Chelion Australia

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

Chelion Australia Pty Ltd.

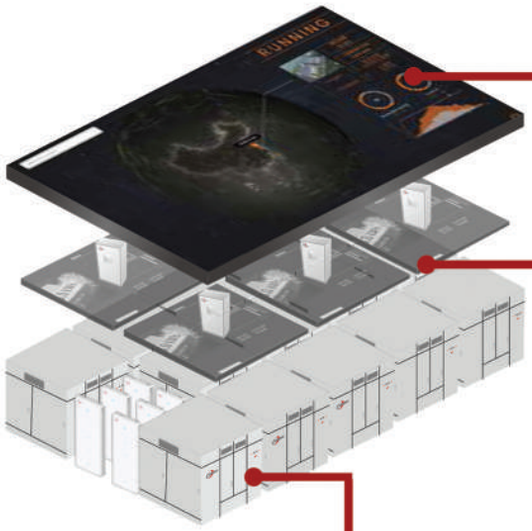
info@chelion.com.au

Chelion

Residential Energy Storage System Solutions

L13 144 Edward Street,
Brisbane City, Qld 4000
1300 208 962

About US



Service

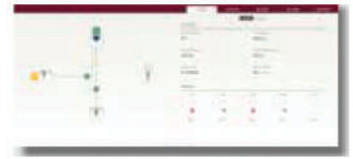
Smart Energy Driver

Software

Digital Energy Platform

Hardware

iHome and Matrix

Financing Services	Maintenance Services	Operation Services
Project Development Investment planning Operational Planning Technical Policy	EPC Asset Management Exception Reporting Maintenance Services AI Control	Asset-backed Securitization Project Transaction Energy Trading VPP New Energy Points Trading Carbon Emissions Trading
 Financial Analytical Software	 Residential EMS  C&I / Utilities EMS	

Residential products

C&I / Utilities Products

We provide access to Global Leading Storage Solutions by integrating energy management technology with domestic & international market resources.

Residential Energy System Solution

Easy

Easy installation
Integrates power distribution and cable connection

Easy O&M
Inverter and battery can be seperated

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 and more available capacity
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 price difference between peak and off-peak time

Off-grid mode

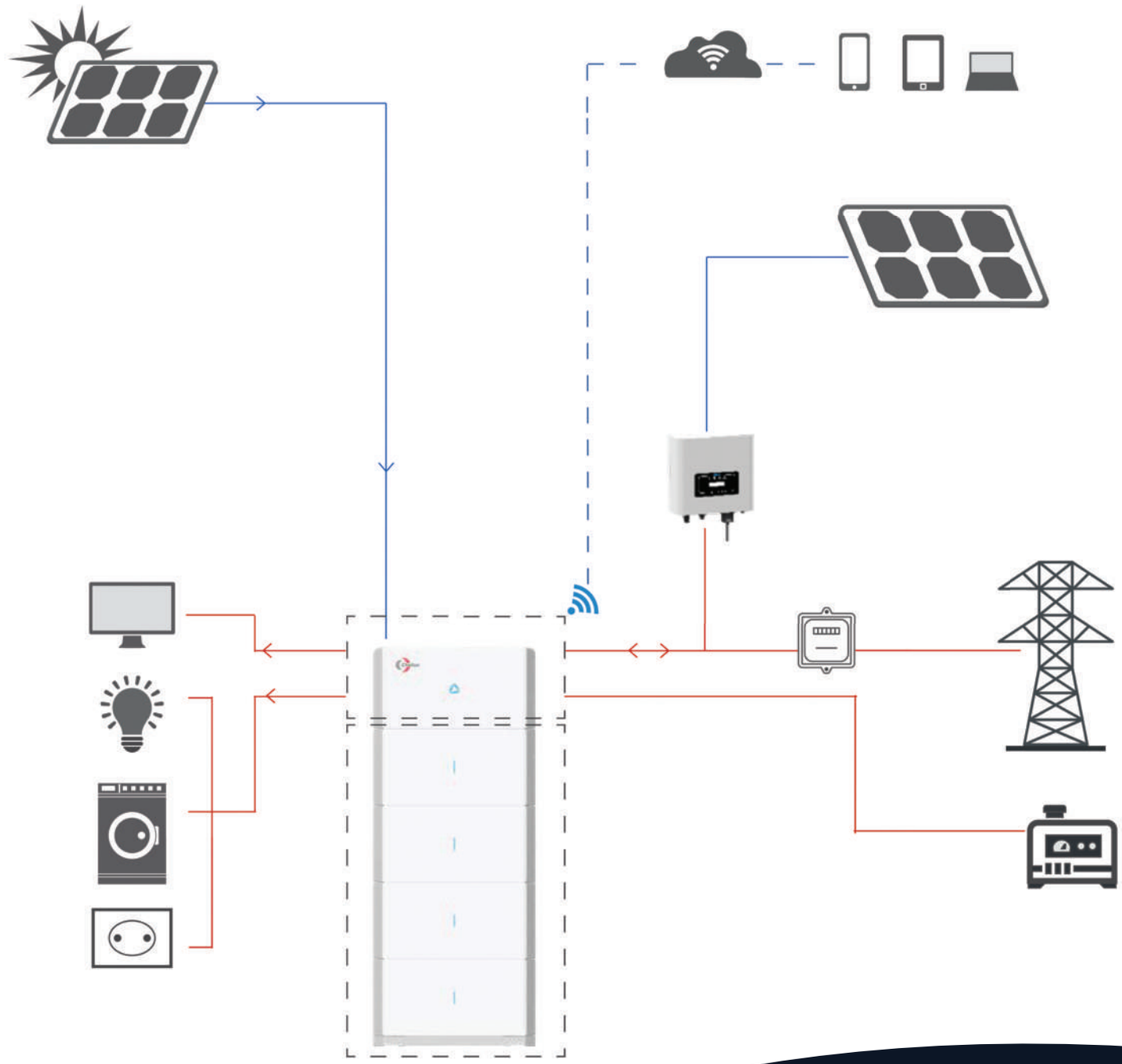
Operating in a complete off-grid mode when no grid power is available

External control mode

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

Back-up mode

Providing blackout protection as an energy back-up unit.



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 additon, 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

Technical Data

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-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 recognise 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 recognise modules
- Multiple safety protection measures

Technical Data

Items	iHome-B6.5-L01
Battery type	LFP
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*30.1*5.7inch (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
Cell safety certification	IEC62619/UL1973
Pack safety certification	IEC62619/UL1973/CE/RCM /CE
UN transportation test standard	UN38.3+PI965（Sea）

iHome-INV-L1H02 Series

Single Phase Hybrid Inverter

The Chelion iHome-INV-L1H02 Series of hybrid energy storage inverter is light and small. Its advanced design maximises energy flexibility. Compatible with both on-and-off-grid PV systems, it can intelligently balance consumption from the grid or battery to ensure energy demand is always within a specific economic or user-defined threshold.

- Up to 16 inverters in parallel even under off-grid condition
- IP65 and fanless design with a long lifespan
- Flexible applications and alternative energy sources input
- Built-in UPS function with 4ms automatic switching time

Technical Data

Items	iHome-INV5K-L1H02
DC Input (PV)	
Recommended Max. PV input power	6.5kW
Max. PV input voltage	500Vdc
Max. PV input current	13+13A
Max. short current	17+17A
No. of MPPT / Strings per MPPT	2 / 1+1
Full load DC volltage range	240~425Vdc
MPPT voltage range	125~425Vdc
Starting voltage	125Vdc
DC Input (BAT)	
Battery type	Lead-acid or Li-ion
Battery voltage range	40~60Vdc
Max. charge / discharge current	120A
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	5.0kW
Max. AC output and UPS power	5.0kW
Rated AC current	21.7A
Max. AC current	21.7A
Max. continuous passthrough	35A
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	50Hz/45Hz-55Hz; L/N/PE 230V/ 195.5V-253V, 240V/204V-264V
Grid type	Split phase
THDi	<3% (Linear load<1.5%)
Efficiency	
Max. efficiency	97.60%
European efficiency	97.00%
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)	13*17*9.4 inch (330*433*238mm)
Weight	33.3lb (15.1kg)
Ingress protection	IP65
Noise level	<30dB
Cooling type	Passive cooling
Operating temperature	-49°F~140°F (-45~60°C), >113°F (45°C) derating
Installation method	Wall-mounted
Communication interface	RS485; CAN
Warranty	5 years
Certification	AS/NZS 4777.2, IEC/EN 61000-6-1/2/3/4, IEC/EN 62109-1, IEC/EN 62109-2

iHome-S-HD3H01 Series

Three Phase HV Residential Energy Storage System

Chelion's iHome-S- HD3H01 Series is an all-in-one solar and storage solution. The system comes preassembled 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 preoptimised 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 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

Technical Data

Items	iHome-SXX**/5K-HD3H01	iHome-SXX**/6K-HD3H01	iHome-SXX**/8K-HD3H01	iHome-SXX**/10K-HD3H01	iHome-SXX**/12K-HD3H01
Inverter model	iHome-INV5K-H3H01	iHome-INV6K-H3H01	iHome-INV8K-H3H01	iHome-INV10K-H3H01	iHome-INV12K-H3H01
Number of Inverter	1				
Battery system model	iHome-BS-HD03				
Number of battery module	1~8				
Battery type	LFP				
System capacity	5~40kWh				
Rated system power	5kW	6kW	8kW	10kW	12kW
Round Trip Efficiency (AC to Battery to AC, at beginning of life)	89.40%				
Round Trip Efficiency (PV to Battery to AC, at beginning of life)	90.80%				
Dimension (W*H*D)	31.5*78.5*9.4inch (800*1995*240mm)(4 battery modules, with foundation) 31.5*15.8*7.9inch (800*400*200mm) (inverter), 31.5*15*7.9inch (800*380*200mm) (battery module)				
Weight	66.1lb (30kg) (inverter), 121.3lb (55kg) (battery module)				
Ingress protection	IP65				
Surge protection	DC Type II & AC Type II				
Noise level	<30dB				
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)				
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)				
Certification	VDE AR-N-4105, VDE V0124-100,VDE 0126-1-1,EN 50549-1 (NCRFG), CEI 0-21, IEC/EN 62109-1, IEC/EN 62109-2,EN61000, IEC 62619, IEC 60730, UN38.3				

Hybrid Inverter Specification

Items	iHome-INV5K-H3H01	iHome-INV6K-H3H01	iHome-INV8K-H3H01	iHome-INV10K-H3H01	iHome-INV12K-H3H01
DC Input (PV)					
Recommended Max. PV input power	9kWp			18kWp	
Max. PV input voltage	1000Vdc				
Max. PV input current	16A+16A			27A+16A	
Max. short current	20A+20A			34A+20A	
No. of MPPT / Strings per MPPT	2 / 1+1			2 / 2+1	
MPPT voltage range	150~900Vdc				
Starting voltage	180Vdc				
DC (PV) switch	Yes				
DC Input (BAT)					
Battery voltage range	630~900Vdc				
AC Input and Output (On-grid)					
Rated AC output power	5kW	6kW	8kW	10kW	12kW
Rated AC output voltage	380/400Vac				
Grid voltage range	323~418Vac/340~440Vac				
Max. output current	7.6A	9.1A	12.2A	15.2A	18.2A
Max. input current	15.2A	18.2A	24.4A	30.4A	
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	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	
Max. output current	18.2A, 60s			30.4A, 60s	
Switch time	<10ms (without parallel), <300ms (parallel)				
Support the unbalanced load	Yes				
Efficiency					
Max. efficiency	98.30%				
European efficiency	97.50%				

*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 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 8.3A, 10s	11.11A 13.33A, 10s	6.15A 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