

Residential **Energy Storage System**

US DIVISION GLOBAL CHELION.US CHELION.COM Locations

Suzhou

• Xi'an



- Shanghai
- Madrid
- Athens
- Silicon Valley
- Hong Kong
- Tokyo
- Brisbane

Enjoy Green Energy

With iHome Energy Storage 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		Smart	Investable	
Eas	sy installation	Smart energy management	Reliable Power Protection	
	Easy O&M	Automatic back-up switch	More flexible application	
Easy ca	apacity expansion	Intelligent monitoring	Long Service Life and more available capacity	

iHome-S-HD1H02 Series

Single Phase HV Residential Energy Storage System

Chelion's iHome-S-HD1H02 Series 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.







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More available capacity in the life cycle









AFCI & RSD function integration

	iHome-S12K-HD1H02		
Inverter model	iHome-INV12K-H1H02		
Number of Inverter	1		
Battery system model	iHome-B5-HD01		
Number of battery module	4		
Battery type	LFP		
System capacity	20kWh		
Rated system power	12kW		
Peak system power	24kW, 10s		
Round Trip Efficiency			
(AC to Battery to AC, at beginning of life)	89.40%		
(PV to Battery to AC at beginning of life)	90.80%		
(i v to battery to ne, at beginning of the)			
Dimension (W*H*D)	31.5*80.5*9.4inch (800*2045*240mm) (four battery modules, with bracket) 31.5*17.7*7.9inch (800*450*200mm) (inverter) 31.5*17.7*7.9inch (800*200*200*200mm) (battary module)		
	31.5 1.5 7.3inch (800 380 200mm) (battery module)		
Weight	66.1lb (30kg) (inverter), 121.3lb (55kg) (battery module)		
Ingress protection	IP65 (outdoor/indoor)		
Surge protection	DC Type II & AC Type II		
Noise level	<40dB@1m		
Cooling type	Passive cooling		
Altitude	≤6561.7 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/4G, Meter-RS485, EMS-RS485 (sunspec)		
Certification	FCC Part 15 Class B, IEEE1547, IEEE1547.1, California Rule 21, HECO Rule 14H,		
*Certifications will be available beginning in November 2022	UL9540, UL 9540A, UL1699B, UL1998, UL1741 SA,UL 1973,UN 38.3		
	Inverter Specification		
	iHome-INV12K-H1H02		
	DC Input (PV)		
Recommended Max. PV input power	18kWp		
Max. PV input voltage	500Vdc		
Max. PV input current	15A+15A+15A		
Max. short current	18.75A+18.75A+18.75A		
No. of MPPT / Strings per MPPT	4 / 1+1+1+1		
	100 E00/dc		
MPPT voltage range	100~500vac		
MPPT voltage range Starting voltage	125Vdc		
MPPT voltage range Starting voltage DC (PV) switch	125Vdc Yes		
MPPT voltage range Starting voltage DC (PV) switch	125Vdc Yes DC Input (BAT)		
MPPT voltage range Starting voltage DC (PV) switch Battery voltage range	125Vdc Yes DC Input (BAT) 360-500Vdc		
MPPT voltage range Starting voltage DC (PV) switch Battery voltage range	125Vdc Yes DC Input (BAT) 360~500Vdc AC Input and Output (On-grid)		
MPPT voltage range Starting voltage DC (PV) switch Battery voltage range Rated AC output power	125Vdc Yes DC Input (BAT) 360-500Vdc AC Input and Output (On-grid) 12kW		
MPPT voltage range Starting voltage DC (PV) switch Battery voltage range Rated AC output power Rated AC output voltage	100-5000c 125Vdc Yes DC Input (BAT) 360-500Vdc AC Input and Output (On-grid) 12kW 2240Vac		
MPPT voltage range Starting voltage DC (PV) switch Battery voltage range Rated AC output power Rated AC output voltage Grid voltage range May, extend server 5	100-5000c 125Vdc Yes DC Input (BAT) 360-500Vdc AC Input and Output (On-grid) 12kW 240Vac 211.2-264Vac		
MPPT voltage range Starting voltage DC (PV) switch Battery voltage range Rated AC output power Rated AC output voltage Grid voltage range Max. output current Pated grid from una grid	100-50000 125Vdc Yes DC Input (BAT) 360-5000dc AC Input and Output (On-grid) 12kW 240Vac 211.2-264Vac SOA		
MPPT voltage range Starting voltage DC (PV) switch Battery voltage range Rated AC output power Rated AC output voltage Grid voltage range Max. output current Rated grid frequency Crid frequency	100-5000c 12500c Yes DC Input (BAT) 360-500Vdc AC Input and Output (On-grid) 12kW 240Vac 240Vac 211.2-264Vac 50A 50A		
MPPT voltage range Starting voltage DC (PV) switch Battery voltage range Rated AC output power Rated AC output voltage Grid voltage range Max. output current Rated grid frequency Grid frequency range Power factor	100-5000C 125Vdc Yes DC Input (BAT) 360-500Vdc AC Input and Output (On-grid) 12kW 240Vac 211.2-264Vac 50A 60Hz 55-65Hz		
MPPT voltage range Starting voltage DC (PV) switch Battery voltage range Rated AC output power Rated AC output voltage Grid voltage range Max. output current Rated grid frequency Grid frequency range Power factor Adjustable power factor	100-5000C 125000C Yes DC Input (BAT) 360-500Vdc AC Input and Output (On-grid) 12kW 240Vac 240Vac 240Vac 240Vac 50A 60Hz 50A 60Hz 55-65Hz >0.99 (rated power) 0.85 (lagging)		
MPPT voltage range Starting voltage DC (PV) switch Battery voltage range Rated AC output power Rated AC output voltage Grid voltage range Max. output current Rated grid frequency Grid frequency range Power factor Adjustable power factor	100-5000C 125000C Yes DC Input (BAT) 360-5000dc AC Input and Output (On-grid) 12kW 2400ac 2400ac 211.2-264Vac 50A 60Hz 50A 60Hz 55-65Hz >0.99 (rated power) 0.85 (lagging) 22% (rated power)		
MPPT voltage range Starting voltage DC (PV) switch Battery voltage range Rated AC output power Rated AC output voltage Grid voltage range Max. output current Rated grid frequency Grid frequency range Power factor Adjustable power factor THDi Over current protection device	100-5000C 125000 Yes DC Input (BAT) 360-500Vdc AC Input and Output (On-grid) 12kW 240Vac 240Vac 211.2-264Vac 50A 60Hz 50A 60Hz 50-55-65Hz >0.99 (rated power) 0.85 (leading) -0.85 (lagging) <3 % (rated power) 1000 brooker		
MPPT voltage range Starting voltage DC (PV) switch Battery voltage range Rated AC output power Rated AC output voltage Grid voltage range Max. output current Rated grid frequency Grid frequency range Power factor Adjustable power factor THDi Over current protection device Max. supply fault current	100-5000C 12500c Yes DC Input (BAT) 360-500Vdc AC Input and Output (On-grid) 12kW 240Vac 240Vac 241.2-264Vac 50A 60Hz 50A 60Hz 50S-65Hz >0.99 (rated power) 0.85 (leading) ~0.85 (lagging) <3 % (rated power) 100A breaker		
MPPT voltage range Starting voltage DC (PV) switch Battery voltage range Rated AC output power Rated AC output voltage Grid voltage range Max. output current Rated grid frequency Grid frequency range Power factor Adjustable power factor THDi Over current protection device Max. supply fault current	100-5000C 125Vdc Yes DC Input (BAT) 360-500Vdc AC Input and Output (On-grid) 12kW 240Vac 240Vac 211.2-264Vac 50A 60Hz 50A 60Hz 55~65Hz >0.99 (rated power) 0.85 (leading) ~0.85 (lagging) <3 % (rated power) 100A breaker 5kA		
MPPT voltage range Starting voltage DC (PV) switch Battery voltage range Rated AC output power Rated AC output voltage Grid voltage range Max. output current Rated grid frequency Grid frequency range Power factor Adjustable power factor THDi Over current protection device Max. supply fault current Rated AC output power	100-5000C 12500C Yes DC Input (BAT) 360-500Vdc AC Input and Output (On-grid) 12kW 240Vac 240Vac 241.2-264Vac 50A 60Hz 50A 60Hz 50-65Hz >0.99 (rated power) 0.85 (leading) ~0.85 (lagging) <3 % (rated power) 100A breaker 5kA AC Input (Generator) 12kW		
MPPT voltage range Starting voltage DC (PV) switch Battery voltage range Rated AC output power Rated AC output voltage Grid voltage range Max. output current Rated grid frequency Grid frequency range Power factor Adjustable power factor THDi Over current protection device Max. supply fault current Rated AC output power Over current protection device	۱۵0-5000C 125Vdc Yes DC Input (BAT) 360-500Vdc AC Input and Output (On-grid) 12kW 240Vac 211.2-264Vac 50A 60Hz 50/9 (rated power) 0.85 (leading) ~0.85 (lagging) <3 % (rated power)		
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MPPT voltage range Starting voltage DC (PV) switch Battery voltage range Rated AC output power Rated AC output voltage Grid voltage range Max. output current Rated grid frequency Grid frequency range Power factor Adjustable power factor THDi Over current protection device Max. supply fault current Rated AC output power Over current protection device Max. supply fault current Rated AC output power Over current protection device Max. supply fault current Rated AC output voltage Rated AC output voltage Rated AC output voltage			
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MPPT voltage range Starting voltage DC (PV) switch Battery voltage range Rated AC output power Rated AC output voltage Grid voltage range Max. output current Rated grid frequency Grid frequency range Power factor Adjustable power factor THDi Over current protection device Max. supply fault current Rated AC output power Over current protection device Max. supply fault current Rated AC output voltage Rated AC output voltage Rated output frequency Rated output frequency Rated output power Peak output power Peak output current Switch time Over current protection device Over current protection device Over current protection device Current			
MPPT voltage range Starting voltage DC (PV) switch Battery voltage range Rated AC output power Rated AC output voltage Grid voltage range Max. output current Rated grid frequency Grid frequency range Power factor Adjustable power factor THDi Over current protection device Max. supply fault current Rated AC output power Over current protection device Max. supply fault current Rated AC output voltage Rated output frequency Rated output frequency Rated output power Peak output power Peak output current Switch time Over current protection device Max. supply fault current	100-300VdC 125Vdc Yes DC Input (BAT) 360-500Vdc AC Input and Output (On-grid) 12kW 240Vac 240Vac 240Vac 240Vac 50A 60Hz 50A 60Hz 55-65Hz >0.99 (rated power) 0.85 (leading) -0.85 (lagging) <3% (rated power) 100A breaker 5kA C Input (Generator) 12kW 63A breaker 5kA C Conput (Back-up) 240Vac/120Vac 2W/N/PE, Split Phase 60Hz 12kW 240Vac/120Vac 2W/N/PE, Split Phase 60Hz 12kW 240Vac/120Vac 2W/N/PE, Split Phase 60Hz 12kW 240Vac/120Vac 2W/N/PE, Split Phase 60Hz 12kW		
MPPT voltage range Starting voltage DC (PV) switch Battery voltage range Rated AC output power Rated AC output voltage Grid voltage range Max. output current Rated grid frequency Grid frequency range Power factor Adjustable power factor THDi Over current protection device Max. supply fault current Rated AC output power Over current protection device Max. supply fault current Rated AC output power Over current protection device Max. supply fault current Rated AC output power Peak output power Peak output current Switch time Over current protection device Max. supply fault current Switch time Over current protection device Max. supply fault current Support the unbalanced load			
MPPT voltage range Starting voltage DC (PV) switch Battery voltage range Rated AC output power Rated AC output voltage Grid voltage range Max. output current Rated grid frequency Grid frequency range Power factor Adjustable power factor THDi Over current protection device Max. supply fault current Rated AC output power Over current protection device Max. supply fault current Rated AC output power Over current protection device Max. supply fault current Rated AC output voltage Rated output frequency Rated output frequency Rated output power Peak output power Peak output current Switch time Over current protection device Max. supply fault current Support the unbalanced load	100-300vdt 125Vdc Yes 0 D I nput (BAT) 360-500Vdc AC Input and Output (On-grid) 12kW 240Vac 240Vac 60Hz 50A 60Hz 50-55Hz 240ver) 0.85 (leading) - 0.85 (leading) 360-56Hz 100A breaker 50A 60Hz 50-56Hz 60Hz 50-56Hz 60Hz 50-56Hz 60Hz 50-56Hz 100A breaker 58A 63A breaker 54A 60Hz 240Vac/120Vac 2W/N/PE, Split Phase 60Hz 12kW 60Hz 60Hz 60Hz 60Hz 12kW 60Hz </td		

	iHome-S12K-HD1H02				
Inverter model	iHome-INV12K-H1H02				
Number of Inverter	1				
Battery system model	iHome-B5-HD01				
Number of battery module	4				
Battery type	LFP				
System capacity	20kWh				
Rated system power	12kW				
Peak system power	24kW 10s				
Pound Trip Efficiency					
(ACto Dottorito AC at heringing of life)	89.40%				
(AC to Battery to AC, at beginning of life)					
Round Trip Efficiency	00.000/				
(PV to Battery to AC, at beginning of life)	90.00%				
Dimension (W*H*D)	31.5*80.5*9.4inch (800*2045*240mm) (four battery modules, with bracket) 31.5*17.7*7.9inch (800*450*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 (outdoor/indoor)				
Surge protection	DC Type II & AC Type II				
Noise level	40dB@1m				
Cooling type	Passive cooling				
Altitude	≤6561.7 ft (2000m)				
Operating temperature	-4°E~12°E (-20~50°C)				
Recommended operating temperature					
Storage temperature	0.00 + 0.00 + (10.50 C) 14/9E_1129E / 110_46(c)				
Operating humidity					
	U~100%tn				
Display					
Communication interface	Portal-WiFI/4G, Meter-RS485, EMS-RS485 (sunspec)				
Certification *Certifications will be available beginning in November 2022	FCC Part 15 Class B, IEEE1547, IEEE1547.1, California Rule 21, HECO Rule 14H,				
	Inverter Specification				
Decommonded May DV input neuror	IOKWD				
Recommended Max. PV input power	FOUND				
Recommended Max. PV input power Max. PV input voltage Max. PV input voltage	500Vdc				
Recommended Max. PV input power Max. PV input voltage Max. PV input current	500Vdc 15A+15A+15A				
Recommended Max. PV input power Max. PV input voltage Max. PV input current Max. short current	500Vdc 15A+15A+15A 18.75A+18.75A+18.75A				
Recommended Max. PV input power Max. PV input voltage Max. PV input current Max. short current No. of MPPT / Strings per MPPT	500Vdc 15A+15A+15A+15A 18.75A+18.75A+18.75A 4 / 1+1+11				
Recommended Max. PV input power Max. PV input voltage Max. PV input current Max. short current No. of MPPT / Strings per MPPT MPPT voltage range	500Vdc 15A+15A+15A+15A 18.75A+18.75A+18.75A 4 / 1+1+1+1 100-500Vdc				
Recommended Max. PV input power Max. PV input voltage Max. PV input current Max. short current No. of MPPT / Strings per MPPT MPPT voltage range Starting voltage	500Vdc 15A+15A+15A 18.75A+18.75A+18.75A 4 / 1+1+1+1 100-500Vdc 125Vdc				
Recommended Max. PV input power Max. PV input voltage Max. PV input current Max. short current No. of MPPT / Strings per MPPT MPPT voltage range Starting voltage DC (PV) switch	500Vdc 15A+15A+15A 18.75A+18.75A+18.75A 4 / 1+1+1+1 100-500Vdc 125Vdc Yes				
Recommended Max. PV input power Max. PV input voltage Max. PV input current Max. short current No. of MPPT / Strings per MPPT MPPT voltage range Starting voltage DC (PV) switch	500Vdc 15A+15A+15A 18.75A+18.75A+18.75A 4 / 1+1+1+1 100~500Vdc 125Vdc Yes DC Input (BAT)				
Recommended Max. PV input power Max. PV input voltage Max. PV input current Max. short current No. of MPPT / Strings per MPPT MPPT voltage range Starting voltage DC (PV) switch Battery voltage range	500Vdc 15A+15A+15A 18.75A+18.75A+18.75A 4 / 1+1+1+1 100-500Vdc 125Vdc Yes DC Input (BAT) 360-500Vdc				
Recommended Max. PV input power Max. PV input voltage Max. PV input current Max. short current No. of MPPT / Strings per MPPT MPPT voltage range Starting voltage DC (PV) switch Battery voltage range	500Vdc 15A+15A+15A 18.75A+18.75A+18.75A 4 / 1+1+1+1 100-500Vdc 125Vdc Yes DC Input (BAT) 360-500Vdc AC Input and Output (On-grid)				
Recommended Max. PV input power Max. PV input voltage Max. PV input current Max. short current No. of MPPT / Strings per MPPT MPPT voltage range Starting voltage DC (PV) switch Battery voltage range Rated AC output power	500vdc 15A+15A+15A 18.75A+18.75A+18.75A 4/1+1+1+1 100-500vdc 125vdc Yes DC Input (BAT) 360-500vdc 125vdc 126v				
Recommended Max. PV input power Max. PV input voltage Max. PV input current Max. short current No. of MPPT / Strings per MPPT MPPT voltage range Starting voltage DC (PV) switch Battery voltage range Rated AC output power Rated AC output voltage	500vdc 15A+15A+15A 18.75A+18.75A+18.75A 4/1+1+1 100-500Vdc 125Vdc Yes DC Input (BAT) 360-500Vdc 125Vdc				
Recommended Max. PV input power Max. PV input voltage Max. PV input current Max. short current No. of MPPT / Strings per MPPT MPPT voltage range Starting voltage DC (PV) switch Battery voltage range Rated AC output power Rated AC output voltage Grid voltage range	500Vdc 15A+15A+15A 18.75A+18.75A+18.75A 4 / 1+1+1+1 100-500Vdc 125Vdc Yes DC Input (BAT) 360-500Vdc AC Input and Output (On-grid) 12kW 240Vac 211.2-264Vac				
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Recommended Max. PV input power Max. PV input voltage Max. PV input current Max. short current No. of MPPT / Strings per MPPT MPPT voltage range Starting voltage DC (PV) switch Battery voltage range Rated AC output power Rated AC output voltage Grid voltage range Max. output current Rated grid frequency Grid frequency range Power factor Adjustable power factor	500vdc 15A+15A+15A 18.75A+18.75A+18.75A 4/1+1+1 100-500Vdc 125Vdc Yes DC Input (BAT) 360-500Vdc 125Vdc 125000000000000000000000000000000000000				
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Recommended Max. PV input power Max. PV input voltage Max. PV input current Max. short current No. of MPPT / Strings per MPPT MPPT voltage range Starting voltage DC (PV) switch Battery voltage range Rated AC output power Rated AC output voltage Grid voltage range Max. output current Rated grid frequency Grid frequency range Power factor Adjustable power factor THDi Over current protection device	500Vdc 15A+15A+15A 18.75A+18.75A+18.75A 4/1+1+11 100-500Vdc 125Vdc Yes DC Input (BAT) 360-500Vdc 12kW 240Vac 211.2~264Vac 50A 60Hz 55~65Hz >0.99 (rated power) 0.85 (leaging) <3% (rated power)				
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Recommended Max. PV input power Max. PV input voltage Max. PV input current Max. short current No. of MPPT / Strings per MPPT MPPT voltage range Starting voltage DC (PV) switch Battery voltage range Rated AC output power Rated AC output voltage Grid voltage range Max. output current Rated grid frequency Grid frequency range Power factor Adjustable power factor THDi Over current protection device Max. supply fault current	500Vdc 15A+15A+15A 18.75A+15A+15A 4.1+15A+15A 100-500Vdc 125Vdc 0 125Vdc 0 125Vdc 0 125Vdc 126V 126V 128V 128V <t< td=""></t<>				
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Technical Data

iHome-B5-HD 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 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.



Items	iHome-B5-HD01	iHome-B5-HD02	iHome-B5-HD03	
Battery type		LFP		
Energy capacity	5kWh			
Scalability	8			
Scalable capacity range	5~40kWh			
DOD	100%			
Rated power	2.5kW	4kW	4kW	
Rated voltage	380Vdc		650Vdc	
Voltage range	360~500Vdc		630~900Vdc	
Max. charge current	6.94A	11.11A	6.25A	
May discharge surrent	6.94A	11.11A	6.25A	
Max. discharge current	8.3A, 10s	13.33A, 10s	7.5A, 10s	
Dimensions(W*H*D)	31.5*15*7.9inch (800*380*200mm)			
Weight	121.3lb (55kg) (battery module)			
Cooling type	Passive cooling			
Altitude	≤6561.7 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			
Certification *Certifications will be available beginning in November 2022	UL 1973, UL 1741, UL 1998, UL 9540A,FCC, UN 38.3	UL 1973,UL 1998, IEC 62619:2022, IEC 60730, IEC 62040-1,UN 38.3	UL 1973,UL 1998, IEC 62619:2022, IEC 60730, UN 38.3	
*Specifications are subject to change without prior no	tice.			

Technical Data

Chelion Residential EMS

Three Phase HV 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.



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2.36 -



3.EVW

LAWN

7.8 kW



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Setting

