



Since its establishment in 2014, Shenzhen Improve Battery Co., Ltd has been dedicated to the research, development, production, and export of LiFePO4 batteries. We have established multiple modern production lines capable of manufacturing Residential LV Batteries, Residential HV Batteries, Low-Speed Vehicle Batteries, and Lead-Acid Replacement Batteries. Our products are widely used in residential energy storage, Rvs energy storage, low-speed vehicles, and other fields, with customers spanning over 50 countries and regions worldwide. We have earned high praise and trust from our clients.

Any needs about Lithium battery?
Please visit www.improvecn.com/contact and fill out the form below.



We will give you

- Email Technical Manual
- Make a quotation
- Book a business meeting
- Book a Factory Tour



RESIDENTIAL

Energy Storage System

Shenzhen Improve Battery Co.,Ltd

Head Office Addr: 2F Rongcheng Industrial Park, Yayuan Road,Longgang District, Shenzhen City, Guangdong, China.

Factory Addr: Building 3, Rome Fuyuan Street No.8, Qingxi Town, Dongguan City, Guangdong, China.

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Shenzhen Improve Battery Co.,Ltd.
Dongguan Improve Battery Co.,Ltd.

IMPROVE BATTERY

Shenzhen IMPROVE BATTERY Co., Ltd. was established in 2014 and is located in Shenzhen. We specialize in the research, development, production, and export of LiFePO4 lithium batteries. Our products are widely used in energy storage, Caravan, golf carts, and other fields. We operate a factory in Dongguan with a monthly production capacity of over 15,000 batteries and has strong OEM/ODM project capabilities.

IMPROVE is committed to the development of green energy, providing safe and reliable new energy solutions, with the goal of becoming a global leader in the lithium battery industry.

1200+ Global Customers

5500m² Factory Area

50+ Lithium Battery Product Ranges

130+ Customized Model

Quality Control Certificates

IMPROVE has obtained a number of third-party authoritative qualification certifications according to the qualification.

- ISO 9001:2015 (Quality Management System)
- ISO 14001:2015 (Environmental Management System)
- ISO 45001:2018 (Occupational Health and Safety Management System)



Product Certifications

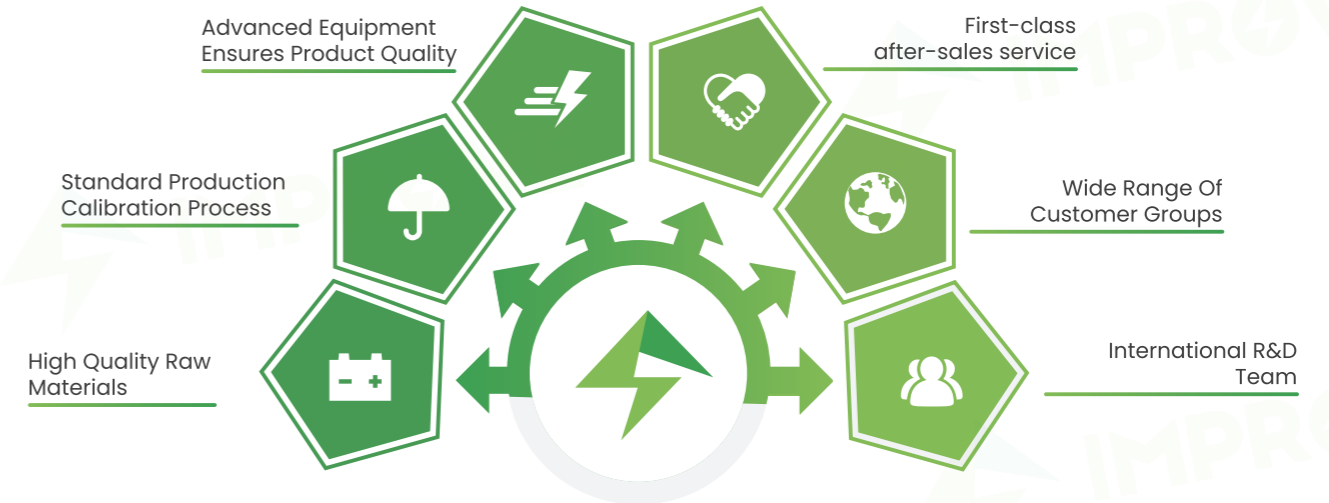
- CE EN 61000-6-1 ENIEC 61000-6-3
- PS E J55032(H29)
- FC FCC Part 15 B, ANSI C63.4:2014
- RoHS RoHS 2.0 Directive (EU) 2015/863 & (EU)2017/2102
- TRANSPORT UN38.3 MSDS
- UL CELL UL Certified

Ensure solid product quality and smooth import & export.



Get a fresh upgrade with our solutions

We are always committed to the innovation and exploration of new energy solutions. With years of experience, we provide customers with professional and precise customized services to meet diverse needs.



We are honored to provide customers with the following professional solutions:

- **Low-Speed Vehicle Batteries** including golf carts, sightseeing cars, UTVs and etc.
- **Household Energy Storage System** including home storage, off-grid energy storage and etc.
- **Caravan Energy Storage Batteries** including RV storage, off-grid energy storage and etc.
- **Industrial Batteries** including forklift, floor cleaning /sweeping machines and etc.
- **LiFePO4 Battery (Lead-acid Replacement)** including replacement of various lead-acid batteries.



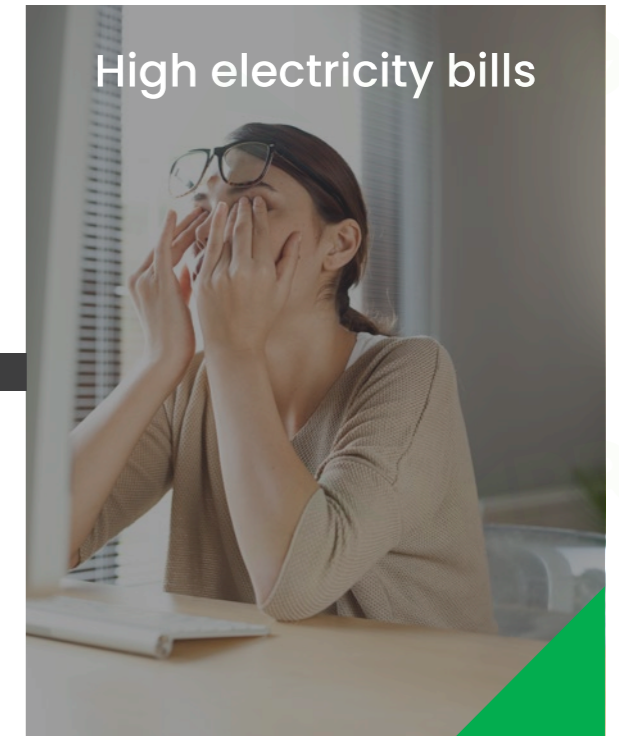
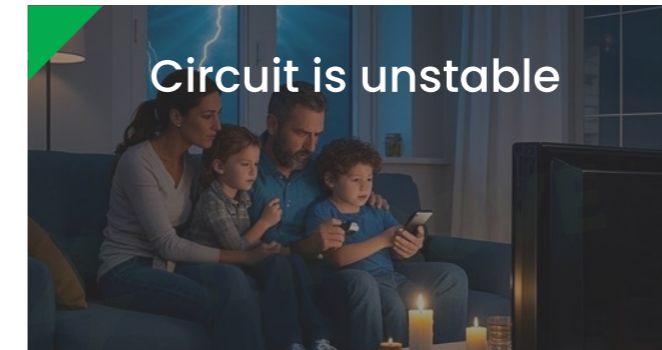


Break Free – Power Your Future

Uninterrupted power, smarter savings! The IMPROVE Home Energy Storage System ensures stable and reliable power supply, safeguarding a sustainable future with green energy.

The Shortcomings

of Traditional Energy Storage Solutions



Why Choose IMPROVE Battery ?

Choose us and embark on a worry - free and energy - saving carefree life!

Save money

Break free from bill anxiety, take control of your household energy spending.



Backup power

No more blackout worries! When the grid goes down, our system switches seamlessly, providing uninterrupted power to keep your home running.



Environmental friendly

Intelligently manages solar power, prioritizing clean energy for charging—efficient, economical, and eco-friendly.



Stabilize

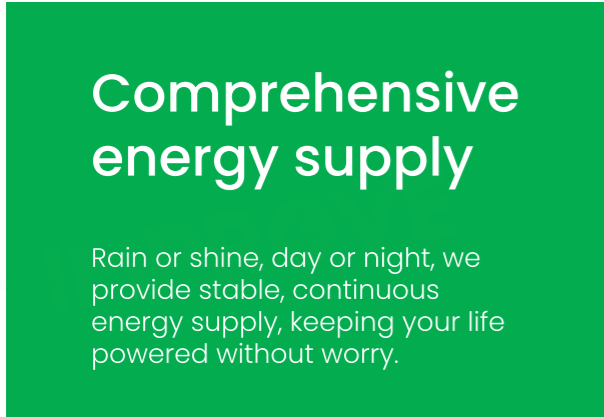
No matter how the grid fluctuates, your appliances keep running smoothly—life never skips a beat.





Backup power protection

When the grid fails, backup power kicks in instantly, providing continuous and stable energy for your home.



Comprehensive energy supply

Rain or shine, day or night, we provide stable, continuous energy supply, keeping your life powered without worry.



Control Your Energy!

IMPROVE app monitors energy in real time, optimizes self-use & savings, and enables remote control.



Sleek & Versatile!

IMPROVE features a compact, all-in-one design for easy installation, seamlessly blending into any home style. Whether indoors or outdoors, it adapts flexibly to your space needs.



Application Scenarios

Energy storage



Use stored energy anytime to power your home.




During power outages




High Voltage Stackable Energy Storage System


IMP-HV-PB4872



 Easy Installation

 Smart BMS

 Three-phase supported

 Longer Cycle Life

 Safety & Reliability

 Flexible & Customizable

Technical Specifications



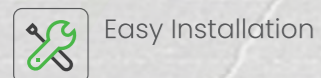
Datasheet	Specification					
Battery Modules	IMP-HV-PB4872 (51.2V72Ah 3,686.4Wh)					
Num. of Modules	3	4	5	6	7	8
Nominal Energy	11.05kWh	14.74kWh	18.43kWh	22.11kWh	25.80kWh	29.49kWh
Available Energy	9.94kWh	13.26kWh	16.58kWh	19.89kWh	23.22kWh	26.54kWh
Nominal Voltage	153.6V	204.8V	256V	307.2V	358.4V	409.6V
Dimension (W x D x H) mm	650x290x805	650x290x970	650x290x1135	650x290x1300	650x290x1465	650x290x1630
Approx. Weight	131Kg	166Kg	201Kg	236Kg	271Kg	306 Kg
Life Cycles	≥6,000 Cycles (80%DOD), at 25°C					
Anode Material	LiFePO4					
Self Discharge Rate	≤3% per month at 25°C					
Charge						
Standard Charge Current	30A					
Max. Charge Current	60A					
Charge Voltage	175.2V	233.6V	292.0V	350.4V	408.8V	467.2V
Discharge						
Max. Continuous Discharge Current	60A					
Discharge Cut-off	134.4V	179.2V	224.0V	268.8V	313.6V	358.4V
Temperature						
Charge	0 ~ 50°C (32 ~ 122°F)					
Discharge	-20 ~ 60°C (-4 ~ 140°F)					
Storage	15 ~ 35°C (59 ~ 95°F)					
Communication Mod						
PCS	X 1					
CAN	X 1					
RS485	X 1					



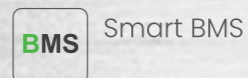
* The technical specifications of this document are subject to change without any notice.

High Voltage Stackable Energy Storage System

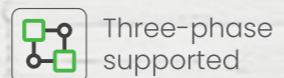
IMP-HV-PB48100



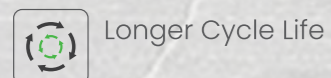
Easy Installation



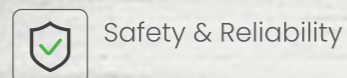
Smart BMS



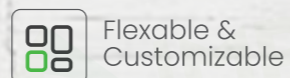
Three-phase supported



Longer Cycle Life



Safety & Reliability



Flexible & Customizable

Technical Specifications



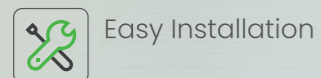
Datasheet	Specification					
Battery Modules	IMP-HV-PB48100 (51.2V 100Ah 5,120Wh)					
Num. of Modules	3	4	5	6	7	8
Nominal Energy	15.36kWh	20.48kWh	25.60kWh	30.72kWh	35.84kWh	40.96kWh
Available Energy	13.82kWh	18.43kWh	23.04kWh	27.64kWh	32.25kWh	36.86kWh
Nominal Voltage	153.6V	204.8V	256V	307.2V	358.4V	409.6V
Dimension (W x D x H) mm	600x400x740	600x400x890	600x400x1040	600x400x1190	600x400x1340	600x400x1490
Approx. Weight	165Kg	210Kg	255Kg	300Kg	345Kg	390Kg
Life Cycles	≥6,000 Cycles (80%DOD), at 25°C					
Anode Material	LiFePO4					
Self Discharge Rate	≤3% per month at 25°C					
Charge						
Standard Charge Current	50A					
Max. Charge Current	85A					
Charge Voltage	175.2V	233.6V	292.0V	350.4V	408.8V	467.2V
Discharge						
Max. Continuous Discharge Current	85A					
Discharge Cut-off	134.4V	179.2V	224.0V	268.8V	313.6V	358.4V
Temperature						
Charge	0 ~ 50°C (32 ~ 122°F)					
Discharge	-20 ~ 60°C (-4 ~ 140°F)					
Storage	15 ~ 35°C (59 ~ 95°F)					
Communication Mod						
PCS	X 1					
CAN	X 1					
RS485	X 1					



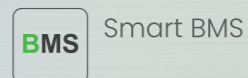
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High Voltage Stackable Energy Storage System

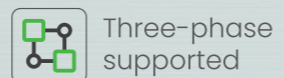
IMP-HV-PB72230



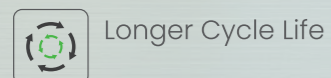
Easy Installation



Smart BMS



Three-phase supported



Longer Cycle Life



Safety & Reliability



Flexible & Customizable

Technical Specifications



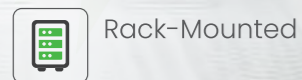
Datasheet	Specification		
Battery Modules	IMP-HV-PB72230 (76.8V230Ah 17,664Wh)		
Num. of Modules	3	4	5
Nominal Energy	52.99kWh	70.65kWh	88.32kWh
Available Energy	47.69kWh	63.58kWh	79.48kWh
Nominal Voltage	230.4V	307.2V	384V
Dimension (W x D x H) mm	800x560x1135 mm	800x560x1270 mm	800x560x1405 mm
Approx. Weight	525Kg	685Kg	845Kg
Life Cycles	≥6,000 Cycles (80%DOD), at 25°C		
Anode Material	LiFePO4		
Self Discharge Rate	≤3% per month at 25°C		
Charge			
Standard Charge Current	50A		
Max. Charge Current	150A		
Charge Voltage	262.8V	350.4V	438.0V
Discharge			
Max. Continuous Discharge Current	150A		
Discharge Cut-off	201.6V	268.8V	336.0V
Temperature			
Charge	0 ~ 50°C (32 ~ 122°F)		
Discharge	-20 ~ 60°C (-4 ~ 140°F)		
Storage	15 ~ 35°C (59 ~ 95°F)		
Communication Mod			
PCS	X 1		
CAN	X 1		
RS485	X 1		



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High Voltage Rack Energy Storage System

IMP-HV-CT48100



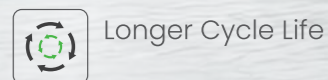
Rack-Mounted



Smart BMS



Higher Power



Longer Cycle Life



Safety & Reliability

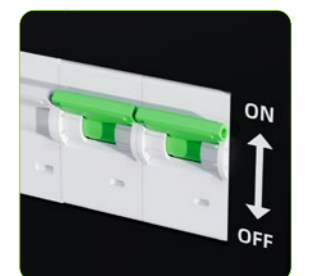


Flexible & Customizable

Technical Specifications



Datasheet	Specification					
Model	IMP-HV-CT48100 (51.2V 100Ah 5,120Wh)					
Num. of Modules	3	4	5	6	7	8
Nominal Energy	15.36kWh	20.48kWh	25.60kWh	30.72kWh	35.84kWh	40.96kWh
Available Energy	13.82kWh	18.43kWh	23.04kWh	27.64kWh	32.25kWh	36.86kWh
Nominal Voltage	153.6V	204.8V	256V	307.2V	358.4V	409.6V
Nominal Capacity	100Ah					
Dimension (W x D x H)	446*450*710 mm	446*450*888 mm	446*450*1066 mm	446*450*1244 mm	446*450*1422 mm	446*450*1600 mm
Approx. Weight	160Kg	208Kg	256Kg	304Kg	352Kg	400Kg
Life Cycles	≥6,000 Cycles (80%DOD), at 25°C					
Anode Material	LiFePO4					
Charge						
Standard Charge Current	50A					
Max. charge Current	85A					
Charge Voltage	175.2V	233.6V	292.0V	350.4V	408.8V	467.2V
Discharge						
Max Continuous Discharge Current	85A					
Discharge Cut-off Voltage	134.4V	179.2V	224.0V	268.8V	313.6V	358.4V
Temperature						
Charge	0 ~ 50°C (32 ~ 122°F)					
Discharge	-20 ~ 60°C (-4 ~ 140°F)					
Storage	15 ~ 35°C (59 ~ 95°F)					
Communication Mod						
COM	X 1					
CAN	X 1					
RS485	X 1					




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High Voltage Rack Energy Storage System


IMP-HV-CT96100




 Rack-Mounted

 Smart BMS

 Higher Power

 Longer Cycle Life

 Safety & Reliability

 Flexible & Customizable

Technical Specifications



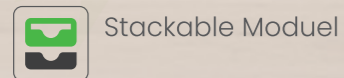
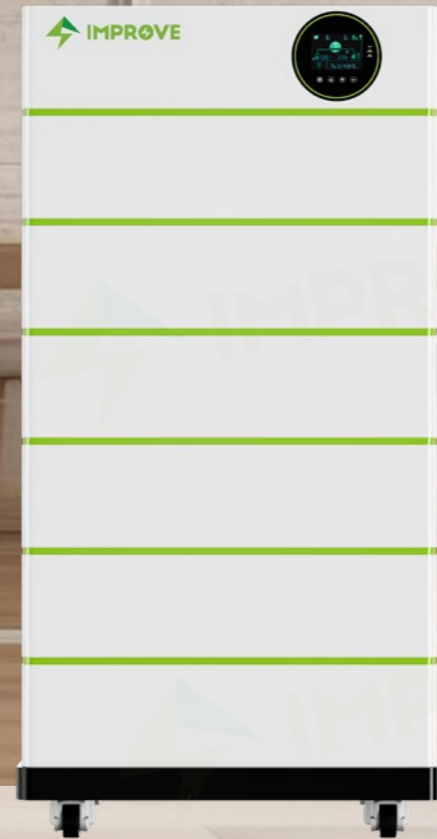
Datasheet	Specification			
Model	IMP-HV-CT96100 (102.4V 100Ah 10,240Wh)			
Num. of Modules	3	4	5	6
Nominal Energy	30.72kWh	40.96kWh	51.20kWh	61.44kWh
Available Energy	27.64kWh	36.86kWh	46.08kWh	55.29kWh
Nominal Voltage	307.2V	409.6V	512V	614.4V
Nominal Capacity	100Ah			
Dimension (W x D x H)	460*750*620 mm	460*750*775 mm	460*750*930 mm	460*750*1085 mm
Approx. Weight	290Kg	375Kg	460Kg	545Kg
Life Cycles	≥6,000 Cycles (80%DOD), at 25°C			
Anode Material	LiFePO4			
Charge				
Standard Charge Current	50A			
Max. charge Current	85A			
Charge Voltage	350.4V	467.2V	584.0V	700.8V
Discharge				
Max Continuous Discharge Current	85A			
Discharge Cut-off Voltage	268.8V	358.4V	448.0V	537.6V
Temperature				
Charge	0 ~ 50°C (32 ~ 122°F)			
Discharge	-20 ~ 60°C (-4 ~ 140°F)			
Storage	15 ~ 35°C (59 ~ 95°F)			
Communication Mod				
PCS	X 1			
RS485	X 1			
PAR-IN/OUT	X 1			



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Stackable Energy Storage System

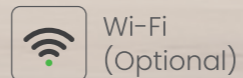
IMP-PB48100



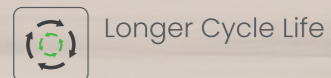
Stackable Moduel



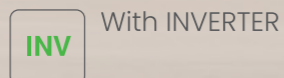
Smart BMS



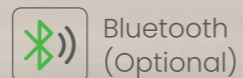
Wi-Fi (Optional)



Longer Cycle Life



With INVERTER



Bluetooth (Optional)

Technical Specifications



Datasheet	Specification					
Battery Modules	IMP-PB48100 (51.2V 100Ah 5.12kWh)					
Num. of Modules	1	2	3	4	5	6
Nominal Energy	5.12kWh	10.24kWh	15.36kWh	20.48kWh	25.6kWh	30.72kWh
Dimension (W x D x H)	666*516*444 mm	666*516*618 mm	666*516*792 mm	666*516*966 mm	666*516*1140 mm	666*516*1314 mm
Approx. Weight	102Kg	160Kg	215Kg	270Kg	325Kg	380Kg
Life Cycles	≥6,000 Cycles (80%DOD), at 25°C					
Max. Continuous Current	Charge/Discharge: 100A					
Temperature	Charging: 0°C ~ +55°C (32°F ~ 131°F) / Discharging: -20°C ~ +60°C (-4°F ~ 140°F) Storage: -10°C ~ +45°C (14°F ~ 113°F)					
Communication Port	CAN / RS485 / RS232 (Optional Bluetooth / Wi-Fi)					
Certification	CE, RoHS, FCC, PSE, MSDS, UN38.3					
Inverter	110Vac			230Vac		
Inverter Output						
Rated Output Power	5,000W					
Rated Output Voltage	120Vac (L/N/PE single-phase)			230Vac (L/N/PE single-phase)		
Rated AC Frequency	50 / 60Hz					
Parallel Capacity	1-6 units (single/three phase)					
PV Input						
Max. PV Array Power	5,500W					
Max. Input Current	22A					
Max. Volatge of Open Circuit	500Vdc					
MPPT Voltage Range	125~450Vdc					
Grid / Generator Input						
Input Voltage Range	90~140Vac			90~280Vac		
Frequency Range	50Hz / 60Hz					
Bypass Overload Current	63A			40A		
Efficiency						
MPPT Tracking Efficiency	99.9%					
Max. Efficiency	92%					
Battery Charging						
Max.Solar Charging Current	100A					
Max. Mains/Generator Charging Current	40A			60A		
Max. Hybrid Charging Current	100A					

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Stackable Energy Storage System

IMP-PB48200



Stackable Moduel



Smart BMS



Wi-Fi (Optional)



Longer Cycle Life



With INVERTER



Bluetooth (Optional)

Technical Specifications



Datasheet	Specification		
Battery Modules	IMP-PB48200 (51.2V 200Ah 10.24kWh)		
Num. of Modules	1	2	3
Nominal Energy	10.24kWh	20.48kWh	30.72kWh
Dimension (W x D x H)	600*500*635 mm	600*500*968 mm	600*500*1301 mm
Approx. Weight	130Kg	221Kg	312Kg
Life Cycles	≥6,000 Cycles (80%DOD), at 25°C		
Max. Continuous Current	Charge/Discharge: 100A		
Temperature	Charging: 0°C ~ +55°C (32°F ~ 131°F) / Discharging: -20°C ~ +60°C (-4°F ~ 140°F) Storage: -10°C ~ +45°C (14°F ~ 113°F)		
Communication Port	CAN / RS485 / RS232 (Optional Bluetooth / Wi-Fi)		
Certification	CE, RoHS, FCC, PSE, MSDS, UN38.3		
Inverter	110Vac	230Vac	
Inverter Output			
Rated Output Power	5,000W		
Rated Output Voltage	120Vac (L/N/PE single-phase)	230Vac (L/N/PE single-phase)	
Rated AC Frequency	50 / 60Hz		
Parallel Capacity	1-6 units (single/three phase)		
PV Input			
Max. PV Array Power	5,500W		
Max. Input Current	22A		
Max. Volatge of Open Circuit	500Vdc		
MPPT Voltage Range	125~450Vdc		
Grid / Generator Input			
Input Voltage Range	90~140Vac	90~280Vac	
Frequency Range	50Hz / 60Hz		
Bypass Overload Current	63A	40A	
Efficiency			
MPPT Tracking Efficiency	99.9%		
Max. Efficiency	92%		
Battery Charging			
Max.Solar Charging Current	100A		
Max. Mains/Generator Charging Current	40A	60A	
Max. Hybrid Charging Current	100A		

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Vertical Energy Storage System

IMP-VPB48100



Designed for Families



Smart BMS



With INVERTER



Longer Cycle Life



Flexible & Customizable



Wi-Fi (Optional)

Technical Specifications

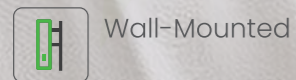
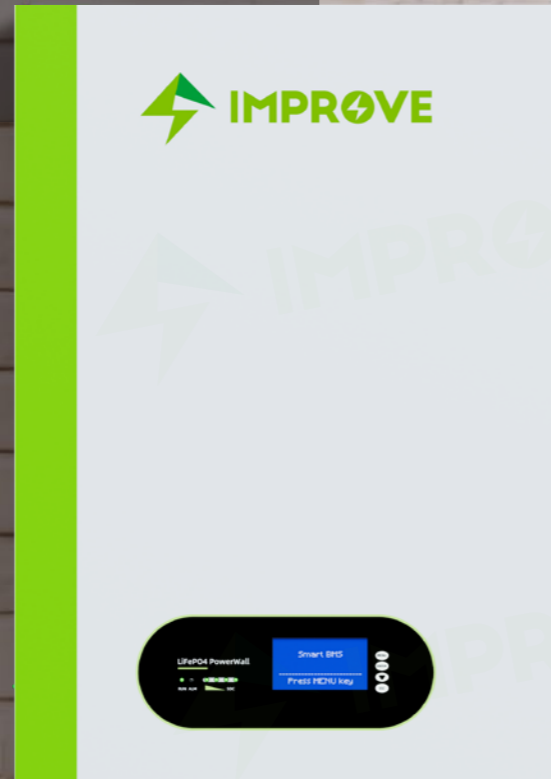


Datasheet	Specification		
Battery Modules	IMP-VPB48100 (51.2V 100Ah 5.12kWh)		
Num. of Modules	1	2	3
Nominal Energy	5.12kWh	10.24kWh	15.36kWh
Dimension (W x D x H) mm	705*179.5*1058	705*179.5*1468	705*179.5*1878
Approx. Weight	84Kg	126Kg	168Kg
Life Cycles	≥6,000 Cycles (80%DOD), at 25°C		
Max. Continuous Current	Charge/Discharge: 100A		
Temperature	Charging: 0°C ~ +55°C (32°F ~ 131°F) / Discharging: -20°C ~ +60°C (-4°F ~ 140°F) Storage: -10°C ~ +45°C (14°F ~ 113°F)		
Communication Port	RS485 (Optional Bluetooth / Wi-Fi)		
Certification	CE, RoHS, FCC, PSE, MSDS, UN38.3		
Inverter	110Vac	230Vac	
Inverter Output			
Rated Output Power	5,000W		
Rated Output Voltage	120Vac (L/N/PE single-phase)	230Vac (L/N/PE single-phase)	
Rated AC Frequency	50 / 60Hz		
PV Input			
Max. PV Array Power	5,500W		
Max. Input Current	22A		
Max. Voltage of Open Circuit	500Vdc		
MPPT Voltage Range	125~450Vdc		
Grid / Generator Input			
Input Voltage Range	90-140Vac	90-280Vac	
Frequency Range	50Hz / 60Hz		
Bypass Overload Current	63A	40A	
Efficiency			
MPPT Tracking Efficiency	99.9%		
Max. Efficiency	92%		
Battery Charging			
Max. Solar Charging Current	100A		
Max. Mains/Generator Charging Current	40A	60A	
Max. Hybrid Charging Current	100A		

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Wall-Mounted Battery

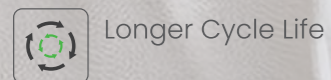
IMP-PW48100
IMP-PW48200



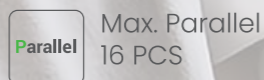
Wall-Mounted



Smart BMS



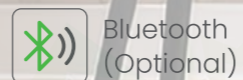
Longer Cycle Life



Max. Parallel
16 PCS



Wi-Fi
(Optional)



Bluetooth
(Optional)

Technical Specifications



Datasheet		Specification	
Model		IMP-PW48100	IMP-PW48200
Nominal Voltage		51.2V	
Nominal Capacity		100Ah	200Ah
Nominal Energy		5,120Wh	10,240Wh
Dimension (H x W x D)		615*420*145mm	800*550*145mm
Approx. Weight		52Kg	86Kg
Life Cycles		≥6,000 Cycles (80%DOD), at 25°C	
Charge & Discharge			
Charge Voltage		58.4V	
Discharge Cut-off Voltage		43V	
Standard Current	Charge	20A	20A
	Discharge	50A	50A
Max. Continuous Current	Charge	100A	100A (200A customized)
	Discharge	100A	100A (200A customized)
General			
Temperature	Charge	0 ~ 55°C (32 ~ 131°F)	
	Discharge	-20 ~ 60°C (-4 ~ 140°F)	
Storage Temperature		-10 ~ 45°C (14 ~ 113°F)	
Module Parallel		16PCS	
Communication Mod		RS232 / RS485 / CAN	
Certification		CE, RoHS, FCC, PSE, MSDS, UN38.3	
Optional		BLUETOOTH / Wi-Fi / HEATER	

* The technical specifications of this document are subject to change without any notice.



Rack-Mounted Battery

IMP-CT48100
IMP-CT48200



Rack-Mounted



Smart BMS



Higher Power



Longer Cycle Life



Safety & Reliability



Flexible & Customizable

Technical Specifications



Datasheet		Specification	
Model		IMP-CT48100	IMP-CT48200
Nominal Voltage		51.2V	
Nominal Capacity		100Ah	200Ah
Nominal Energy		5,120Wh	10,240Wh
Dimension (H x W x D)		19-inch 3U/4U chassis	19-inch 3.5U/4U chassis
Approx. Weight		47Kg	75Kg
Life Cycles		≥6,000 Cycles (80%DOD), at 25°C	
Charge & Discharge			
Charge Voltage		58.4V	
Discharge Cut-off Voltage		43V	
Standard Current	Charge	20A	20A
	Discharge	50A	50A
Max. Continuous Current	Charge	100A	100A (200A customized)
	Discharge	100A	100A (200A customized)
General			
Temperature	Charge	0 ~ 55°C (32 ~ 131°F)	
	Discharge	-20 ~ 60°C (-4 ~ 140°F)	
Storage Temperature		-10 ~ 45°C (14 ~ 113°F)	
Module Parallel		16PCS	
Communication Mod		RS232 / RS485 / CAN	
Certification		CE, UN38.3, ROHS, MSDS, FCC, PSE	

* The technical specifications of this document are subject to change without any notice.



Customized Stacking Component

Directly use LiTime customized integrated stacking component

Server Rack Cabinet

3-4U Directly plug it in a 3-4U standard server rack cabinet to use

