Chelion

Residential
Energy Storage System

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Enjoy Green Energy

With iHome Energy Storge and PV solutions, managing your home solar systems has never been easier. iHome’ s products have added blackout protection and flexibility to join a virtual power plant, providing customers with a futureproofed and complete residential energy solution for all situations.

Residential Energy Storage System Solutions

Easy

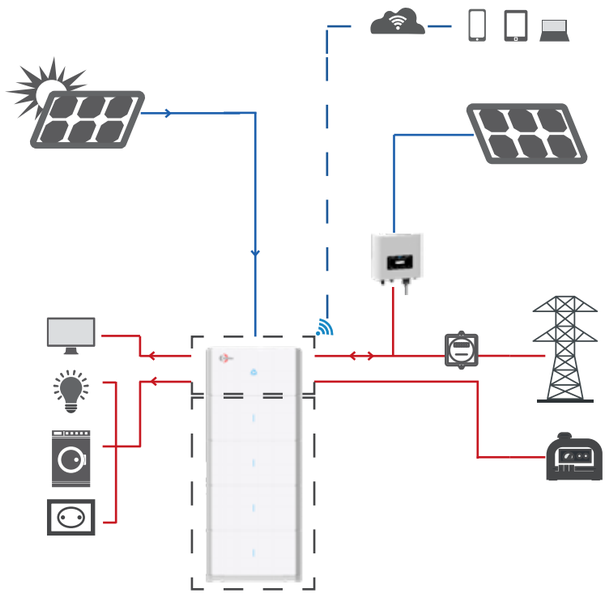
- Easy installation
- Easy O&M
- Easy capacity expansion

Smart

- Smart energy management
- Automatic back-up switch
- Intelligent monitoring

Investable

- Reliable Power Protection
- More flexible application
- Long Service Life and more available capacity



iHome-B6.5-L01 Series

Low Voltage Battery

The Chelion iHome-B-L01 Series is a top-class low voltage lithium battery designed with the home experience in mind. The battery will automatically recognize connected modules for an easier, faster, and safer installation. In addition to delivering unparalleled performance with an unprecedented ten-year service life.

- Top-class lithium iron phosphate battery with a long lifespan
- Easy installation and capacity expansion
- Automatically recognize modules
- Multiple safety protection measures

Technical Data

Items	iHome-B6.5-L01
Battery type	LFP(LiFePO4)
Energy capacity	6.5kWh
Cell configuration in pack	16S2P
Total capacity pack	128Ah
DOD	94.50%
Rated capacity	118Ah
Rated energy	6.0kWh
Rated voltage	51.2V
Voltage range	44.8~57.6V
Max. charge / discharge current	104.2A
Max. charge / discharge power	5kW
Peak charge / discharge power(@3S)	6.9kW
Dimensions(W*H*D)	18.7*30.12*5.71inch (475*765*145mm)
Weight	127.9±2.2lb (58±1kg)
Operating temperature	-14°F~122°F (-10~50°C)
Storage conditions	-4°F~113°F (-20~45°C); Within 6 month after each charge
Operating humidity	5%-95%RH
RTE	95%
Altitude	⩽6561.7 ft (2000m)
Cooling type	Passive cooling
Room temperature calendar life(25°C±2°C)	10 years/60% SOH
Room temperature cycle life(25°C±2°C)	6000 cycles/60%SOH
Connection method	Floor or Wall mounted
Communication interface	CAN；RS485
Parallel connection	Max 8 PACKs
Ingress protection	IP55
Certification	IEC 62619, IEC 62040, EN 61000, RCM, UN38.3

iHome-INV-L1H04 Series Single

Single Phase Hybrid Inverter

The Chelion iHome-INV-L1H04 Series of hybrid energy storage inverter comes in a smaller and lighter form than it's predecessor does. Its advanced design maximizes energy flexibility. Compatible with both on-and-off-grid PV systems, it can intelligently balance use from the grid or battery to ensure energy consumption is always within economic or user-defined thresholds.

- DC couple and AC couple to retrofit existing solar system
- 6 time periods for battery charging/discharging
- Up to 16 inverters in parallel even under off-grid condition
- IP65 and fanless design with a long lifespan
- Flexible applications and multiple energy sources input
- Built-in UPS function with 4ms automatic switching time

Technical Data

Items	iHome-INV3.6K-L1H04	iHome-INV5K-L1H04	iHome-INV6K-L1H04
DC Input (PV)			
Recommended Max. PV input power	4.68kW	6.5kW	7.8kW
Max. PV input voltage	500Vdc		
Max. PV input current	13+13A		
Max. short current	17+17A		
No. of MPPT / Strings per MPPT	2 / 1		
Full load DC volltage range	300~425Vdc		
MPPT voltage range	150~425Vdc		
Starting voltage	125Vdc		
DC Input (BAT)			
Battery type	Lead-acid or Li-Ion		
Battery voltage range	40~60Vdc		
Max. charge / discharge current	90A	120A	135A
External temperature sensor	Yes		
Charging curve	3 Stages / Equalization		
Charging strategy for Li-ion battery	Self-adaption to BMS		
AC Output			
Rated AC output and UPS power	3.6kW	5.0kW	6.0kW
Max. AC output and UPS power	3.96kW	5.5kW	6.6kW
Rated AC current	16.4 / 15.7A	22.7 / 21.7A	27.3 / 26.1A
Max. AC current	18 / 17.2A	25 / 23.9A	30 / 28.7A
Max. continuous passthrough	35A		40A
Peak power(off grid)	2 time of rated power, 10 S		
Adjustable power factor	0.8 leading to 0.8 lagging		
Output frequency and voltage	50/60Hz; L/N/PE 220/230Vac (single phase)		
Grid type	single phase		
THDi	<3% (Linear load<1.5%)		
Efficiency			
Max. efficiency	97.60%		
European efficiency	96.50%		
MPPT efficiency	99.90%		
Protection			
Integrated	PV Input Lightning Protection, Anti-islanding Protection, PV String Input Reverse Polarity Protection, Insulation Resistor Detection, Residual Current Monitoring Unit, Output Over Current Protection, Output Shorted Protection, Surge protection		
Surge protection	DC Type II/AC Type III		
General			
Dimensions(W*H*D)	12.99*22.83*9.13 inch (330*580*232mm)		
Weight	45.2lb (20.5kg)		
Ingress protection	IP65		
Noise level	<30dB		
Cooling type	Smart cooling		
Operating temperature	-40°F~140°F (-40~60°C), >113°F (45°C) derating		
Installation method	Wall-mounted		
Communication interface	RS485; CAN		
Warranty	5 years		
Certification	UNE 217002, NTS Type A, UNE217001 IEC/EN 62109-1, IEC/EN 62109-2, IEC/EN 61000-6-1, IEC/EN 61000-6-3, IEC/EN 61000-3-2, IEC/EN 61000-3-3,		

iHome-S-HD1H01 Series

Single Phase HV Residential Energy Storage System

Chelion' s iHome-S-HD1H01Series is an all-in-one solar and storage solution. The system comes pre-assembled for a seamless installation experience and is complemented with a modular battery design. Each battery module has a built-in DC/DC converter and is pre-optimized to perform at the highest levels safely. In additon, it's more flexible and easily configured in new battery augmentation, allows mixed usage of both new and old batteries and completely utilizes the full battery capacity.

Independent

Built-in EMS function with multi-mode operation
Uninterruptible power supply with a transfer time < 10 ms
Stronger backup power up to 7,800 W

Smart

Smart battery pack management
Active equalization strategy for battery charge and discharge
Intelligent energy management system

Safe

Inherently safe and highly stable LFP with low resistance
Physical segregation and electrical isolation
Integrated modular fire suppression system
Advanced AFCI and online detection of current leakage and insulation degradation

Simple

Standardized Modular design
Easy installation, operation and maintenance
Quick wiring via plug connectors
Flexible system expansibility

Technical Data

Items	iHome-SXX**/3.6K-HD1H01	iHome-SXX**/5K-HD1H01	iHome-SXX**/6K-HD1H01
Inverter model	iHome-INV3.6K-H1H01	iHome-INV5K-H1H01	iHome-INV6K-H1H01
Number of Inverter	1		
Battery system model	iHome-B5-HD02		
Number of battery module	1~8		
Battery type	LFP($LiFePO_4$)		
System capacity	5~40kWh		
Rated system power	3.6kW	5kW	6kW
Round Trip Efficiency (AC to Battery to AC, at beginning of life)	89.20%		
Round Trip Efficiency (PV to Battery to AC, at beginning of life)	90.60%		
Dimension (W*H*D)	31.49*42.91*9.44inch (800*1090*240mm) (2 battery modules, with foundation) 31.49*11.02*9.13inch (800*280*232mm) (inverter), 31.49*14.96*7.87inch (800*380*200mm) (battery module)		
Weight	39.68b (18kg) (inverter), 121.25b (55kg) (battery module)		
Ingress protection	IP65		
Noise level	<25dB@1m		
Cooling type	Passive cooling		
Altitude	6561 ft (2000m)		
Operating temperature	-4°F~122°F (-20°C~50°C)		
Recommended operating temperature	59°F~86°F (15~30°C)		
Storage temperature	14°F~113°F (-10~45°C)		
Operating humidity	0~100%RH		
Display	LED & APP		
Installation method	Floor or Wall-mounted (optional)		
Communication interface	Portal-WiFi(standard)/4G(optional), Meter-RS485		
Certification	AS/NZS 4777.2, NTs type A, UNE 217001, UNE 217002, IEC/EN 62109-1, IEC/EN 62109-2, IEC/EN 61000-6-2, IEC/EN 61000-6-3, IEC/EN 61000-3-11, IEC/EN 61000-3-12,IEC 62040-1 ,UN38.3		

Hybrid Inverter Specification

Items	iHome-INV3.6K-H1H01	iHome-INV5K-H1H01	iHome-INV6K-H1H01
DC Input (PV)			
Recommended Max. PV input power	9.0kWp		
Max. PV input voltage	580Vdc		
Max. PV input current	15A+15A		
Max. short current	18.75A+18.75A		
No. of MPPT / Strings per MPPT	2 / 1+1		
MPPT voltage range	100~550Vdc		
Starting voltage	100Vdc		
DC (PV) switch	Yes		
DC Input (BAT)			
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	230Vac		
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	45~55Hz/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	230Vac		
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%		

*Specifications are subject to change without prior notice.
**XX indicates the battery capacity, such as 10, 15, or 20.

iHome-B5-HDxx Series

Battery with DC/DC Converter

Chelion' s iHome-B5-HD01-03 Series is a top-class lithium battery module. There is a built-in DC/DC converter in the module that is preoptimized to perform most safely. The DC/DC converter facilitates module maintenance and battery replacement. It is flexible to add new batteries in the future without causing the "Buckets effect". And it is able to make the most of battery capacity.

- Built-in DC/DC
- More available capacity in the life cycle
- Flexible expansion
- Excellent safety and optimization performance

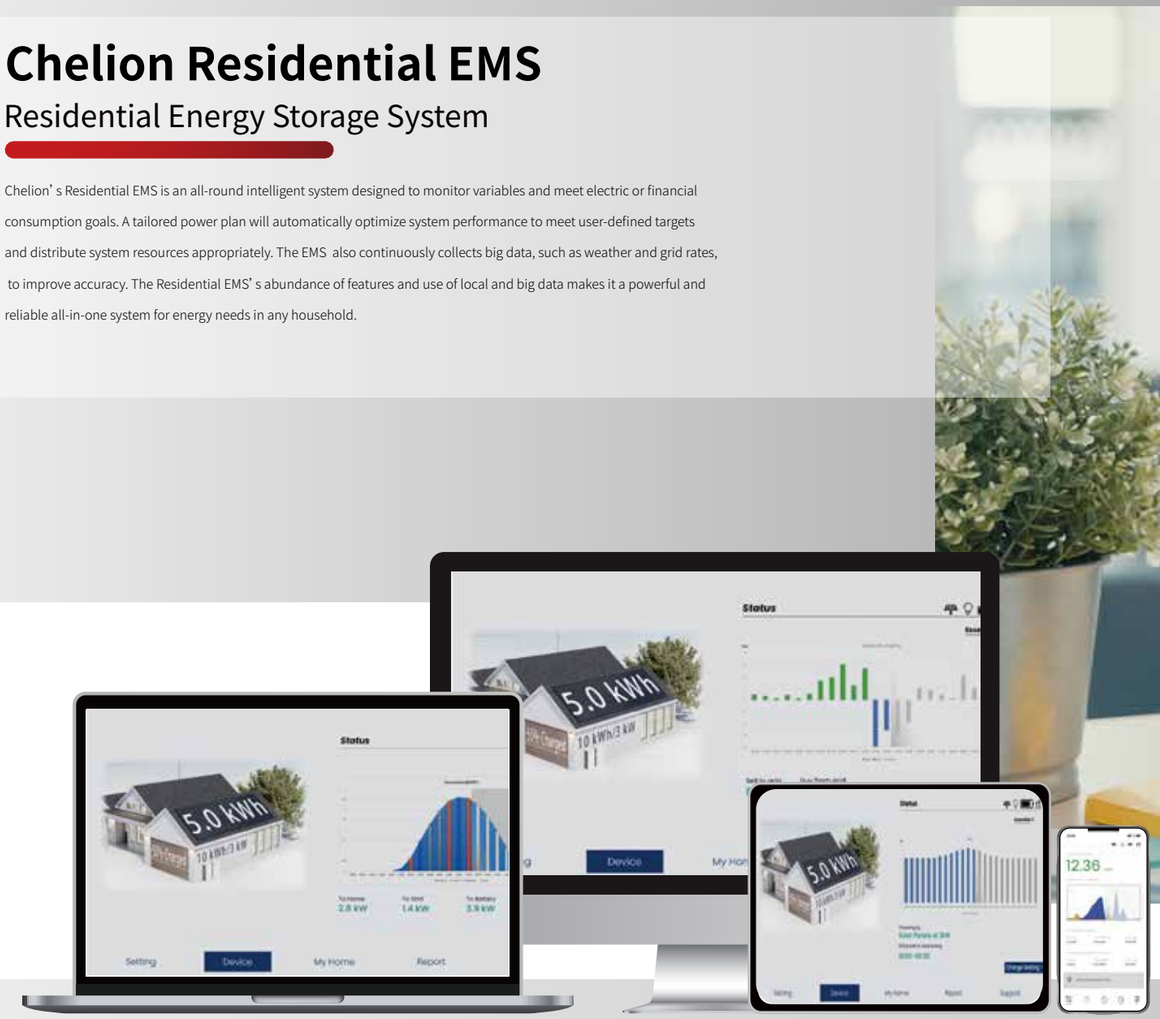
Technical Data

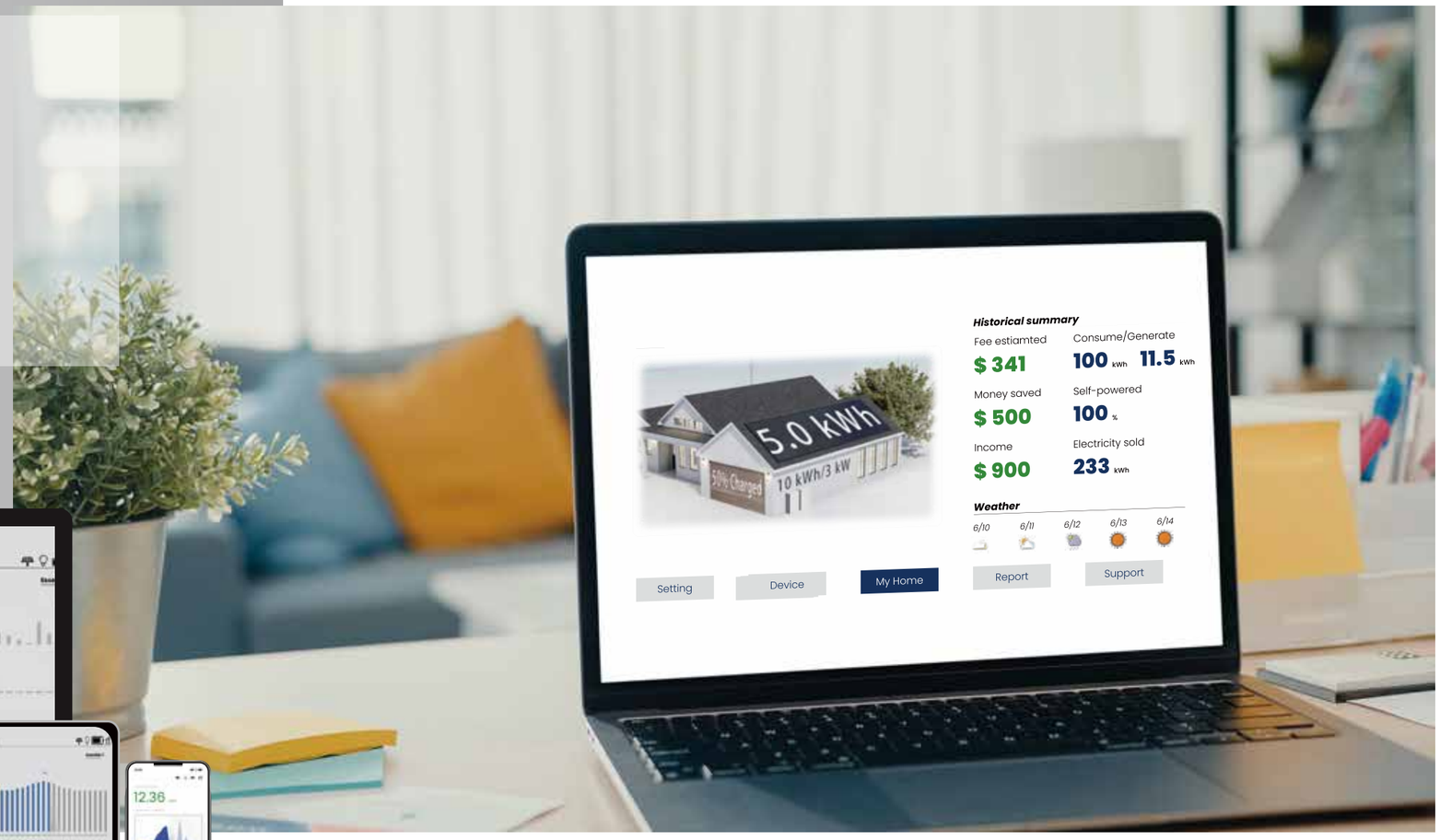
Items	iHome-B5-HD02
Battery type	LFP
Energy capacity	5kWh
Usable capacity	5kWh
Scalability	8
Scalable capacity range	5~40kWh
DOD	100%
Rated power	4kW
Voltage range	360~500Vdc
Max. charge current	11.11A
Max. discharge current	11.11A 13.33A, 10s
Dimensions(W*H*D)	31.5*15*7.9inch (800*380*200mm)
Weight	121.3lb(55kg)
Cooling type	Passive cooling
Altitude	⩽6561 ft (2000m)
Operating temperature	-4°F~122°F (-20~50°C)
Recommended operating temperature	59°F~86°F (15~30°C)
Storage temperature	14°F~113°F (-10~45°C)
Humidity	0~100%RH
Display	LED
Communication interface	RS485, CAN
Topology	Isolated
Connection method	Floor or Wall mounted (optional)
Certification	IEC 62619: 2022, IEC 60730, IEC62040-1, UN38.3
*Specifications are subject to change without prior notice.	

Chelion Residential EMS

Residential Energy Storage System

Chelion' s Residential EMS is an all-round intelligent system designed to monitor variables and meet electric or financial consumption goals. A tailored power plan will automatically optimize system performance to meet user-defined targets and distribute system resources appropriately. The EMS also continuously collects big data, such as weather and grid rates, to improve accuracy. The Residential EMS' s abundance of features and use of local and big data makes it a powerful and reliable all-in-one system for energy needs in any household.





- User-defined energy goals and timeline periods can be set
- Connects to a wide range of existing modules and infrastructure
- Optimized performance by using local and big data
- Will continuously adapt the energy profile to identify energy saving opportunities
- Provides recommendations to enhance longevity and profitability
- Integrated management and diagnostic