



Residential Energy Storage Product Catalog

www.kehua.com

Stock Code
002335.SZ

Kehua Tech



30+ Years

30+ years R&D and manufacturing
experience of power electronic technologies

21+GW

21GW+ PV installation worldwide

**2.6GW
/3.8GWh**

2.6GW/3.8GWh ESS installation

No.5

2020, KEHUA ranks No.5 in world PCS market
share (by IHS Markit)

Residential Energy Storage System

With Kehua Residential Energy Storage System, it is possible to effectively manage solar in your home day and night.

This energy storage system will give you a complete energy solution with multiple working modes which meet different application scenarios. It will bring independence and economy for energy use.

Residential Energy

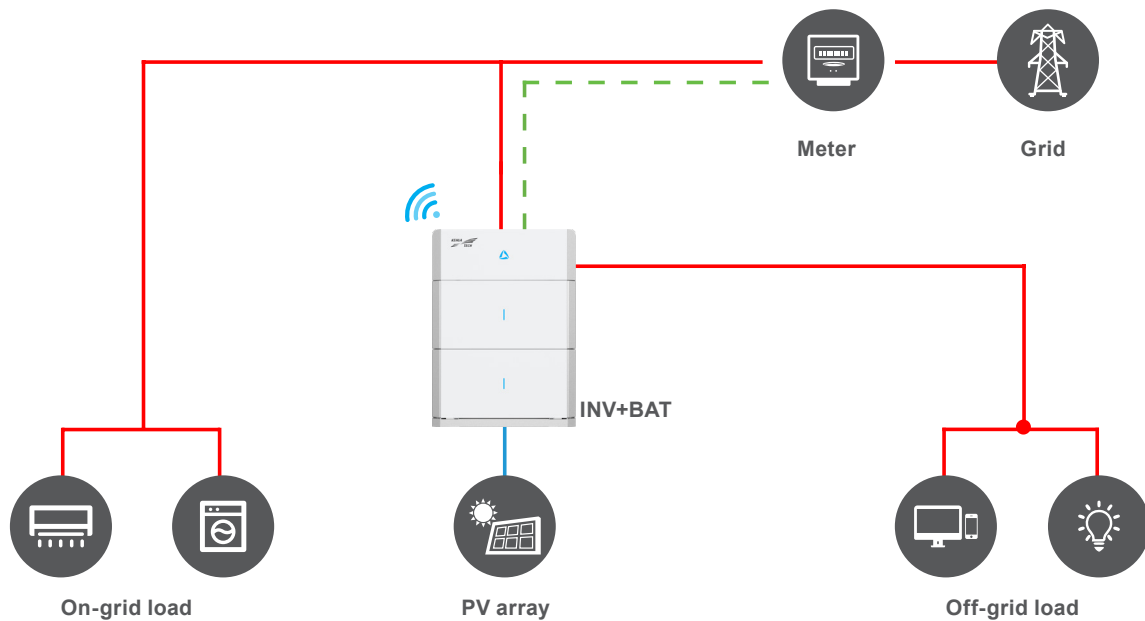
Contents

About Kehua	01
Application Scenarios	03
Working Mode	07
Residential Energy Storage System	09
iStoragE1 series	09
iStoragE2A series	11
iStoragE3 series	13
Battery System	15
Lithium-ion battery module	15
System Accessories	16
Datalogger	16
Kehua Energy Cloud	17
APP	18

y Storage System

Application scenarios

Newly installed system

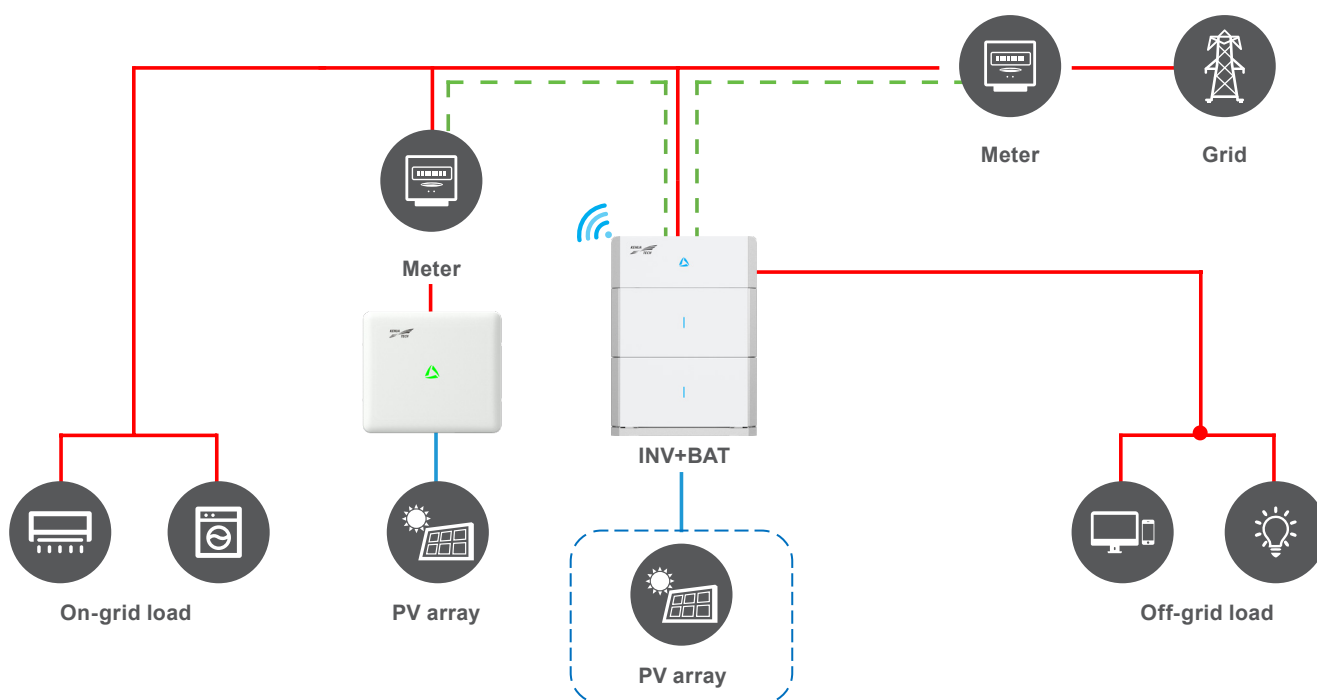


In areas with high electricity prices, customers can build a new home energy management system with Kehua PV+ESS solution, which can realize the maximum self-use of solar energy and reduce electricity bills. At the same time, this solution is also very suitable for areas with limited power supply and peak-to-valley adjustment of power.



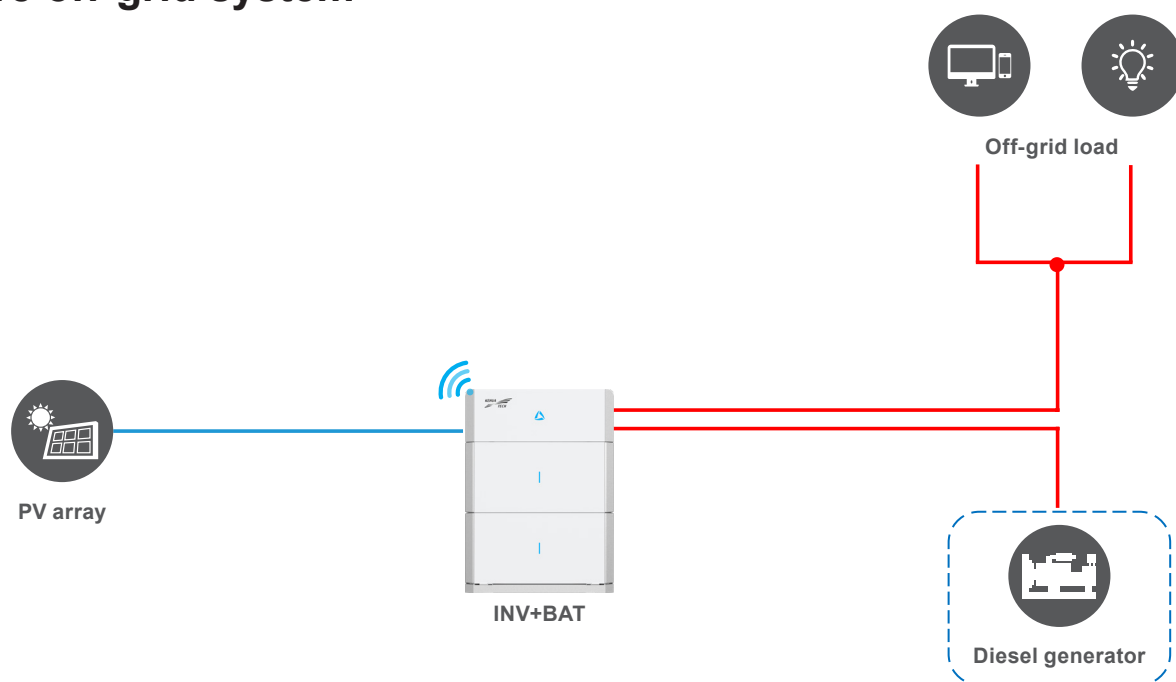
AC retrofit system

For households that have installed PV on-grid inverters, Kehua's energy storage products are selected to construct an energy storage system, and combined with meter communication, electricity costs can be effectively reduced by increasing the rate of self-generation and self-consumption, so that customers can obtain better investment returns.



Application Scenarios

Pure off-grid system



In some areas without power grid, such as ocean islands or remote areas, Kehua Energy Storage System can be combined with generators to form a complete off-grid system to ensure energy independence.





Working Mode

Self-consumption mode

Realizing the maximum self-use of solar energy.

Backup mode

Providing blackout protection as an energy backup unit.

Time of use mode

Realizing the maximum energy utilization rate and users' income with flexible electricity consumption strategies at different times.

Energy scheduling mode

Getting profit through programable charging and discharging time according price difference between peak and off-peak time.

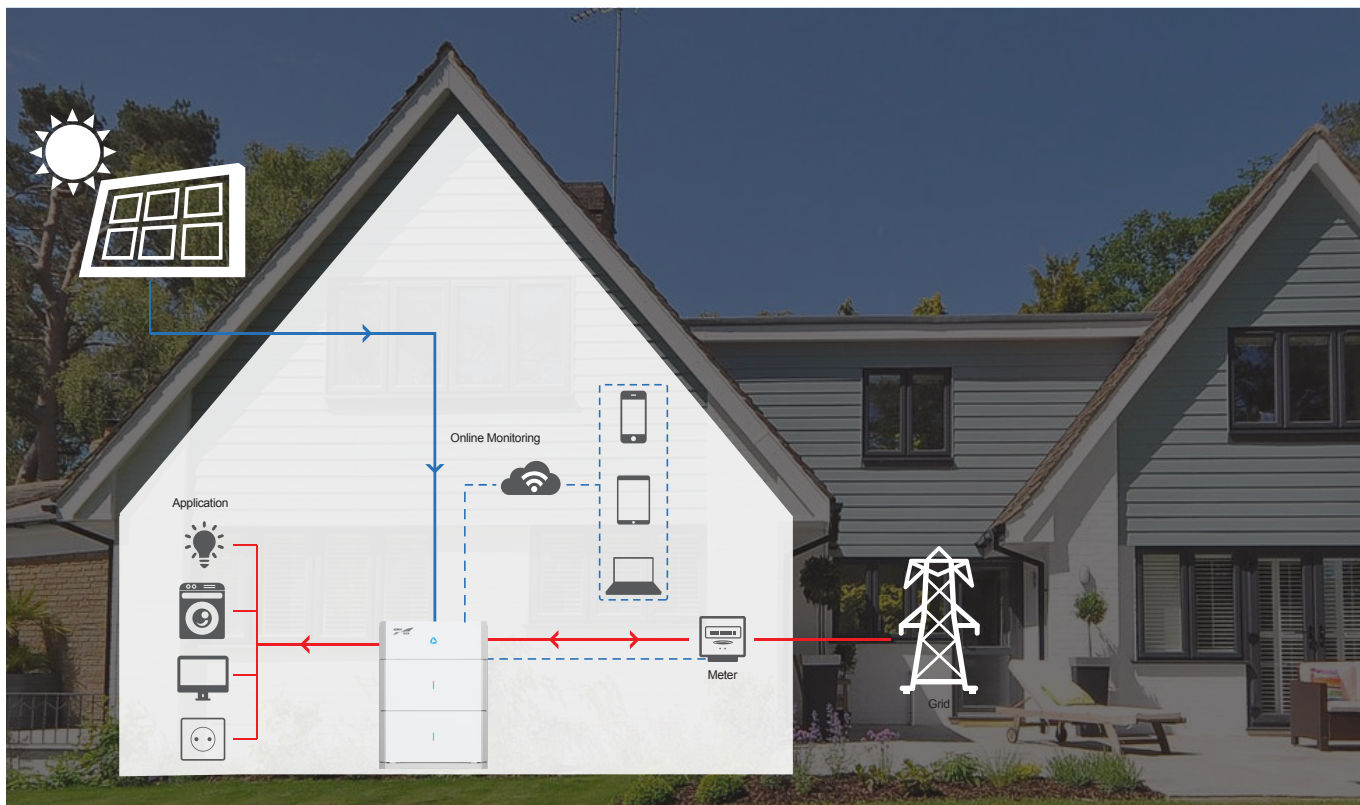
External control mode

Remote inverter control, realize full fleet control and operation (such as VPP).

Off-grid mode

Operating in a complete off-grid mode when no grid power is available.





Residential Energy Storage System

Single-phase ESS iStorageE1 Series 3600~6000



Product Features



Independent

- Built-in EMS function with multi-mode operation
- Real uninterruptible power supply, switching time <10ms
- Stronger back up power up to 7800W



Safe

- Physical and electrical dual isolation
- Modular fire protection integration
- AFCI function integration (optional)



Simple

- All-in-one design
- Modular installation & Quick plug connector
- Multiple battery expansion



Smart

- Multi-point real-time monitoring, adaptive SOC management
- PACK-level battery management, active balance of charging and discharging
- Intelligent energy management

System Specification

Items	iStorageE1 3600 Series	iStorageE1 5000 Series	iStorageE1 6000 Series
System components			
Inverter model	iStorageE1 3600	iStorageE1 5000	iStorageE1 6000
Number of Inverter		1	
Battery system model		iStorageE B5-S1	
Number of battery module		1~8	
General			
Cell technology		LiFePO4	
System capacity		5~40kWh	
Rated system power	3.6kW	5kW	6kW
Dimension (W*H*D)	800*1090*240mm/31.49* 42.91*9.45in (two battery modules, with foundation)		
Noise		<25dB	
Cooling type		Natural cooling	
Altitude		2000m/6561ft	
Operating temperature		-20~50°C/-4~122°F	
Recommended operating temperature		15~30°C/59~86°F	
Storage temperature		-10~45°C/14~113°F	
Operating humidity		0~100%RH	
Display		LED & APP	
Installation method		Floor or Wall-mounted (optional)	
Communication interface		Portal-WiFi (standard) /4G (optional), Meter-RS485	

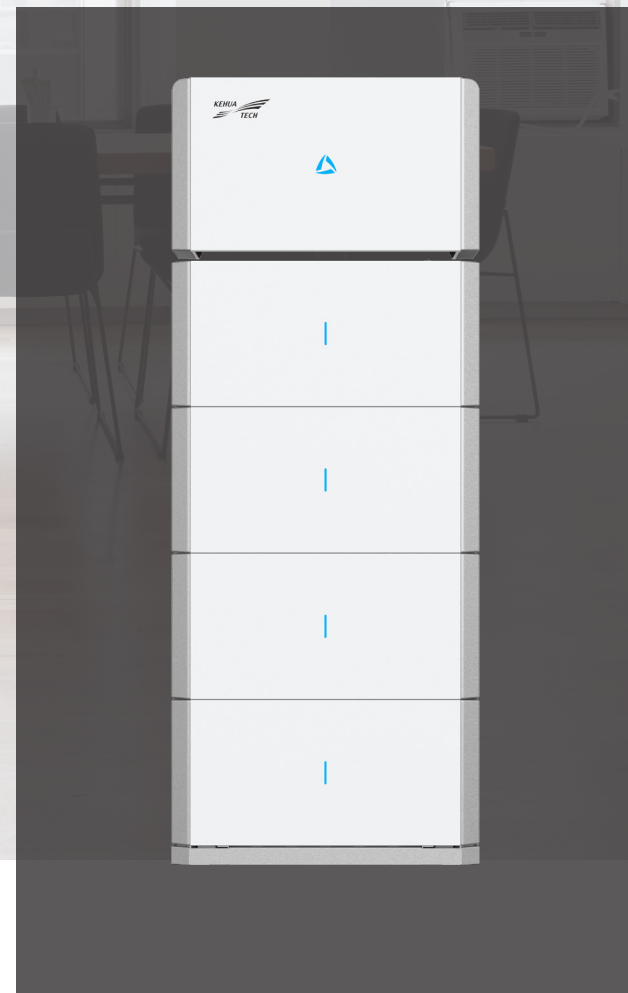
Hybrid Inverter Specification

Items	iStorageE1 3600	iStorageE1 5000	iStorageE1 6000
DC Input (PV)			
Recommended Max. PV input power		9.0kWp	
Max. PV input voltage		580Vdc	
No. of MPPTs		2	
No. of PV strings per MPPT		1/1	
Max. PV input current		15A/15A	
Max. short current		18.75A/18.75A	
MPPT voltage range		100~550Vdc	
Starting voltage		100Vdc	
DC (PV) switch		Yes	
DC Input (Battery)			
Battery voltage range		360~500Vdc	
AC Input and Output (On-grid)			
Rated AC output power	3.6kW	5.0kW	6.0kW
Rated AC output voltage		220/230/240Vac	
Grid voltage range		180~270Vac	
Max. output current	15.6A	21.7A	26.1A
Max. input current	31.2A	43.4A	52.2A
Rated grid frequency		50/60Hz	
Grid frequency range		45~55/55~65Hz	
Power factor		>0.99 (rated power)	
Adjustable power factor		0.8 (leading)~0.8 (lagging)	
THDi		<3% (rated power)	
AC Output (Back-up)			
Rated AC output voltage		220/230/240Vac	
Rated output frequency		50/60Hz	
Rated output power	3.6kW	5.0kW	6.0kW
Peak output power	4.68kW, 60s 5.4kW, 30s	6.5kW, 60s 7.5kW, 30s	7.8kW, 60s
Switch time		<10ms	
Efficiency			
Max. efficiency		97.70%	
European efficiency		97.10%	
General			
Weight		17kg/37.47lb (including side plates)	
Dimension (W*H*D)		800*280*233mm/31.49*11.02*9.17in (including side plates)	
Enclosure type		IP65	
Certification	EN 62109-1/2, IEC 62109-1/2, EN IEC 61000-6-2/3, EN IEC 61000-3-11, EN 61000-3-12, VDE-AR-N 4105, VDE V 0124-100, G98, G99, XP C15-712-3, VDE V 0126-1-1, EN50549-1, CEI0-21, AS4777.2, PO12.2, UNE 217002, UNE 217001		

*Specifications are subject to change without prior notice.

Residential Energy Storage System

Split phase ESS for North America iStorageE2A Series 7600~12000



Product Features



Independent

- Built-in EMS function with multi-mode operation
- Real uninterruptible power supply, switching time <20ms
- Stronger back up power up to 24kW



Safe

- Physical and electrical dual isolation
- Modular fire protection integration
- AFCI & RSD function integration



Simple

- All-in-one design
- Modular installation & Quick plug connector (battery module)
- Multiple battery expansion & Multiple system expansion



Smart

- Multi-point real-time monitoring, adaptive SOC management
- PACK-level battery management, active balance of charging and discharging
- Intelligent energy management with weather forecast function

System Specification

Items	iStorageE2A 7600 Series		iStorageE2A 9600 Series		iStorageE2A 10000 Series		iStorageE2A 11400 Series		iStorageE2A 12000 Series	
System components										
Inverter model	iStorageE2A 7600		iStorageE2A 9600		iStorageE2A 10000		iStorageE2A 11400		iStorageE2A 12000	
Number of Inverter	1									
Battery system model	iStorageE B5L-S1									
Number of battery module	3~8									
General										
Cell technology	LiFePO4									
System capacity	15~40kWh									
Rated system power	7.6kW		9.6kW		10kW		11.4kW		12kW	
Peak system power	15.2kW, 10s		19.2kW, 10s		20kW, 10s		22.8kW, 10s		24kW, 10s	
Dimension (W*H*D)	800*2045*240mm (four battery modules, with foundation)									
Noise emission	<40dB									
Cooling type	Natural cooling									
Altitude	2000m/6561ft									
Operating temperature	-20~50°C/-4~122°F									
Recommended operating temperature	15~30°C/59~86°F									
Storage temperature	-10~45°C/14~113°F									
Operating humidity	0~100%RH									
Display	LED & APP									
Installation method	Floor or Wall-mounted (optional)									
Communication Interface	Portal-WiFi (standard)/4G (optional), Meter-RS485, EMS-RS485 (sunspec)									

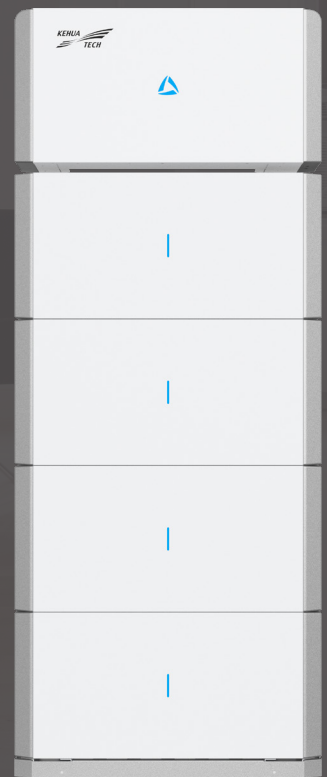
Hybrid Inverter Specification

Items	iStorageE2A 7600	iStorageE2A 9600	iStorageE2A 10000	iStorageE2A 11400	iStorageE2A 12000
DC Input (PV)					
Recommended Max. PV input power	18kWp				
Max. PV input voltage	500Vdc				
No. of MPPTs	4 (2)				
No. of PV strings per MPPT	1/1/1/1 (2/2)				
Max. PV input current	15A/15A/15A/15A (30A/30A)				
Max. short current	18.75A/18.75A/18.75A/18.75A (37.5A/37.5A)				
MPPT voltage range	100~500Vdc				
Starting voltage	125Vdc				
DC (PV) switch	Yes				
DC Input (BAT)					
Battery voltage range	360~500Vdc				
AC Input and Output (On-grid)					
Rated AC output power	7.6kW	9.6kW	10kW	11.4kW	12kW
Rated AC output voltage	240Vac				
Grid voltage range	211.2-264Vac				
Max. output current	31.7A	40A	41.7A	47.5A	50A
Max. input current	63.4A	80A	83.4A	95A	100A
Rated grid frequency	60Hz				
Grid frequency range	55~65Hz				
Power factor	>0.99 (rated power)				
Adjustable power factor	0.8 (leading)~0.8 (lagging)				
THDi	<3% (rated power)				
Over current protection device	125A breaker				
Maximum supply fault current	5kA				
AC Input (Generator)					
Rated AC current	50A				
Rated AC output power	12kW				
Over current protection device	63A breaker				
Maximum supply fault current	5kA				
AC Output (Back-up)					
Rated AC output voltage	240Vac/120Vac 2W/N/PE, Split Phase				
Rated output frequency	60Hz				
Rated output power	7.6kW	9.6kW	10kW	11.4kW	12kW
Peak output power	15.2kW,10s	19.2kW,10s	20kW,10s	22.8kW,10s	24kW, 10s
Peak output current	63.4A,10s	80A,10s	83.4A,10s	95A, 10s	100A, 10s
Switch time	<20ms (without parallel), <300ms (parallel)				
Over current protection device	63A breaker				
Maximum supply fault current	5kA				
Support the unbalance load	Yes				
Efficiency					
Max. efficiency	97.5%				
CEC efficiency	96.8%				
General					
Weight	35kg/77.16lb (including side plates)				
Dimension (W*H*D)	800*450*200mm/31.49*17.72*7.87in (including side plates)				
Enclosure type	NEMA Type 3R				
Certification	UL9540, CFR 47, FCC Part 15, Subpart B, UL1741SB, CSA C22.2, IEEE1547, IEEE1547.1UL1699B, UL1998, CEC, IEEE 2030.5				

*Specifications are subject to change without prior notice.

Residential Energy Storage System

Three-phase ESS iStorageE3 Series 5K~12K



Product Features



Independent

- Built-in EMS function with multi-mode operation
- Real uninterruptible power supply, switching time <10ms
- Stronger back up power up to 20kW



Safe

- Physical and electrical dual isolation
- Modular fire protection integration
- AFCI function integration (optional)



Simple

- All-in-one design
- Modular installation & Quick plug connector
- Multiple battery expansion & Multiple system expansion



Smart

- Multi-point real-time monitoring, adaptive SOC management
- PACK-level battery management, active balance of charging and discharging
- Intelligent energy management with weather forecast function

System Specification

Items	iStorageE3 5K Series	iStorageE3 6K Series	iStorageE3 8K Series	iStorageE3 10K Series	iStorageE3 12K Series
System components					
Inverter model	iStorageE3 5K	iStorageE3 6K	iStorageE3 8K	iStorageE3 10K	iStorageE3 12K
Number of Inverter	1				
Battery system model	iStorageE B5-S2				
Number of battery module	1~8				
General					
Cell technology	LiFePO4				
System capacity	5~40kWh				
Rated system power	5kW	6kW	8kW	10kW	12kW
Dimension (W*H*D)	800*1995*240mm/31.49*78.54*9.45in (four battery modules, with foundation)				
Noise emission	<30dB				
Cooling type	Natural cooling				
Altitude	2000m/6561ft				
Operating temperature	-20~50°C/-4~122°F				
Recommended operating temperature	15~30°C/59~86°F				
Storage temperature	-10~45°C/14~113°F				
Operating humidity	0~100%RH				
Display	LED & APP				
Installation method	Floor or Wall-mounted (optional)				
Communication Interface	Portal-WiFi (standard)/4G (optional), Meter-RS485, EMS-RS485 (sunspec)				

Hybrid Inverter Specification

Items	iStorageE3 5K	iStorageE3 6K	iStorageE3 8K	iStorageE3 10K	iStorageE3 12K
DC Input (PV)					
Recommended Max. PV input power	23kWp		29kWp		
Max. PV input voltage			1000Vdc		
No. of MPPTs			2		
No. of PV strings per MPPT	1/1		2/1		
Max. PV input current	16A/16A		27A/16A		
Max. short current	20A/20A		34A/20A		
MPPT voltage range			150~900Vdc		
Starting voltage			180Vdc		
DC (PV) switch			Yes		
DC Input (Battery)					
Battery voltage range			650~900Vdc		
AC Input and Output (On-grid)					
Rated AC output power	5kW	6kW	8kW	10kW	12kW
Rated AC output voltage			380/400Vac, 3W/N/PE		
Grid voltage range			323-418Vac/340-440Vac		
Max. output current	7.9A	9.6A	12.8A	16A	17.4A
Max. input current	14.4A	17.4A	23.2A	26A	26A
Rated grid frequency			50Hz/60Hz		
Grid frequency range			45~55Hz/55~65Hz		
Power factor			>0.99 (rated power)		
Adjustable power factor			0.8 (leading)~0.8 (lagging)		
THDi			<3% (rated power)		
AC Output (Back-up)					
Rated AC output voltage			380/400Vac, 3W/N/PE		
Rated output frequency			50/60Hz		
Rated output power	5kW	6kW	8kW	10kW	12kW
Peak output power	12kW, 60s		20kW, 60s		
Peak output current	18.2A, 60s		30.4A, 60s		
Switch time			<10ms (without parallel), <300ms (parallel)		
Support the unbalance load			Yes		
Efficiency					
Max. efficiency			98.3%		
European efficiency			97.5%		
General					
Weight			27kg/59.52lb (including side plates))		
Dimension (W*H*D)			800*400*200mm/31.49*15.75*7.87in (including side plates)		
Enclosure type			IP65		
Certification	EN 62109-1/2, IEC 62109-1/2, EN IEC 61000-6-1/2/3/4, EN 50549-1 NC RfG, PPDS,CEI 0-21, VDE AR-N-4105, VDE V 0124-100				

*Specifications are subject to change without prior notice.

Lithium-ion Battery Module

iStorageE B5 Series

Product Features



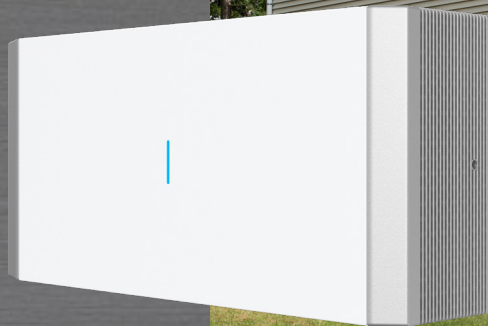
Safe and reliable



Intelligent and flexible



Easy O&M



Items	iStorageE B5L-S1	iStorageE B5-S1	iStorageE B5-S2
General			
Cell technology	LiFePO4		
Energy capacity	5kWh		
Usable capacity	5kWh		
Scalability	8		
Scalable capacity range	5~40kWh		
Rated power	2.5kW	4kW	4kW
Voltage range	360~500Vdc		650~900Vdc
Maximum charge current	6.94A	11.11A	6.15A
Maximum discharge current	6.94A 8.3A, 10s	11.11A 13.33A, 10s	6.15A 7.38A, 10s
Dimension (W*H*D)	800*380*200mm/31.49*14.6*9.37in (including side plates)	800*380*238mm/31.49*14.6*9.37in (including side plates)	800*380*238mm/31.49*14.6*9.37in (including side plates)
Weight	49kg/108.02lb (including side plates)	51kg/112.43lb (including side plates)	52kg/114.64lb (including side plates)
Operating temperature	-20~50°C/-4~122°F		
Recommended operating temperature	15~30°C/59~86°F		
Storage temperature	-10~45°C/14~113°F		
Humidity	0~100%RH		
Altitude	2000m/6561ft		
Cooling type	Natural cooling		
Display	LED		
Communication interface	RS485, CAN		
Topology	Isolated		
Connection method	Floor or Wall mounted (optional)		
Enclosure type	IP65		
Certification	UL9540A, UL1973, UL60730, UN38.3	IEC 62619, IEC 60730, UN38.3, IEC 62040-1	IEC 62619, IEC 60730, UN38.3

* Specifications are subject to change without prior notice.

System Accessories

Datalogger

Wifi Stick/4G Stick



Product Features

Smart and flexible

- Support WiFi configuration and baud rate configuration
- Unobstructed communication distance up to 100m

Simple and efficient

- Plug and play, quick installation
- Upgrade the data collector and inverter by cloud platform and APP

Safe and reliable

- Password and encrypted transmission for data protection
- IP65 protection, wide operating temperature range

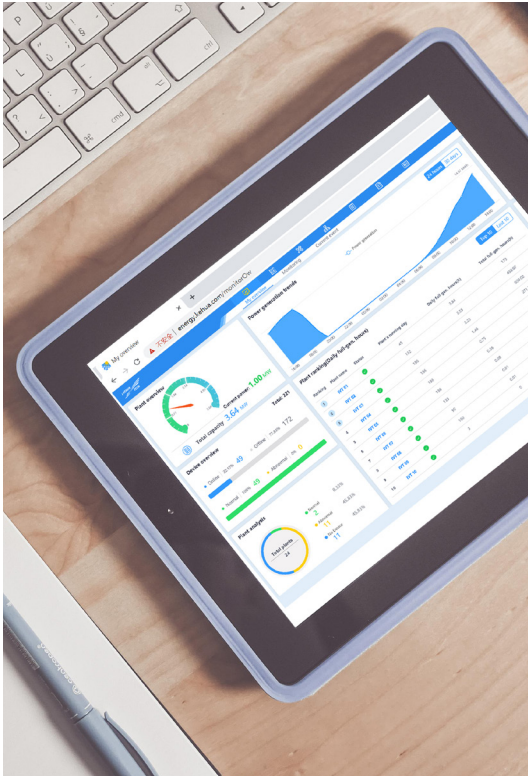
System Specification

Items	KC762A	KC761B
Type	Wifi Stick	4G Stick
Communication Mode		
RS485 communication	Support 4800/9600/115200bps communcation distance ≤100m	
WLAN communicatoin	IEEE802.11b/g/n 2.412GHz~2.484GHz	LTE-FDD B1/B3/B5/B7/B8/B20/B28 LTE-TDD B38/B40/B41 GSM 850MHz/900MHz/1800MHz/1900MHz
Power Supply		
DC input voltage	5~15VDC, 1A@15V	
Power consumption	≤5w	
General		
Max. number of devices	≤10	
Display	LED	
Operating temperature	-30~70°C/-22~158°F	
Relative air humidity	0%~100%	
Elevation	≤4000m/13123.36ft	
Protection class	IP65	
Dimensions (W×H×D)	48*130.5*31.4mm/1.89*5.14*1.24in	
Mounting type	plug & play	
Certification	CE, FCC	CE

*Specification indexes may be subject to changes without further notice.

System Accessories

Kehua Energy Cloud



Product Features

Smart O&M

- Provide multi-level data statistics for required agents , regions , power stations, etc.
- Provide systematic online upgrade and remote maintenance functions to ensure stable operation of equipment and power stations.
- Support remote IV curve and fault wave recording, efficient data acquisition, and accurate fault locating.

Efficient Management

- Provide effective end-user information maintenance and power plant information management.
- Provide various types of system logs to locate the cause of a problem accurately
- Support batch setting and remote control functions to achieve convenient and efficient management.

Perfect Functions

- Provide the functions of account management, event alarm, data report, organization management, equipment assets, and equipment's operation parameter design, etc.
- Support real-time monitoring of data at the region-level/station-level/equipment-level.
- Offer the advantages of comprehensive inverter technology, realize efficient response, and provide a strong support for intelligent O&M management.

Function List

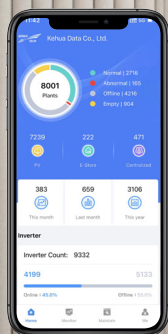
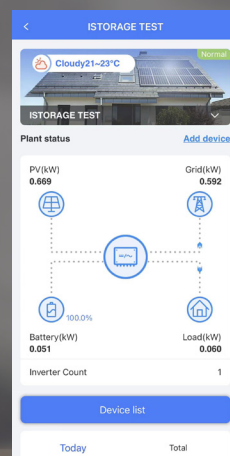
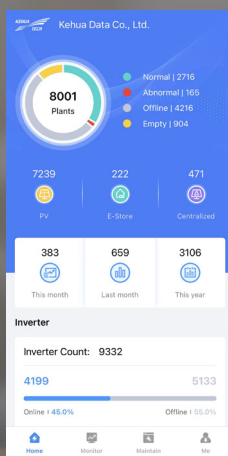
Items	Kehua Energy Cloud
Parameter	
Language	Chinese/English
Browser	Support IE, Chrome, Firefox
Data storage interval	>15min (settable)
Data management	Support 25 years saving
Function List	
O&M management	Provide management, equipment upgrade and remote control functions of users, power stations, collectors and inverters
organization management	Provide the administrative right, realize the personnel accounts creation and authority management functions
monitoring center	View real-time information and alerts for monitoring sites and devices, and add agent-level management interface for efficient data monitoring and management
data report	Provide historical data of power station and equipment, query alarm information, create custom report, download and export functions
expandability	The system adopts modular design, and supports the modular expansion; Device type and device protocol support configuration expansion.

*Specifications are subject to change without prior notice.

System Accessories

APP-WiseSolar Plus

With Kehua WiseSolar, customers can manage and control their energy consumption and production. Available via smartphone or tablet, the APP allows customers to monitor, analyze and control their Kehua iStorageE system from anywhere in the world.



Reliable • Flexible • Responsible

Kehua Digital Energy

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