Designed with standard commercial-grade IP65 dust & water protection and C4 corrosion protection, the system can still operate normally.



03 Global certification

Both ePowerHEMS have passed global certification and met access standards in many countries, and have been tested in extreme use environments in the laboratory to ensure their use safety for users.





ePowerCUBE

AIOT

Three-phase residential energy storage system



150% PV panel power
configuration



Easy installation



Three-phase
unbalanced output



Load monitoring
accuracy 10W



Intelligent insulation
detection



120-800V battery
voltage range



Off-grid 150% overload
operation



Multi-stage charging/
discharging time setting



IP65 dust and water protection
C4 corrosion protection



Reverse flow protection



Remote upgrade



Inverter, 5-year warranty
Battery pack, 10-year warranty

Three-phase hybrid inverter

Model	AE8K-H-T	AE10K-H-T	AE12K-H-T
PV (input)			
Max. PV input power (kW)		15	
Max. DC voltage (V)		1000	
MPPT voltage range (V)		180~950	
Max. DC current (A)		16+16	
Max. inverter backfeed current to the array (A)		0	
Isc PV (A)		20+20	
Start voltage		120	
AC (input/output/EPs)			
Rated grid voltage (V)		3L/ N/ PE, 220/ 380, 230/ 400	
Rated current (A)	12.2/11.6	15.2/14.5	18.2/17.4
Rated grid frequency (Hz)	50/60	50/60	50/60
Rated input active power (kW)	12	15	18
Rated input apparent power (kVA)	12	15	18
Max. input apparent power (kVA)	12	15	18
Max. input current (A)	20.3	22.7	27.2
Overload capacity	150%	120%	100%
Max. output current (A)	13.5	16.8	20.1
System efficiency			
MPPT efficiency		99.90%	
European efficiency		97%	
Max. efficiency		97.60%	
Charge/discharge efficiencya		98.5%/97.5%	
General information			
Operating temperature range		-25~60°C(>45°C derating)	
Topology		Non-Isolated	
Altitude		<3000m	
Noise		<30dB	
Protection rating		IP65	
Cooling method		Natural cooling	
Product size (mm)		550*575*244	
Weight (kg)		29	
Safety certification standards		IEC62109-1, IEC62109-2	
EMC certification standards		IEC61000-6-1, IEC61000-6-3	
Certificatet		TUV CE	
Grid-Connection Standards (refer to the certification status below)		Germany: VDE-AR-N 4105/11.18 Europe: EN 50549-1:2019 EN 50549-10:2022 South Africa: NRS 097-2-1:2017 Ed.2.1 Sweden: EIFS 2018:2 CEI 0-21: 2022-03 、 V1:2022-11 、 V2:2024-01 CEI 0-21: 2022-03 、 V1:2022-11 、 V2:2024-01	

High-voltage battery

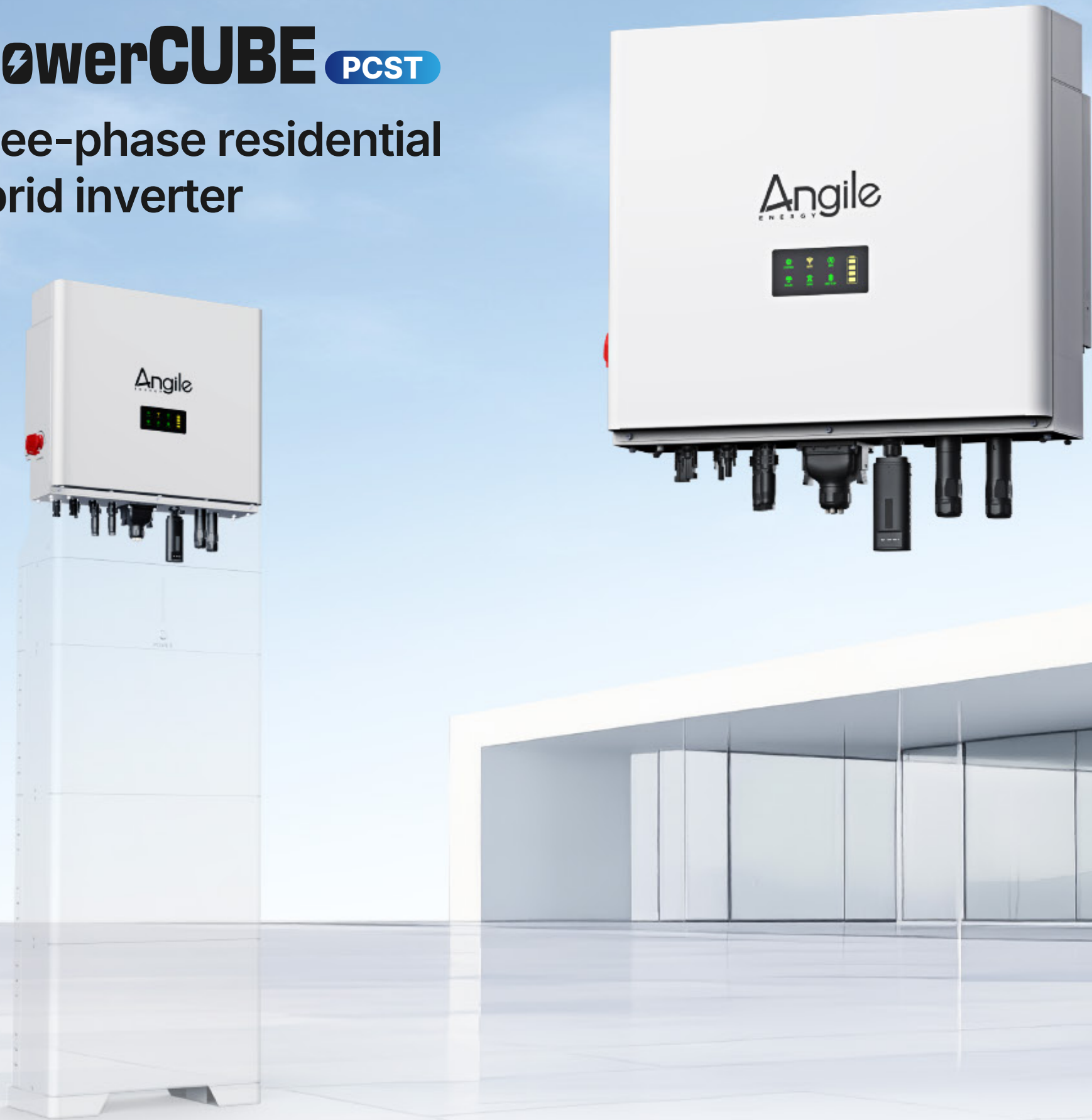
Model	AES5.1-M (with auxiliary electric heating)	AES5.1-M1
Battery parameters		
Rated voltage	102.4	
Operating voltage	89.6~113.6	
Rated capacity (Ah)	50	
Energy capacity (kWh)	5.12	
Battery material	LFP (32S1P)	
Recommended charge/discharge current	25A/25A (25°C)	
Max. charge/discharge current	32A/32A(25°C)	
Charge/discharge efficiency	> 95%	
Cycle life	> 10000* Cycles	
Depth of discharge (DoD)	90%	
Operating temperature	-18°C~53°C	
Communication interface	CAN, RS485	
General information		
Dimensions of battery pack (WxHxD)	550×340×252 mm	
Battery pack weight (kg)	52	
Dimensions of battery controller (Wx HxD)	550×200×252 mm	
Weight of battery controller (kg)	9.5	
Protection rating	IIP65	
Cooling method	Natural Cooling	
Warranty period	10 Years	
EMC certification standards	IEC 61000-6-1, IEC 61000-6-3	
Safety certification standards	IEC/EN62477-1, IEC62619, IEC 60730 Annex H, IEC63056	
Environmental standards	—	
Transportation standards	UN38.3	
Scalability	Up to 6 modules	

* The above data were obtained through tests under laboratory conditions at 20°C, and the actual operating environment may vary.

ePowerCUBE

PCST

Three-phase residential
hybrid inverter



- 150% PV panel power configuration
- Load monitoring accuracy 10W
- Three-phase unbalanced output
- Off-grid 150% overload operation
- Reverse flow protection
- Remote upgrade

Three-phase hybrid inverter

Model	AE8K-H-T	AE10K-H-T	AE12K-H-T
PV (input)			
Max. PV input power (kW)	15		
Max. DC voltage (V)	1000		
MPPT voltage range (V)	180~950		
Max. DC current (A)	16+16		
Max. inverter backfeed current to the array (A)	0		
Isc PV (A)	20+20		
Start voltage	120		
AC (input/output)			
Rated grid voltage (V)	3L/ N/ PE, 220/ 380, 230/ 400		
Rated current (A)	12.2/11.6	15.2/14.5	18.2/17.4
Rated grid frequency (Hz)	50/60	50/60	50/60
Rated input active power (kW)	12	15	18
Rated input apparent power (kVA)	12	15	18
Max. input apparent power (kVA)	12	15	18
Max. input current (A)	20.3	22.7	27.2
Overload capacity	150%	120%	100%
Max. output current (A)	13.5	16.8	20.1
Battery input/output			
Rated voltage (V)	3L/N/PE, 220/380, 230/400		
Rated frequency (Hz)	50/60		
Apparent power (kVA)	8		
Max. power (kVA)	8		
Max. output current (A)	13.5		
System efficiency			
MPPT efficiency	99.90 %		
European efficiency	97%		
Max. efficiency	97.60%		
Charge/discharge efficiency	98.5%/97.5%		
Protection function			
DC reverse-polarity protection	Yes		
Island protection	Yes		
Residual current protection	Yes		
AC short-circuit protection	Yes		
AC overvoltage protection	Yes		
Integrated DC switch	Yes		
Insulation monitoring	Yes		
General information			
Operating temperature range	-25~60°C(>45°C derating)		
Topology	Non-Isolated		
Altitude	<3000m		
Noise	<30dB		
Protection rating	IP65		
Cooling method	Natural cooling		
Product size (mm)	550*575*244		
Weight (kg)	29		
EMC certification standards	IEC62109-1, IEC62109-2		
Safety certification standards	IEC61000-6-1, IEC61000-6-3		
Certificate	TUV CE		
Grid-Connection Standards (refer to the certification status below)	Germany: VDE-AR-N 4105/11.18 Europe: EN 50549-1:2019 EN 50549-10:2022 South Africa: NRS 097-2-1: 2017 Ed.2.1 Sweden: EIFS2018:2 CEI 0-21: 2022-03 、 V1:2022-11 、 V2:2024-01 CEI 0-21: 2022-03 、 V1:2022-11 、 V2:2024-01		

* The above data were obtained through tests under laboratory conditions at 20°C, and the actual operating environment may vary.

ePowerCUBE

BAHV

High-voltage residential
battery pack



- Easy installation
- Remote upgrade
- Low-temperature heating
- Automatic parallel connection,
without voltage limitations
- Long service life
- 10-year warranty

High-voltage battery		
Model	AES5.1-M(with auxiliary electric heating)	AES5.1-M1
Battery parameters		
Rated voltage	102.4	
Operating voltage	89.6~113.6	
Rated capacity (Ah)	50	
Energy capacity (kWh)	5.12	
Battery material	LFP (32S1P)	
Recommended charge/discharge current	25A/25A (25°C)	
Max. charge/discharge current	32A/32A(25°C)	
Charge/discharge efficiency	> 95%	
Cycle life	> 10000* Cycles	
Depth of discharge (DoD)	90%	
Operating temperature	-18°C~53°C	
Communication interface	CAN, RS485	
General information		
Protection rating	IP65	
Cooling method	Natural Cooling	
Dimensions of battery pack (WxHxD)	550×340×252 mm	
Battery pack weight (kg)	52	
Dimensions of battery controller (WxHxD)	550×200×252 mm	
Weight of battery controller (kg)	9.5	
Warranty period	10 Years	
Certification	CE	
EMC certification standards	IEC 61000-6-1, IEC 61000-6-3	
Safety certification standards	IEC/EN62477-1, IEC62619, IEC 60730 Annex H, IEC63056	
Environmental standards	—	
Transportation standards	—	
Scalability	Up to 6 modules	

* The above data were obtained through tests under laboratory conditions at 20°C, and the actual operating environment may vary.



ePowerCUBE

AIOS

Single-phase residential energy storage system

- 150% PV panel power configuration
- Easy installation
- IP65 dustproof and waterproof
C4 anti-corrosion
- Off-grid 150% overload operation
- Low-temperature heating
- 90% DoD
- Load monitoring accuracy
10W
- Automatic parallel connection,
without voltage limitations
- Reverse flow protection

Single-phase inverter			
Model	AE4K6-L1-S	AE5K-L1-S	AE6K-L1-S
PV (input)			
Max. PV input power (kW)		7	
Max. DC voltage (V)		550	
MPPT voltage range (V)		180-500	
Max. DC current (A)		14+14	
Max. inverter backfeed current to the array (A)		0	
Isc PV (A)		18+18	
Start voltage		125	
AC (input/output/EPS)			
Rated grid voltage (V)		L/N/PE 220/230	
Rated current (A)	20.9/20.0	22.7/21.7	27.3/26.1
Rated grid frequency (Hz)	50/60	50/60	50/60
Rated input active power (kW)	4.6	5	6
Rated input apparent power (kVA)	4.6	5	6
Max. input apparent power (kVA)	4.6	5	6
Max. input current (A)	25	25	28
Overload capacity	130%	120%	100%
Max. output current (A)	25	25	28
System efficiency			
MPPT efficiency		99.90%	
European efficiency		97%	
Max. efficiency		97.60%	
Charge/discharge efficiency		97.6%/96%	
General information			
Operating temperature range		-25-60°C(>45°Cderating)	
Topology		Non-Isolated	
Altitude		<2000m	
Noise		<30dB	
Protection rating		IP65	
Cooling method		Natural cooling	
Product size (mm)		550*565*232	
Weight (kg)		28	
EMC certification standards		IEC61000-6-1, IEC61000-6-3	
Safety certification standards		IEC62109-1, IEC62109-2	
Certificate		TUV CE	
Grid-Connection Standards (refer to the certification status below)		G98/G99, CEI 0-21: 2022, VDE-AR-N 4105 CEI 0-21: 2022-03 、 V1:2022-11 、 V2:2024-01 CEI 0-21: 2022-03 、 V1:2022-11 、 V2:2024-01	

Low-voltage battery		
Model	AES5.1-L(with auxiliary electric heating)	AES5.1-L1
Battery parameters		
Rated voltage	51.2	
Operating voltage	48-56	
Rated capacity (Ah)	100	
Energy capacity (kWh)	5.12	
Battery material	LFP (16S1P)	
Recommended charge/discharge current	50A/50A (25°C)	
Max. charge/discharge current	100A/100A (25°C)	
Charge/discharge efficiency	> 95%	
Cycle life	> 10000* Cycles	
Depth of discharge (DoD)	90%	
Operating temperature	-20°C~55°C	
Communication interface	CAN, RS485	
General information		
Dimensions of battery pack (WxHxD)	550×485×195 mm	
Battery pack weight (kg)	48	
Protection rating	IP65	
Cooling method	Natural Cooling	
Warranty period	10 Years	
Certification	CE	
EMC certification standards	IEC 61000-6-1, EC 61000-6-3	
Safety certification standards	IEC 62619, IEC 63056 , IEC 60730 Annex H	
Environmental standards	—	
Transportation standards	UN38.3	
Scalability	Up to 15 modules	

* The above data were obtained through tests under laboratory conditions at 20°C, and the actual operating environment may vary.

ePowerCUBE

PCSS

Single-phase
residential hybrid inverter



- 150% PV panel power configuration
- Reverse flow protection
- Load monitoring accuracy 10W
- Off-grid 150% overload operation
- Remote upgrade
- 10-year warranty

Single-phase inverter

Model	AE4K6-L1-S	AE5K-L1-S	AE6K-L1-S
PV (input)			
Max. PV input power (kW)	7		
Max. DC voltage (V)	550		
MPPT voltage range (V)	180-500		
Max. DC current (V)	14+14		
Max. inverter backfeed current to the array (A)	0		
Isc PV (A)	18+18		
Start voltage	125		
AC (input/output)			
Rated grid voltage (V)	L/N/PE 220/230		
Rated current (A)	20.9/20.0	22.7/21.7	27.3/26.1
Rated grid frequency (Hz)	50/60	50/60	50/60
Rated input active power (kW)	4.6	5	6
Rated input apparent power (WA)	4.6	5	6
Max. input apparent power (kVA)	4.6	5	6
Max. input current (A)	25	25	28
Overload capacity	130%	120%	100%
Max. output current (A)	25	25	28
Battery input/output			
Max. charge/discharge power (kW)	4.6/4.6	5/5	5/5
Min. battery voltage under full load (V)	51.2	51.2	51.2
Battery voltage range	45-58	45-58	45-58
Max. charge/discharge current (A)	70/90	70/100	70/100
Battery type	LFP	LFP	LFP
System efficiency			
MPPT efficiency	99.90%		
European efficiency	97%		
Max. efficiency	97.60%		
Charge/discharge efficiency	97.6%/96%		
Protection function			
DC reverse-polarity protection	Yes		
Island protection	Yes		
Residual current protection	Yes		
AC short-circuit protection	Yes		
AC overvoltage protection	Yes		
Integrated DC switch	Yes		
Insulation monitoring	Yes		
General information			
Operating temperature range	-25-60°C(>45°Cderating)		
Topology	Non-Isolated		
Altitude	<2000m		
Noise	<30dB		
Protection rating	IP65		
Cooling method	Natural cooling		
Product size (mm)	550*565*232		
Weight (kg)	28		
EMC certification standards	IEC61000-6-1, IEC61000-6-3		
Safety certification standards	IEC62109-1, IEC62109-2		
Certificate	TUV CE		
Grid connection standard	G98/G99 CEI 0-21: 2022 VDE-AR-N 4105		
(refer to the certification status in the table below)	CEI 0-21: 2022-03 、 V1:2022-11 、 V2:2024-01 CEI 0-21: 2022-03 、 V1:2022-11 、 V2:2024-01		

* he above data were obtained through tests under laboratory conditions at 20°C, and the actual operating environment may vary.

ePowerCUBE

BALV

Low-voltage residential battery pack

- 

Easy installation
- 

Remote upgrade
- 

Low-temperature heating
- 

Automatic parallel connection,
without voltage limitations
- 

10-year warranty
- 

90% DoD

Low-voltage battery		
Model	AES5.1-L(with auxiliary electric heating)	AES5.1-L1
Battery parameters		
Rated voltage	51.2	
Operating voltage	48-56	
Rated capacity (Ah)	100	
Energy capacity (kWh)	5.12	
Battery material	LFP (16S1P)	
Recommended charge/discharge current	50A/50A (25°C)	
Max. charge/discharge current	100A/100A (25°C)	
Charge/discharge efficiency	> 95%	
Cycle life	> 10000* Cycles	
Depth of discharge (DOD)	90%	
Operating temperature	-20°C~55°C	
Charging temperature	2°C~53°C	
Discharge temperature	-20°C~55°C	
Communication interface	CAN, RS485	
General information		
Dimensions of battery pack (W x H x D)	550×485×195 mm	
Battery pack weight (kg)	48	
Protection rating	IP65	
Cooling method	Natural Cooling	
Warranty period	10 Years	
Certification	CE	
EMC certification standards	IEC 61000-6-1, IEC 61000-6-3	
Safety certification standards	IEC 62619, IEC 63056, IEC 60730 Annex H	
Environmental standards	—	
Transportation standards	UN38.3	
Scalability	Up to 15 modules	

* The above data were obtained through tests under laboratory conditions at 20°C, and the actual operating environment may vary.

ePowerCUBE

OGES

Residential off-grid
PV-ESS All-in-one Box 5K



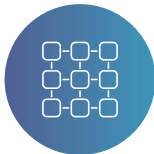
5kW/5.12kWh



UPS<20ms



Max. capacity up to 76.5kWh
(additional 14 battery packs)



9 Sets in parallel



Small for
various scenarios



All-in-One
Integrated PCS & Ba

Off-grid PV-ESS All-in-one Box

Model	AE5KOGES
PV parameters	
Standard output voltage	230Vac
AC input voltage	220/230Vac
Standard output power	5000VA
AC output power	5500W
AC output frequency	50/60Hz
Max. AC charging current	16A
Maximum PV input current	50A
Max. PV input power	5200W
Max. PV charging current	80A
PV voltage range	120V-500V
MPPT voltage range	120V-450V
Switching time	10ms

Battery parameters	
Standard battery voltage	51.2V
Battery voltage range	40-60V
Max. discharge current	100A
Max. charging current	100A
Battery capacity	5.12KWh
Cell material	LFP lithium iron phosphate
Number of cycles	>10000 times (25°C, 0.3C, 80%DOD, >60%C25°C)
Operating voltage	44.8-57.6V
Operating temperature	-20°C~40°C (charging temperature) /-40°C~45°C (discharging temperature)
Storage temperature	-20°C~45°C
Storage humidity	5%~95%
Max. number of units connected in parallel	9

General information	
Capacity	5.12kWh
(L*W*H) actual size	680*400*430mm
Weight	80KG
Storage temperature	-20°C~45°C
Relative temperature	5%~95%
Operating temperature	-10°C~55°C
Protection rating	IP21 (Indoor)
Cooling method	Natural convection and active fan cooling
Maximum battery efficiency	94%

* The above data were obtained through tests under laboratory conditions at 20°C, and the actual operating environment may vary.

ePowerCUBE

OGES

Residential off-grid
PV-ESS All-in-one Box 3K



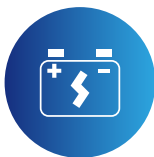
All-in-One
Integrated PCS & Battery



Small for
various scenarios



3kW/2.56kWh



Semi-solid state battery



UPS<20ms



Support off-grid

Off-grid PV-ESS All-in-one Box

Model

AE3KOGES

PV parameters

Max. allowable string power (W)	1500W
MPPT voltage range (VDC)	30-120
Max. DC voltage (VDC)	145
MPPT starting voltage (VDC)	≥36
Max. DC current (V)	25±0.5

Battery parameters

Rated battery voltage (VDC)	25.6
Rated capacity of battery (Wh)	2560
Max. charging power of battery (W)	3000
Rated AC input voltage (VAC)	230
AC input voltage range (VAC)	90-280
Rated output voltage of inverter	230

Efficiency

Max. bypass efficiency	95%
Max. efficiency in charging mode	92%
Max. efficiency in inverter mode	92%
Max. MPPT efficiency	92%

General information

Dimension (L*W*H) (mm)	672*140*461
Weight (kg)	38.0
Ambient temperature	-10~50°C
Cooling method	Forced air cooling

* The above data were obtained through tests under laboratory conditions at 20°C, and the actual operating environment may vary.



Smart Photovoltaic Modules



Efficient conversion

Battery conversion efficiency 26% higher



Safe and durable

25-year power generation efficiency up to 8.90%



Simple and beautiful

Upgraded to all-black seamless design to improve the texture of the whole house

22.3%

Max. conversion efficiency

0~3%

Power tolerance

<1.5%

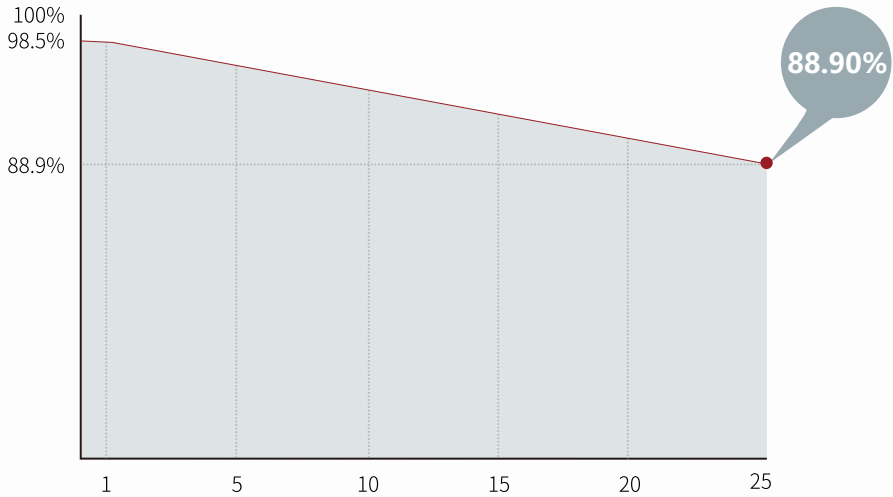
Power attenuation in the first year

0.40%

Annual power attenuation in 2~25 years

Excess returns

25-year warranty for excess linear power output



Mechanical parameters

Battery arrangement	108(6X18)
Junction box	Split junction box, IP68
Output line	4mm ² , ± 1200mm Wire length can be customized
Glass	Single glass, 3,2 mm coated tempered glass
Frame	Anodized aluminum alloy frame
Assembly weight	20.8kg
Component size	1722 X1134 X30mm

Packaging information 36 pcs/pallet 216 pcs/20-foot GP container 936 pcs/40-foot HQ container 1008 pcs/13.5 m flatbed truck 1224 pcs/17.5 m flatbed truck

* The 17.5 m truck is marked with a 30t load capacity. Due to the inconsistent specifications, the specific loading quantity shall be subject to the actual delivery.

Electrical performance parameters

STC: AM1.5 1000W/m² 25°C NOCT: AM1.5 800W/m³ 20°C 1m/s Max. power uncertainty upon test: ±3%

Test conditions	LR5-54HTB415M		LR5-54HTB-420M		LR5-54HTB-425M		LR5-54HTB-430M		LR5-54HTM35M	
Test conditions	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT NOCT
Max. power (Pmax/W)	415	310	420	314	425	318	430	321	435	325
Open-circuit voltage (Voc/V)	38.53	36.46	39.03	36.65	39.23	36.83	39.43	37.02	39.63	37.21
Short-circuit current (Isc/A)	13.78	11.13	13.85	11.19	13.93	11.25	14.00	11.31	14.08	11.37
Peak power voltage (Vmp/V)	32.56	29.71	32.76	29.89	32.96	30.08	33.16	30.26	33.36	30.44
Peak power current (Imp/A)	12.75	10.44	12.83	10.50	12.90	10.56	12.97	10.62	13.05	10.68
Module efficiency (%)	21.3		21.5		21.8		22.0		22.3	

Operating parameters

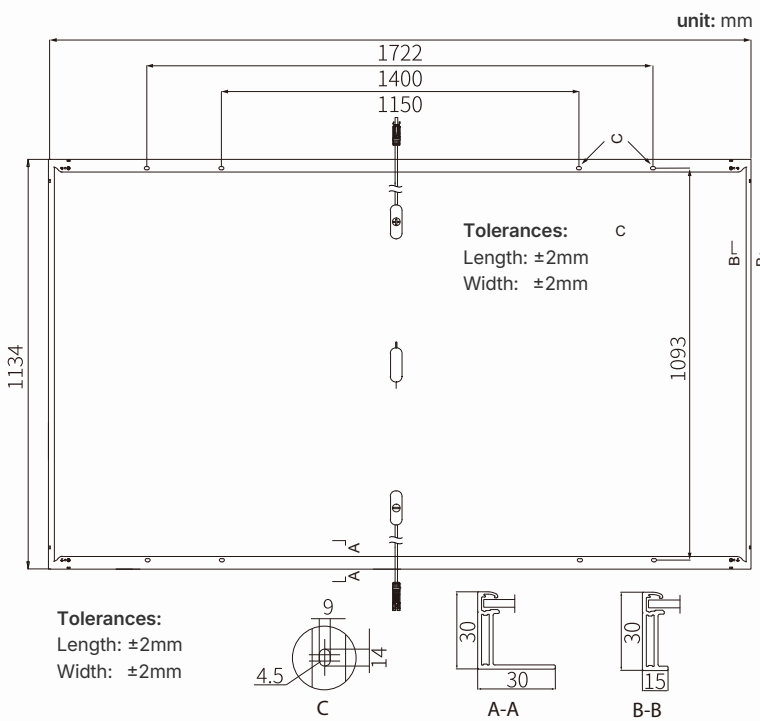
Operating temperature	-40°C~+85°C
Power tolerance	0~3%
Max. system voltage	DC1500V(IEC/UL)
Max. rated current of fuse	25A
Nominal operating temperature	45±2°C
Safety protection	Class II
Fire rating of components	ULTypeI or 2 IEC Class C

Load capacity

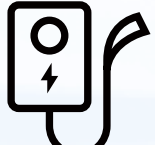
Max. static load on the front side	5400Pa
Max. static load on the back	2400Pa
Hail test	Diameter 25mm, impact speed 23m/s

Temperature coefficient (STC test)

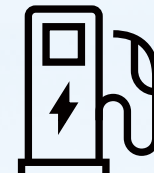
Temperature coefficient at short-circuit current (Isc)	+0.050%/°C
Temperature coefficient at open-circuit voltage (Voc)	-0.230%/°C
Temperature coefficient at peak power (Pmax)	0.290%/°C



Smart Household Charging Set

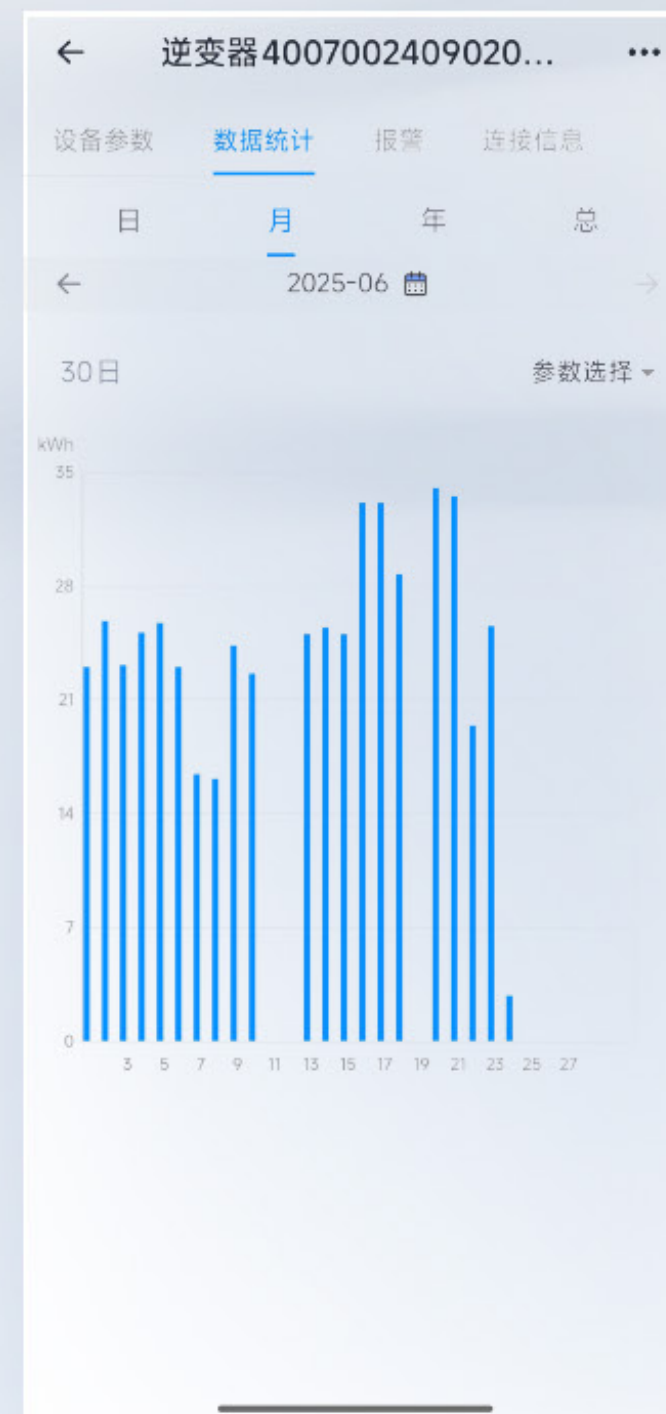
 Household charging kit



 Villa supercharging



AE Studio Smart Energy Management System



Intelligent learning, autonomous optimization

The EMS platform is embedded with AI algorithm, and supports setting and learning of electricity consumption curves and step tariffs



Tap to view consumption and revenues

View the consumption curve and revenues in real time on the APP, which has a user-friendly interface



Real-time alarm and quick troubleshooting

The system supports intelligent alarms to inform the user and the O&M team to reduce the time difference of information transmission and quickly locate problems

Showcase

Type: HEMS For Villa

Scale: 30kW PV + 10kWh EES

Location: China



Type: HEMS For Homestay

Scale: 22kW PV + 40kWh EES

Location: Thailand



Smart Home Energy Management Solution



 Netherlands



 Romania



 South Africa



 China



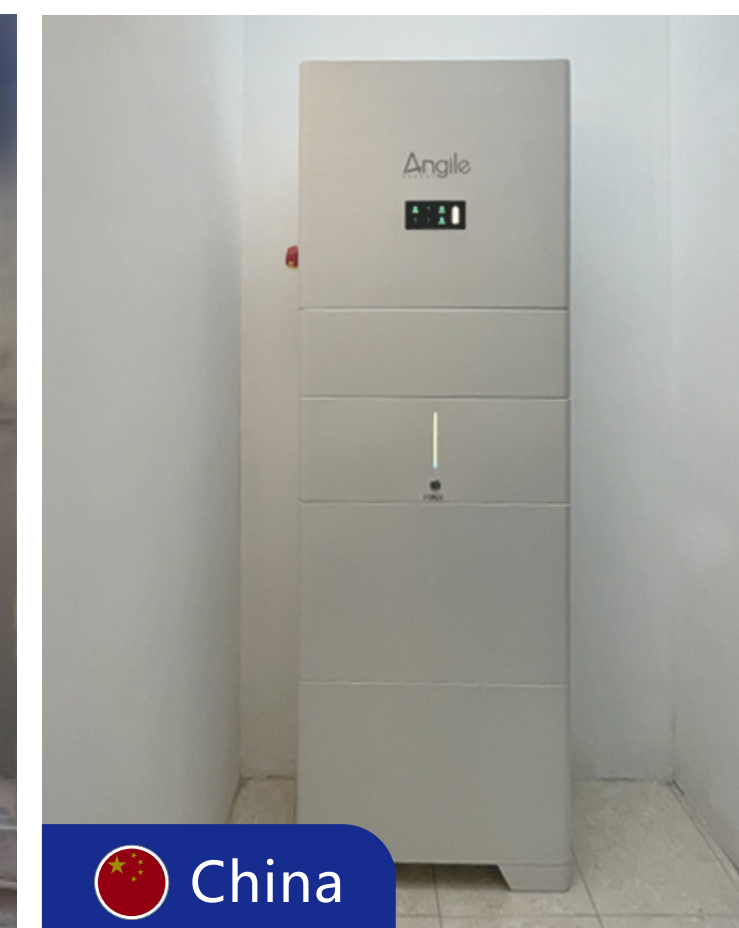
 Ukraine



 U.K.



 Italy



 China



 Morocco

Global Footprint





www.angile-energy.com

info@ae-epower.com

+86 532 8097 7189

Qingdao Angile Energy Tech Co., Ltd.

Add: Room 1401 Building 1, No.106-2 Qiuyang Rd,
Chengyang District, Qingdao, Shandong, China

Post code: 266000

Foshan Angile Energy Tech Co., Ltd.

Add: Room 403, No.10 Hanxing E Rd, Panyu District,
Guangzhou, China

Post code: 510495

Angile Energy (Guangdong) Construction Co., Ltd

Add: Room 403, No.10 Hanxing E Rd, Panyu District,
Guangzhou, China

Post code: 510495

Angile Energy European Warehouse

Add: Industriestr. 8, Nortorf, Germany

Post code: DE-24589
