xenterra

Innovative Solar
Energy Storage Solutions

About Xenterra

Xenterra, a vibrant and trailblazing brand, specializes in the development, manufacturing, and sales of photovoltaic inverters, energy storage systems, and intelligent solar energy solutions. As part of the HDL Automation family—a global leader in smart living solutions since 1985—Xenterra benefits from the same robust research, development, and manufacturing capabilities that have made HDL a trusted name in the smart home industry. This strong foundation empowers Xenterra to deliver products that excel in performance, versatility, reliability, and safety.

Xenterra represents more than just a provider of energy solutions, we are the practitioners of sustainable development. Dedicated to advancing sustainable energy, Xenterra offers ESS products that are environmentally friendly, cost-effective, and intelligent, enabling every kilowatt-hour of electricity to be safer, highly efficient and incredibly smart.
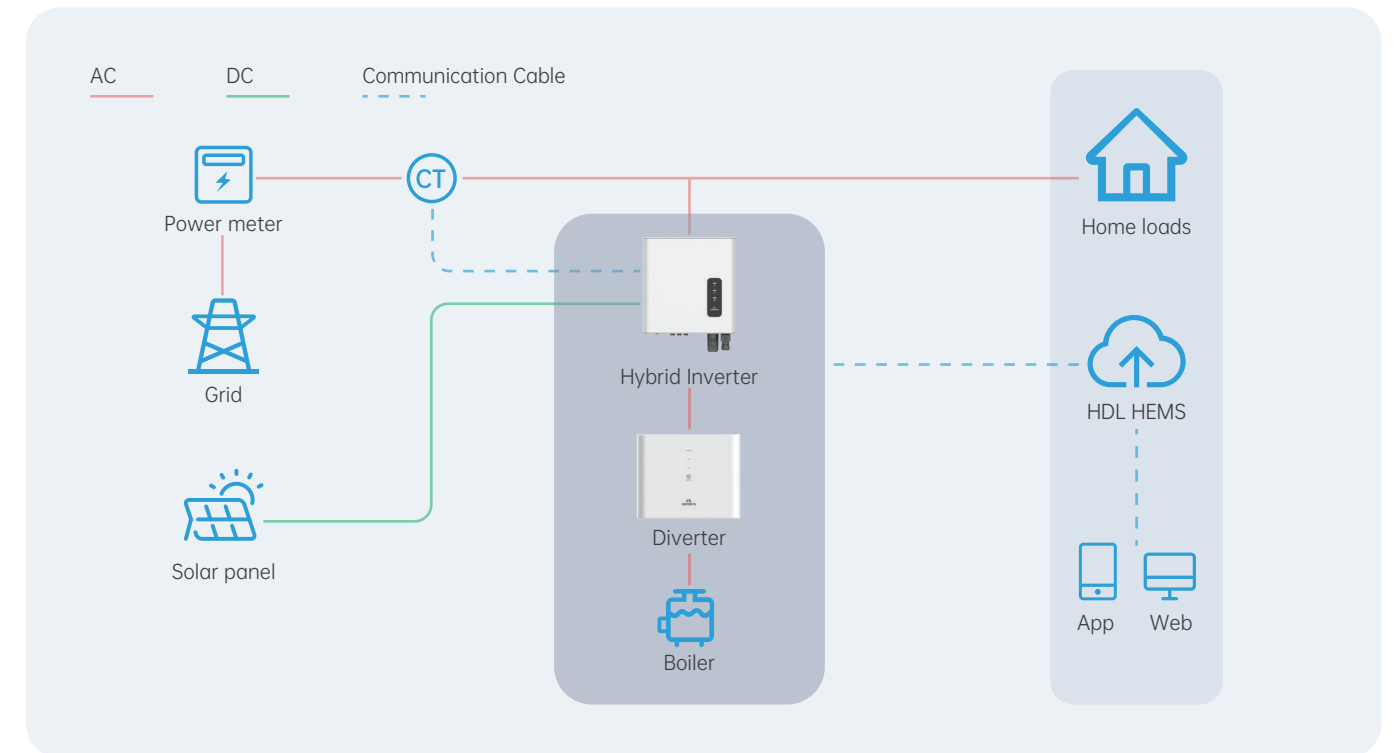
Product Family

On-grid Energy Storage Solution

Tailored for regions with abundant sunlight and stable power supply, this is a versatile and effective means of harnessing solar power.
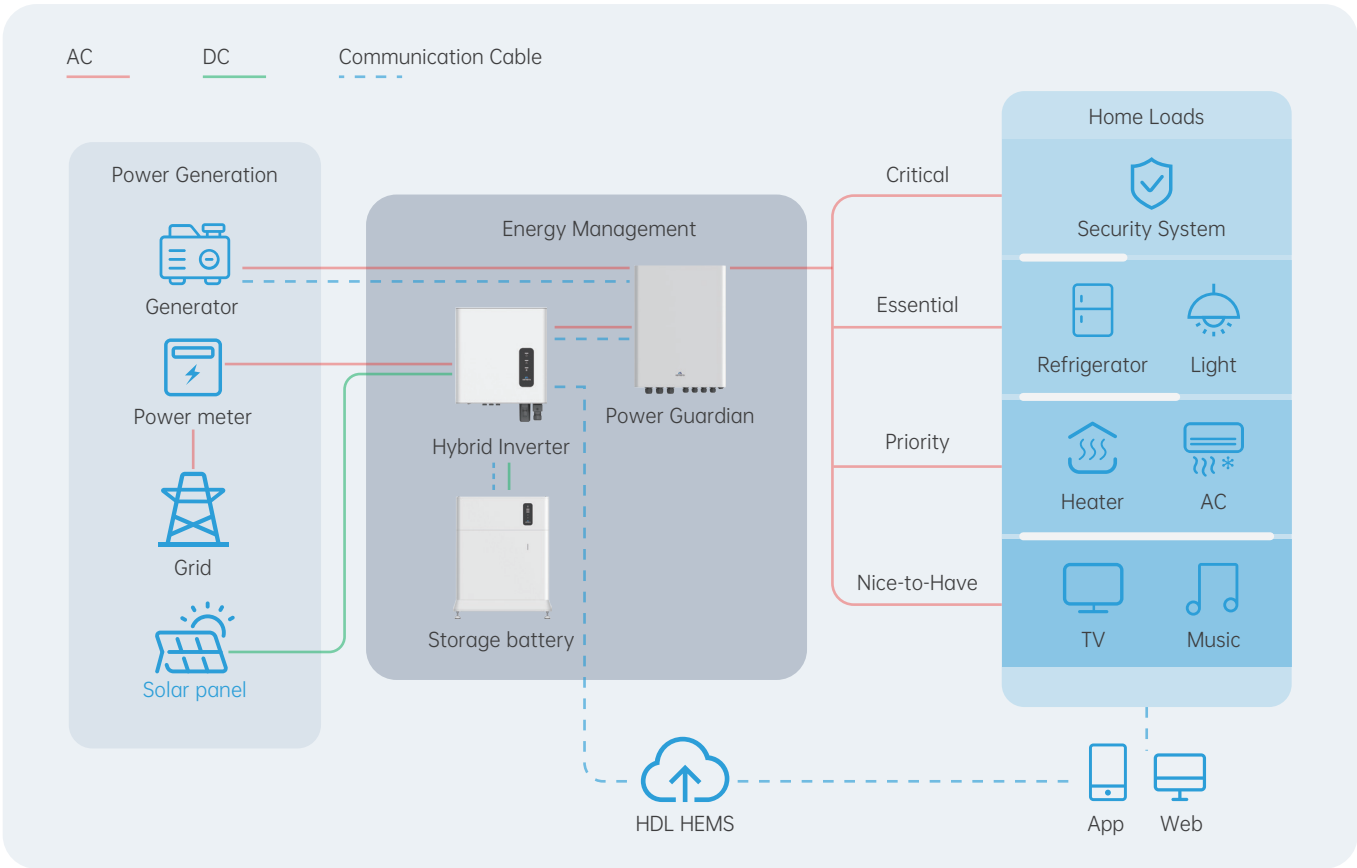

AC   DC   Communication Cable

Power meter | CT | Home loads
Grid | Hybrid Inverter | HDL HEMS
Solar panel | Diverter | App   Web
Boiler

Working Mode

▸ **Power Generation Using Only Inverter:**

Solar power to feed homeloads, surplus feed into grid.

▸ **Power Generation Using Both Inverter and Diverter:**

Solar power to feed homeloads in priority, surplus power heat the boiler, remaining surplus power sell to grid.

▸ **PV Production Lower Than Homeloads:**

All loads supported by PV and grid.

▸ **Without Solar Power:**

Take power from grid.

Off-grid Energy Storage Solution

Tailored for regions with insufficient grid power supply and frequent outage, this solution extends battery runtime by at least 40%.

Off-grid Energy Storage Solution diagram — AC, DC, Communication Cable. Power Generation (Generator, Power meter, Grid, Solar panel); Energy Management (Power Guardian, Hybrid Inverter, Storage battery); Home Loads (Critical: Security System; Essential: Refrigerator, Light; Priority: Heater, AC; Nice-to-Have: TV, Music); HDL HEMS, App, Web.
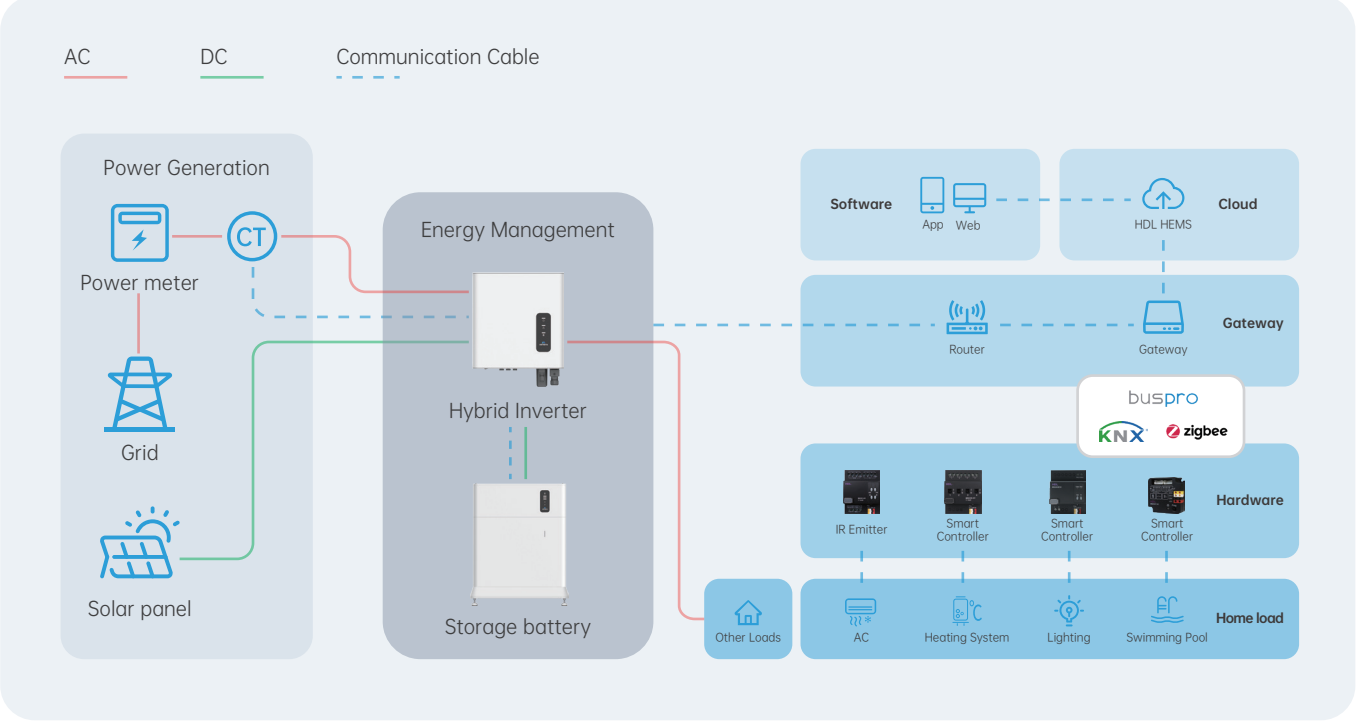
Working Mode

▸ **When Grid Normal:**

1. Daytime solar power to feed homeloads, surplus power stored in battery. If PV insufficient, compensated from Battery.
2. At night, prioritizing ESS for household needs, battery insufficient then import from grid.

▸ **When Grid Outage:**

In case outage, automatically switch off connection with grid and use PV and ESS to power homeloads, battery insufficient then automatically switch on generator. In case detection of grid recovery, automatically tie grid.

▸ **Grid Outage But No Generator:**

Use PV and ESS to keep the power on during an outage, when inverter output power runs low automatically switch off non-essential loads to secure power supply to essential loads.

Smart Home Solar ESS Solution

This system stands out with its intelligent features, adding intelligence to your system to avoid interruptions and manual interference.

Smart Home Solar ESS Solution diagram — AC, DC, Communication Cable. Power Generation (Power meter, Grid, Solar panel); Energy Management (Hybrid Inverter, Storage battery); Software (App, Web), Cloud (HDL HEMS), Gateway (Router, Gateway), buspro, KNX, zigbee; Hardware (IR Emitter, Smart Controller, Smart Controller, Smart Controller); Home load (AC, Heating System, Lighting, Swimming Pool), Other Loads.

Working Mode

▸ **During Daytime:**

daytime solar power to feed homeloads, surplus power stored in battery. If PV insufficient, compensated from Battery.

▸ **During Nighttime:**

prioritizing ESS for household needs, battery insufficient then import from grid.

▸ **During Outage:**

When load consumption beyond inverter output power, automatically allocate off-peak power consumption of equipment to reduce load demand.

▸ **When ESS Run Low:**

Automatically activate generator for 24h uninterrupted power supply.

Single-phase Hybrid Inverter

Model: ME-GSE-S3.6K | ME-GSE-S4.6K
ME-GSE-S5K

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Proactive Power Safety Shield
· DC Arc Protection
· Leakage Protection
· SunSpec Rapid Shutdown
· Insulation Monitoring
· 24/7 Real-time Monitoring

Superior Performance
· Unmatched 97.6% DC to AC Conversion Efficiency
· MPPT efficiency exceeding 99.9%
· Up to 2 MPPT Channels, more power generation
· Wide MPPT Range, longer power generation time MPPT

Unparalleled Installation Experience
· Plug-and-play design for quick connection
· Compact design with only 16KG weigh
· Ultra-fast configuration in under 10 minutes

More Adaptive Design
· -20 ~ 60℃ working temperature
· 100% of rated power at altitudes up to 4000m
· IP65 waterproof rating for both indoor and outdoor
· Large string current, higher power PV compatible

More User-Friendly
· No fan design, lower noise

Technical Data

Model	ME-GSE-S3.6K	ME-GSE-S4.6K	ME-GSE-S5K
Battery Input Data			
Battery Type		Li-Ion	
Nominal Battery Voltage (V)		450	
Battery Voltage Range (V)		450 ~ 550	
Max. Charging Current (A)	10	10	10
Max. Discharging Current (A)	10	10	10
PV String Input Data			
Max. PV Input Power (W)	4500	6000	6500
Max. PV Input Voltage (V)		550	
Start-up Voltage (V)		120	
MPPT Voltage Range (V)		90 ~ 500	
Rated PV Input Voltage (V)		380	
Max. Operating PV Input Current (A)		13	
Max. Input Short-Circuit Current (A)		18	
Number of MPPT Trackers		2	
Number of Strings per MPPT		1	
AC Output Data (On-grid)			
Rated AC Input/Output Active Power (W)	3600	4600	5000
Max. AC Input/Output Apparent Power (VA)	3800	4800	5500
Rated AC Input/Output Current (A)	16.4 / 15.7/ 15.0	20.9/ 20.0/ 19.2	22.7/ 21.7/ 20.8
Max. AC Input/Output Current (A)	17.3/ 16.5/ 15.8	21.8/ 20.8/ 20.0	25/ 23.9/ 22.9
Peak Power (off-grid) (W)		1.2 times rated power	
Power Factor Adjustment Range		0.85 leading to 0.85 lagging	
Rated Input/Output Voltage (V)		220/230/240	
Rated Input/Output Grid Frequency(Hz)		50/60	
Grid Connection Form		L+N+PE	
Total Current Harmonic Distortion THDi		<3% (of nominal power)	
Efficiency			
Max.PV to AC Efficiency		97.6%	
European Efficiency		97.3%	
Max. Battery to AC Efficiency		98%	
Max.PV to Battery Efficiency		98.8%	
MPPT Efficiency		99.9%	
Protection			
PV Insulation Resistance Detection		Integrated	
Residual Current Monitoring		Integrated	
PV Reverse Polarity Protection		Integrated	
Anti-islanding Protection		Integrated	
AC Overcurrent Protection		Integrated	
AC Short Circuit Protection		Integrated	
AC Overvoltage Protection		Integrated	
General Data			
Operating Temperature Range (°C)		-25 ~ +60 , >45℃ Derating	
Relative Humidity		0 ~ 95% RH	
Max. Operating Altitude (m)		4000	
Cooling Method		Nature Convection	
User Interface		APP	
Communication with BMS		RS485	
Communication with Meter		RS485	
Communication with Portal		Wifi / Ethernet	
Weight (kg)		16	
Dimension (W × H × D mm)		376 × 396 × 145	
Topology		Non-isolated	
Self-consumption at Night (W)		<6	
Ingress Protection Rating		IP65	
Mounting Method		Wall Bracket	
Safety / EMC Standard		IEC/EN 61000-6-1/2/3/4, IEC/EN 62109-1, IEC/EN 62109-2	
Grid Regulation		CEI 0-21, EN 50549	

Three-phase Hybrid Inverter

Model： ME-GSE-T10K ｜ ME-GSE-T15K

Proactive Power Safety Shield
- DC Arc Protection
- Leakage Protection
- SunSpec Rapid Shutdown
- Insulation Monitoring
- 24/7 Real-time Monitoring

Superior Performance
- Unmatched 98% DC to AC Conversion Efficiency
- MPPT efficiency exceeding 99.9%
- Up to 2 MPPT Channels, more power generation
- Wide MPPT Range, longer power generation time MPPT

Unparalleled Installation Experience
- Plug-and-play design for quick connection
- Compact design with only 16KG weigh
- Ultra-fast configuration in under 10 minutes

More Adaptive Design
- -20 ~ 60℃ working temperature
- 100% of rated power at altitudes up to 4000m
- IP65 waterproof rating for both indoor and outdoor
- Large string current, higher power PV compatible

More User-Friendly
- No fan design, lower noise (ME-GSE-T10K Only)

Technical Data

Model	ME-GSE-T10K	ME-GSE-T15K
Battery Input Data		
Battery Type	Li-Ion	
Nominal Battery Voltage (V)	720	
Battery Voltage Range (V)	680 ~ 800	
Max. Charging Current (A)	10	10
Max. Discharging Current (A)	20	20
PV String Input Data		
Max. PV Input Power (W)	11000	16000
Max. PV Input Voltage (V)	1100	
Start-up Voltage (V)	240	
MPPT Voltage Range (V)	180~800	
Rated PV Input Voltage (V)	720	
Max. Operating PV Input Current (A)	15	
Max. Input Short-Circuit Current (A)	18	
Number of MPPT Trackers	2	
Number of Strings per MPPT	1	
AC Output Data (On-grid)		
Rated AC Input/Output Active Power (W)	10000	15000
Max. AC Input/Output Apparent Power (VA)	11000	16500
Rated AC Input/Output Current (A)	15.1 / 14.5/ 13.9	22.7/ 21.7/ 20.8
Max. AC Input/Output Current (A)	16.6/ 16.0/ 15.3	25/ 23.9/ 22.9
Peak Power (off-grid) (W)	1.2 times rated power	
Power Factor Adjustment Range	0.85 leading to 0.85 lagging	
Rated Input/Output Voltage (V)	230/400	
Rated Input/Output Grid Frequency(Hz)	50/60	
Grid Connection Form	3W+N+PE	
Total Current Harmonic Distortion THDi	<3% (of nominal power)	
Efficiency		
Max.PV to AC Efficiency	98%	
European Efficiency	97.7%	
Max. Battery to AC Efficiency	98%	
Max.PV to Battery Efficiency	98.8%	
MPPT Efficiency	99.9%	
Protection		
PV Insulation Resistance Detection	Integrated	
Residual Current Monitoring	Integrated	
PV Reverse Polarity Protection	Integrated	
Anti-islanding Protection	Integrated	
AC Overcurrent Protection	Integrated	
AC Short Circuit Protection	Integrated	
AC Overvoltage Protection	Integrated	
General Data		
Operating Temperature Range (°C)	-25 ~ +60 , >45℃ Derating	
Relative Humidity	0 ~ 95% RH	
Max. Operating Altitude (m)	4000	
Cooling Method	Nature Convection (ME-GSE-T10K Only)	
User Interface	APP	
Communication with BMS	RS485	
Communication with Meter	RS485	
Communication with Portal	Wifi / Ethernet	
Weight (kg)	21	
Dimension (W × H × D mm)	550 x 496 x 217	
Topology	Non-isolated	
Ingress Protection Rating	IP65	
Mounting Method	Wall Bracket	
Safety / EMC Standard	IEC/EN 61000-6-1/2/3/4, IEC/EN 62109-1, IEC/EN 62109-2	
Grid Regulation	CEI 0-21, EN 50549	
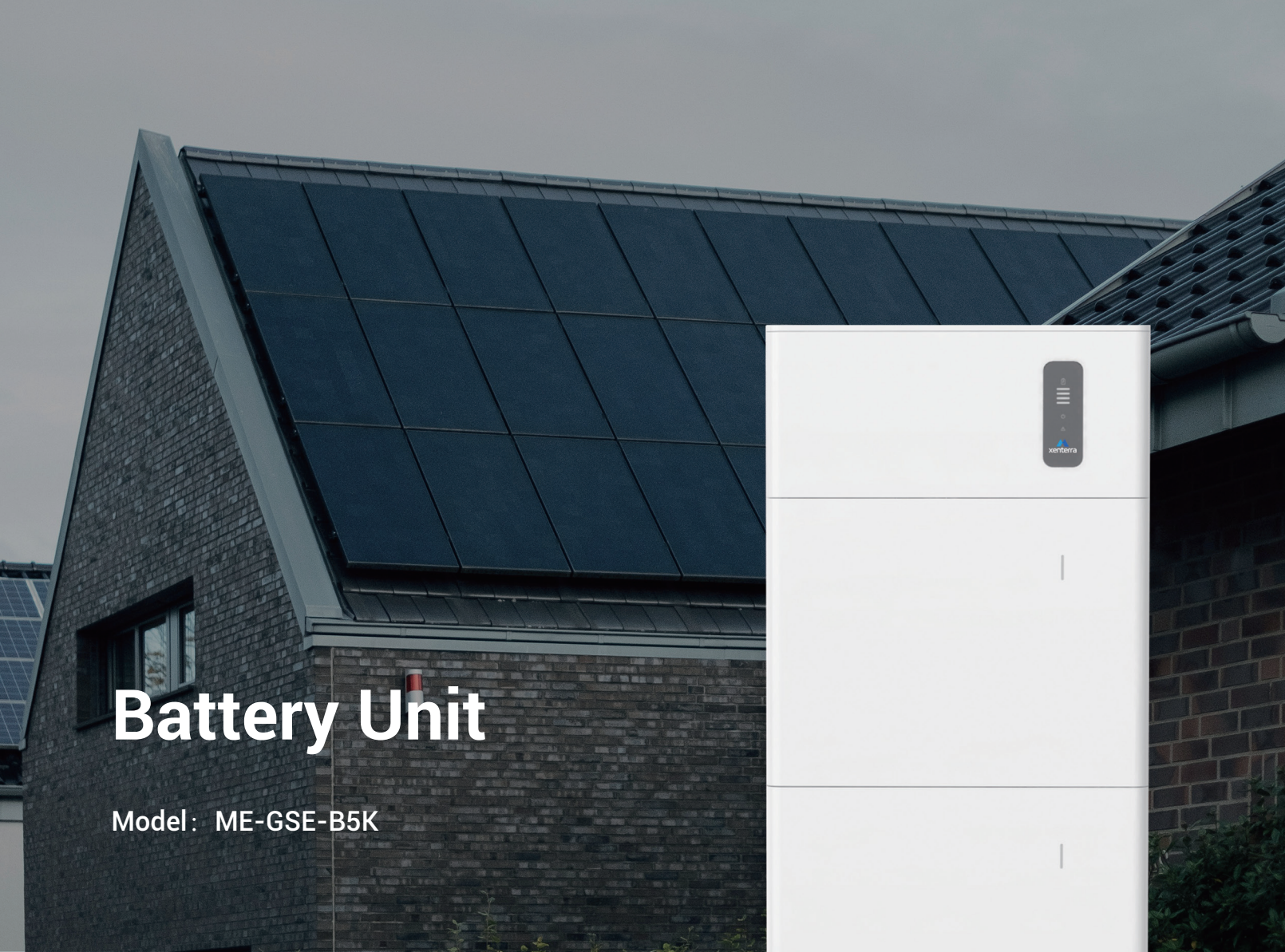
Battery Unit

Model：ME-GSE-B5K

Flexible Expansion

· Flexibly matched with battery units ranging from
  5-15 kWh per BMS module
· Modular design, maximum battery capacity of 90kwh per system
  (by working with power guardian)

Effortless Installation

· Stackable wire-free battery design
· 0.13 ㎡ compact size for one person installtion
· Ultra-fast configuration in under 10 minutes

Adaptive Design

· -20～55℃ working temperature
· 100% of rated power at altitudes up to 4000m
· IP65 waterproof rating for both indoor and outdoor

Technical Data

Technical Data	5kWh	10kWh	15kWh
Performance			
BMS Module	ME-GSE-BMS15K		
Number of BMS module	1		
Nominal voltage (single-phase system)	450 V		
Operating voltage range (single-phase system)	450 ~ 550 V		
Nominal voltage (three-phase system)	720 V		
Operating voltage range (three-phase system)	720 ~880 V		
Batter module	ME-GSE-B5K		
Battery module capacity	5kWh		
Number of battery modules	1	2	3
Nominal voltage	256 V	512 V	768 V
Operating voltage range	240V~288V	480V~576V	720V~864V
Battery usable capacity	5kWh	10kWh	15kWh
Max. output power	5kW	10kw	15kw
Max. Charge Current	10A		
Max. Discharge Current	20A		
General Data			
Display	SOC status indicator, LED indicator		
Communication	RS485		
Weight (Floor stand toolkit included)	72	122	172
BMS module dimension (W × H × D mm)	588 × 195 × 184		
BMS module weight (kg)	22		
Battery module dimensions (W × H × D mm)	588 × 442 × 184		
Battery module weight (kg)	50		
Installation	Floor stand		
Operating Temperature Range (°C)	-20 ~ +55		
Max. Operating Altitude (m)	4000		
Environment	Outdoor / indoor		
Permissible Ambient Humidity	5 ~ 95%		
Cooling Method	Nature Convection		
IP rating	IP65		
Cell technology	Lithium-iron phosphate (LiFePO4)		
Compatible inverters	ME-GSE-S3.6K / ME-GSE-S4.6K / ME-GSE-S5K / ME-GSE-T10K / ME-GSE-T15K		
Certificates	CE , IEC62619 , UN38.3		
Available for ordering	ME-GSE-B5K , ME-GSE-BMS15K		

Power Guardian

Model： ME-GSE-PG63A

Optimize the energy distribution and scheduling, increase backup time by at least 40% during blackouts.

Holistic Energy Integration
integrate power from grid, PV, wind turbine, battery and generators

Automatic Control
automatically shut down lower priority loads to prevent overloads and manual intervention

Maximize Backup Time
shed large loads in a smart way to maximize backup time during blackouts

Load Prioritization
efficiently classify and prioritize home loads, pairing with preset SOC value

Control from Anywhere
effortlessly manage your energy control from anywhere at any time via intuitive mobile APP

Modular Design
allowing extensible channels of smart loads control: 4,8,12,16

Technical Parameter

Model	ME-GSE-PG63A
Performance	
Inverter port current	63A
Current of the backup power port	63A
Current of the non-backup power port	63A
Grid port current	63A
Rated AC voltage	230/400V，L+N+PE/3W+N+PE
Working mode	On-grid or off-grid
On/Off-grid switchover time	20ms
Generator	Integrated
Number of controlled channels	4（Support for extensions）
Energy monitoring	Integrated
Active energy distribution	Integrated
Bypass mode	Manual
General Data	
Weight	≤15kg
Dimensions (W x H x D mm)	400 x 500 x 100
User Interface	App
Communication with Portal	Wi-Fi / Ethernet
RS485	Integrated
Max. Operating Altitude (m)	4000
Operating Temperature Range (°C)	-20 ~ +55
Ingress Protection Rating	IP55

Xenterra Solar App

Intelligent control all on one app

Xenterra solar is a user-friendly app that allows seamless control of BESS system and household devices while enabling real-time monitoring and management of energy generation, storage, sales and consumption anywhere and anytime. It helps users optimize their electricity usage in a smart, cost-effective, and secure way.
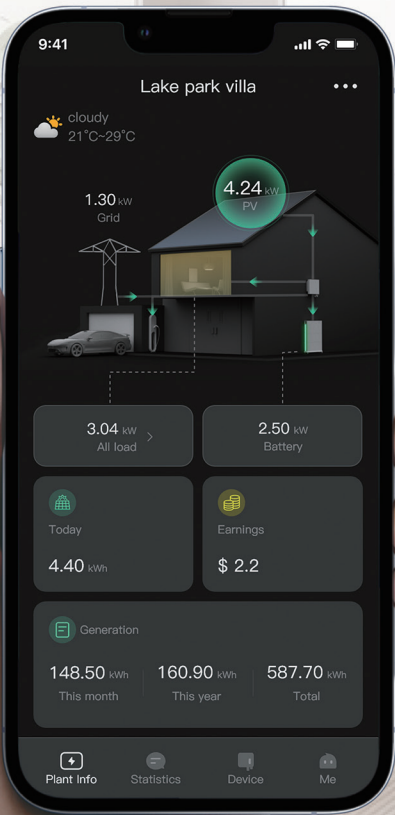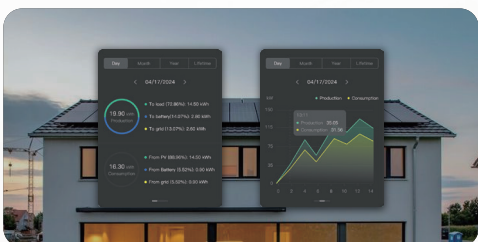
Real-time Monitoring

Monitor power generation, battery levels, charging and discharging status, and electricity consumption in real time, ensuring clear visibility of energy usage.

Energy Consumption Insights

Track and analyze your energy consumption patterns over time, helping homeowners optimize consumption and improve usage habits.

Instant Notifications & Alerts

Homeowners can receive instant notifications on low battery levels, device malfunctions, or excessive energy consumption, ensuring quick problem resolution.

Remote Control

Take full control of your BESS and home-loads anywhere, anytime. Whether at home or on the go, you can easily adjust settings or manage charging to ensure optimal performance.