




Our team is here to support you or your organisation with leading energy solutions. At Chelion, we work with residential, commercial, industrial & utility clients and offer a comprehensive suite of services to assist you in making the switch to sustainable energy.





www.chelion.com.au



Residential Energy **Storage System** Solutions

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iHome Residential Energy System Benefits

Easy

Easy Installation

Integrates power distribution and cable connection

Easy O&M

Inverter and battery can be separated

Easy Capacity Expansion

Inbuilt DC/DC in each battery module

Smart

Smart Energy Management

Built-in EMS function

Automatic Back-up Switch

< 10 ms

Intelligent Monitoring

Real-time Cloud and App

Investable

Reliable Power Protection

Inbuilt UPS

More Flexible Application

DC/AC coupled and Off-grid

Long life

10 Year Warranty



Working Modes



Self-consumption mode

Realising the maximum self-consumption of solar energy.



Time of use mode

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



Energy scheduling mode

Profit through programable charging and discharging time according to price difference between peak and off-peak time.



Off-grid mode

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



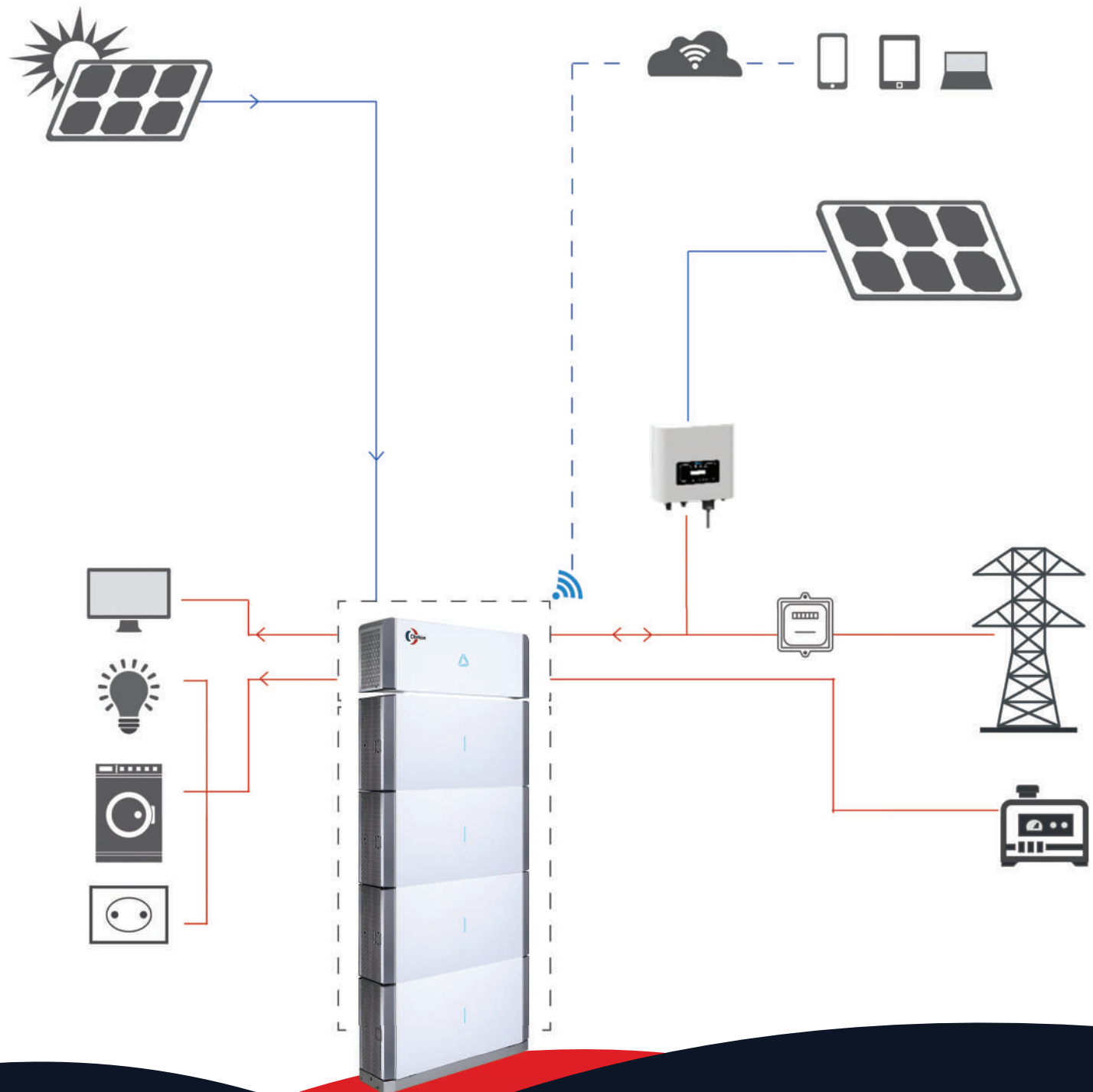
External control mode

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



Back-up mode

Providing blackout protection as an energy back-up unit.






Technical Data


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-optimised to perform at the highest level safely. In addition, it's more flexible and easily configured in new battery augmentation, allows mixed usage of both new and old batteries and completely utilises the full battery capacity.



 UPS with a transfer time < 10 ms
Stronger back-up power up to 7.8kW

 Built-in EMS function with multi-mode operation
Active equalisation and utilises strategy for battery charge and discharge

 Dual-isolation protection design
Integrated modular fire suppression system
Advanced AFCI function and detection of current leakage

 Standardised modular design
Easy installation, operation, maintenance and expand

Items	iHome-SXX**/5K-HD1H01	iHome-SXX**/6K-HD1H01
Inverter model	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
System capacity		5-40kWh
Rated system power	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)	31.5*42.9*9.4inch (800*1090*240mm) (2 battery modules, with foundation) 31.5*11*9.1inch (800*280*232mm) (inverter), 31.5*15*7.9inch (800*380*200mm) (battery module)	
Weight	39.7lb (18kg) (inverter), 121.3lb (55kg) (battery module)	
Ingress protection	IP65	
Noise level	<25dB	
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	VDE-AR-N 4105, VDE V 0124-100, G98, G99, UTE C15-712-1, VDE V 0126-1-1, EN50549-1, CEI0-21, AS4777.2, IEC62109-1/2, IEC61000-6-2/3, EN 61000-3-11, EN 61000-3-12, IEC62619, IEC62040, IEC 60730, UN38.3	

Hybrid Inverter Specification

Items	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
Max. charge / discharge current	13.8A / 20.8A	16.7A / 21.7A
AC Input and Output (On-grid)		
Rated AC output power	5.0kW	6.0kW
Rated AC output voltage		220/230/240Vac
Grid voltage range		180~270Vac
Max. output current	21.7A	26.2A
Max. input current	43.4A	52.4A
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		220/230/240Vac
Rated output frequency		50/60Hz
Rated output power	5.0kW	6.0kW
Peak output power	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-HD01-03 Series

Battery with DC/DC Converter


Chelion's iHome-B5-HD Series is a top-class lithium-ion battery module. There is a built-in DC/DC converter in the module that is optimised 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 optimisation performance

Technical Data

Items	iHome-B5-HD01	iHome-B5-HD02	iHome-B5-HD03
Battery type		LFP	
Energy capacity		5kWh	
Usable capacity		5kWh	
Scalability		8	
Scalable capacity range		5-40kWh	
DOD		100%	
Rated power	2.5kW	4kW	4kW
Voltage range		360-500Vdc	650-900Vdc
Max. charge current	6.94A	11.11A	6.15A
Max. discharge current	6.94A	11.11A	6.15A
	8.3A, 10s	13.33A, 10s	7.38A, 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	UL1973, UL60730, UN38.3,		IEC 62619, IEC 60730, UN38.3

*Specifications are subject to change without prior notice.

Chelion Residential EMS

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 optimise 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



Uses local and big data to optimise performance



Will continuously adapt the energy profile to identify energy saving opportunities



Connects to a wide range of existing modules



Integrated management and diagnostic tools sustain