NOVGEN

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LIGHT UP YOUR HOME OF THE FUTURE

Leading the way in introducing secure, intelligent and environmentally friendly energy solutions into homes worldwide.

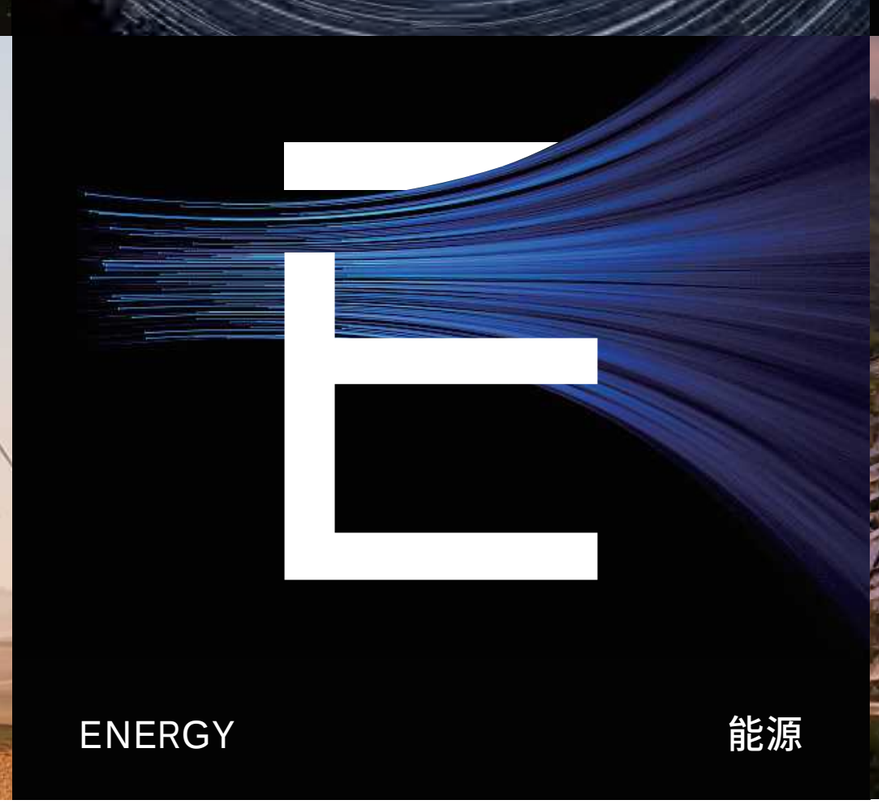
NOVGEN


INNOVATION
创新


COMMITMENT
承诺


VALUE
价值


GREEN
绿色


ENERGY
能源


NETWORK
互联

BUSINESS LAYOUT

CLEAN ENERGY SOLUTION

Shenzhen NOVGEN Digital Energy Co., Ltd is at the forefront of technology, dedicated to advancing the field of user-focused energy storage solutions. Our core mission is to lead the way in introducing secure, intelligent and environmentally friendly energy solutions into homes worldwide. At NOVGEN, we provide holistic clean energy solutions rooted in a customer-centric philosophy. We are driven by an unyielding commitment to ongoing innovation, ensuring we deliver competitive, reliable, and trusted products and services to our customers.

50000+ Global sales channels

70% Penetration rate of European and American channels

PART OF THE JIAWEI GROUP	VIDIS
POSO 品上照明 智在应用 smart application	INTEGRATED PRODUCTION, RESEARCH, AND SALES PROFESSIONAL LIGHTING
SMART HOME	MAXIMUS®
ezsolar®	INNOVATIVE SOLAR LANDSCAPE LIGHTING

MILESTONE

Industrial Development
Photovoltaic and Energy Storage

1993
Founded as the 1st Photovoltaic Enterprise in China

1997
Built the first factory and established the industry standard for civilian photovoltaic lighting

2000
Became the 1st photovoltaic module manufacturer in China that offers 20-year warranty

2005
Joint research on ultra-high conversion efficiency solar cells with Zhongshan University

2006
Mass produced N - type pull - crystal, solar cells and modules

2014
Acquired power station assets and EPC company Huayuan, and started photovoltaic power generation business

2016
Established Jiawei LongPower subsidiary and entered Lithium battery and energy storage industry

2021
Photovoltaic EPC construction scale exceeded 4GW

2023
Started to invest in industrial and commercial energy storage assets

2023
Established NOVGEN Digital Energy and entered energy storage system mainstream market in Europe

Consumer Application
The largest PV lighting exporter in China

1998
Invented and produced solar landscape lights, entered mainstream sales channels in Europe-America

2003
Started to build overseas direct sales channels and established Canadian-French subsidiaries

2010
Established the US subsidiary and the North American operation headquarters

2012
Successful IPO and launched on the Shenzhen Stock Exchange;
Set up a subsidiary in Germany

2014
Acquired the famous domestic commercial lighting brand POSO Lighting and a Danish company L&D

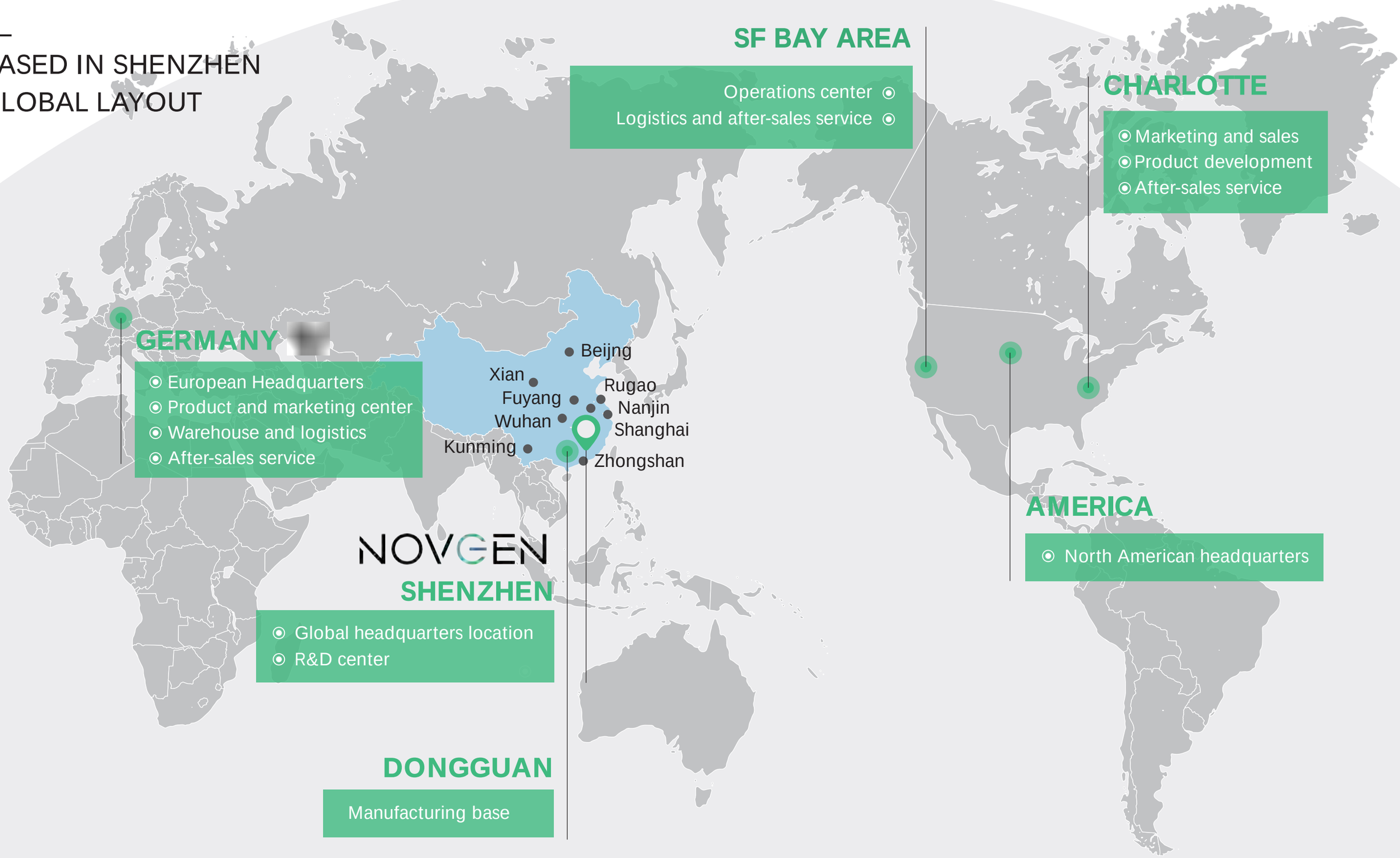
2015
Launched Maximus smart security lighting products in North America

2017
Became the largest mobile power supplier in the sharing-bike industry

2020
Photovoltaic solar consumer products entered more than 50K sales channels globally

GLOBAL LAYOUT

BASED IN SHENZHEN
GLOBAL LAYOUT



NOVGEN

BUSINESS LAYOUT

CATALOGUE

Balcony ESS

·SunWave Light Kit

·SunWave Pro Kit

·NOVB-2048

·NOVB-2400

·NOVM-800

Residential ESS

·Altair Battery

·Polaris Hybrid Inverter

·Altair All In One

Portable Power Station

·NOVP-1200

·NOVP-2200

NOVGEN

BALCONY ENERGY STORAGE SYSTEM

SunWave Light Kit 800W/2048Wh

- ULTRA LIGHT
- DUAL FUNCTIONS
- SMART PLUG&PLAY
- BIDIRECTIONAL

BALCONY ENERGY STORAGE SYSTEM

SunWave Pro Kit 800W/2400Wh

- COST SAVINGS
- LONG LIFESPAN
- EASY INSTALLATION
- SAFE & CONVENIENT

NOVB-2048

All-in-One Solution & ON/OFF-Grid Mode Switch

Design for Green Power & Energy Saving

Dual functions

Portable Power station & Solar balcony system intergrated together

Portable light design

Only 23.2kg with handles design ready for outdoor camping

Smart Plug & Play

No installation needed

Remote control ready

Adjustable grid connected power

Bidirectional inverter included

Refill the battery even without solar panel

BALCONY ESS

NOVB-2048 embodies a grid-connected, all-in-one portable power station (PPS). When combined with solar panels, this adaptable system seamlessly evolves into a practical home balcony solar solution. This convenient setup allows for energy collection from solar panels during the day, promoting cost savings by utilizing stored energy during the night.

Moreover, when employed solely as a PPS, NOVB-2048 proves invaluable for outdoor camping needs. Its versatile functionality caters to various energy requirements in different settings.

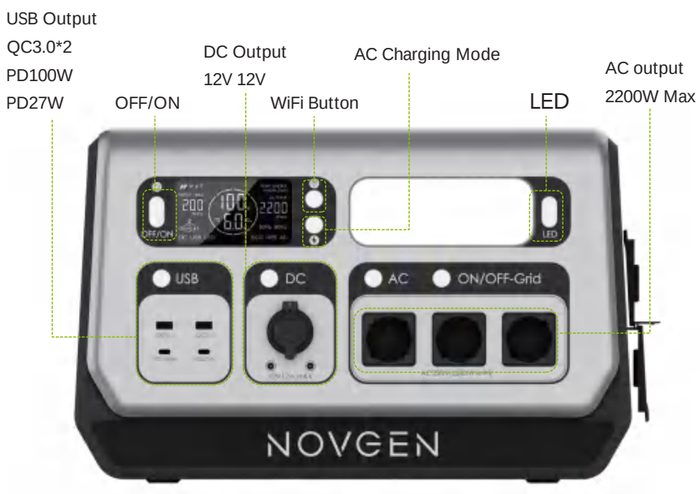
Furthermore, the bidirectional technology incorporated into NOVB-2048 facilitates refilling its battery directly from your wall outlet (grid) without solar panel. This feature empowers the unit to efficiently and quickly charge and discharge from the grid, providing advanced flexibility in managing energy consumption patterns even during extreme weather.

TECHNICAL PARAMETERS

MODEL	NOVB-2048
BATTERY INFO	
Model Name	NOVB-2048
Battery Type	LiFePO4
Capacity	2048Wh / 640000mAh
INPUT	
AC Charging	AC100~125V / AC174~264V Bidirectional Inverter 1400W Max
Car Charging	DC12-24V /15A 360W Max
Solar Charging	DC18~100V /15A 1200W Max
OUTPUT	
Rated Power (Off/On grid)	2200W Max / 800W max
Peak Power	4400W Max
Output Voltage	110V±10% or 230V±10%
Output Frequency	60Hz±5% or 50Hz±5%
USB Output	2*QC18W+PD27W+PD100W Max
DC Output	1*Cigarette Lighter 12.8V/12A Max+2*DC5521 Rated Output 12.8V/5A Max
FUNCTION	
AC Recharging Time	Quick Charge: 1.5-2Hrs/Normal Charge: 4-5Hrs /Silent Charge: 6-7Hrs
UPS Function	Support
APP Control	Support
Micro On-grid	Support
Output Waveform	Pure Sine Wave
LED	3 Levels(H/M/L)+SOS
Weight / Size (W/H/D)	23.2 kg / 465x295x260mm

High Power & Large Capacity

Ready for 99%+ home appliances



NOVGEN

NOVB-2400

SunWave-STORAGE BATTERY

BALCONY SOLAR SYSTEM

By installating NOVB-2400, you can transform your on-grid PV system into a hybrid solution with simple plug&play connection, which maximizes self consumption and achieves cost savings. Make full use of clean energy during the day and store it for later/night use.

EASY INSTALLATION
PLUG & PLAY

2×MPPT & BATTERY
INTERGRATED

IP65 WATERPROOF
MULTI-LAYERS BATTERY
MANAGEMENT SYSTEM

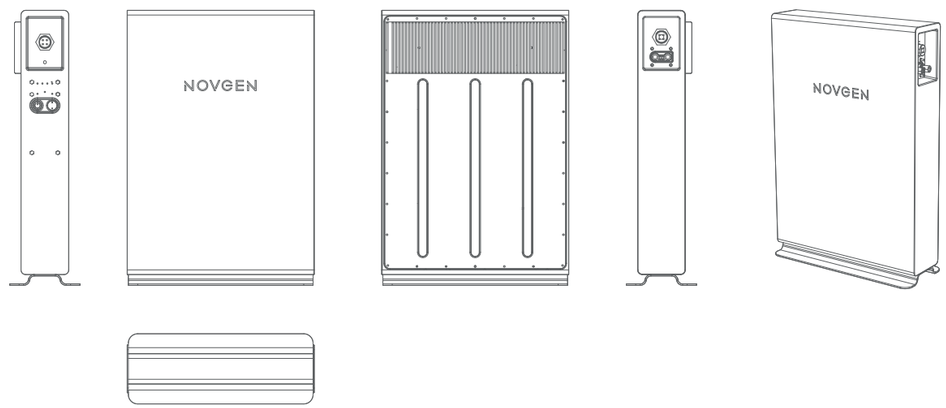
EXPANDABLE CAPACITY
2400Wh—4800Wh

SMART REMOTE
CONTROL

OVER 10 YEARS LIFESPAN
LIFE CYCLE 4000+ TIMES

TECHNICAL PARAMETERS

MODEL	NOVB-2400
PV INPUT | DC	
Recommended. PV Module	425*2/210*4 (2S2P) W
MPPT Voltage Range	18-55 V
Startup Voltage	22 V
Max. Input Voltage	60 V
Max. Input Current	14 A x 2
Min. Input Voltage	16 V
Max. Input Power	500 W x 2
MPPT Efficiency	>99.5
Peak Conversion Efficiency	97.5%
BATTERY DATA	
Battery Type	LiFePO4
Cycle Life/Cycles (100% DOD)	4000＋
Battery Voltage	42-54 V
Max Charging/Discharging current	25/25 A
Max Charging/Discharging power	1200/1200 W
Nominal Voltage	51.2 V
Capacity	2400 Wh
BATTERY OUTPUT TO MICROINVERTER	
Recommended Microinverter Power	800 W
Max. Output Power	1000 W
Max. Output Current	25 A
GENERAL DATA	
Operating Temperature	-20~55°C
Weight	27±0.5
Protection Class	IP65
Dimension (W/H/D)	400x587x102
Overvoltage/Overcurrent/Short Circuit/Temperature Protection	Integrated
Communication Method	WIFI
Relative Humidity Range	0-100%



NOVGEN

BALCONY MICROINVERTER

NOVM-800

MAXIMIZED EFFICIENCY

Individual optimization, se-parate dedicated MPPT for each panel. New topology design, max. efficiency up to 96.7%

FLEXIBILITY

Suitable for AC module solution. Plug & play installation, Easy to install

SAFETY

Max. DC voltage 60V. No threat for high DC voltage. Integrat-ed LoM protection function. Ensure the safety of power grid

RELIABILITY

Die casting design and glue filling technology. Better thermal dissipation. Standard 12 years warranty, Quality guaranteed

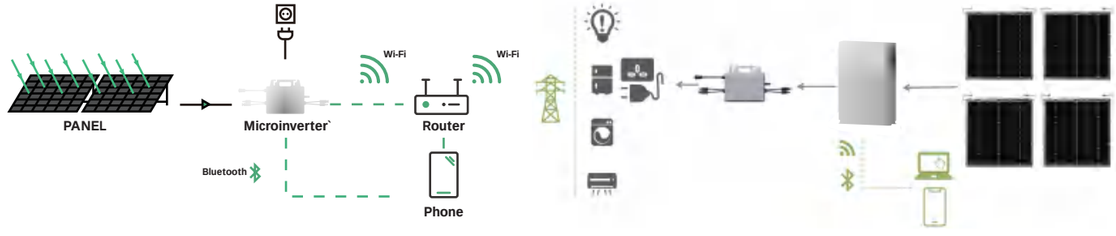
CE VDE 0126 VDE 4105 E5 0549 RD 1699 G 98

TECHNICAL PARAMETERS

MODEL	NOVM-800
INPUT | DC	
Recommended Module Power	300-550 W
Start up Voltage	22 V
MPPT Voltage Range	16-60 V
Max. Input Voltage	60 V
Max. Input Current	2 * 14 A
Max. Input Short-circuit Current	2 * 20 A
OUTPUT | AC	
Max. Continuous Output Power	800 VA
Max. Output Current	4 A
Nominal Output Voltage	230 V, L/N/PE
Nominal Frequency	50 Hz
Power Factor	>0.99 default
EFFICIENCY	
Peak Inverter Efficiency	96.7%
Nominal MPPT Efficiency	99.9%
Night Time Power Consumption	< 50 mW
GENERAL DATA	
Dimensions (W/H/D)	250x170x28 mm
Weight	2.5 kg
Operating Ambient Temperature Range	-40 °C to 65°C
Cooling	Natural Convection
Type of Isolation	Galvanically Isolated HF Transformer
Type of Enclosure	IP67
DC Connector Type	QC4 (Stäubli MC4 Optional)
Compliance	CE-RED, EN 50549-1:2019, VDE-AR-N 4105:2018, CEI 0-21:2022, TOR, Synergrid
POWER CORD | OPTIONAL	
Wire Size	1.5 mm²
Cable Length:	5m / 10m / 20m
Plug Type:	Schuko
MONITORING	
Communication	Built-in WiFi module

1) The output power of microinverter can be limited to 300W / 600W according to the local regulations.
2) The AC voltage and frequency range may vary depending on specific country grid.
3) The microinverter may derate under poor ventilation and heat dissipation installation environment.
4) The length and plug type can be customized.

Diagram



NOVOEN

ULTRA LIGHT 210W

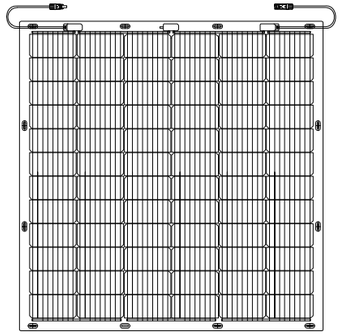
SunWave-SOLAR PANEL

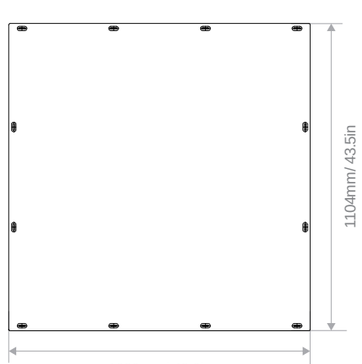
- ULTRA-LIGHT
- FLEXIBLE TECHNOLOGY
- IP67
- PLUG AND PLAY
- EASY TO INSTALL
- EXTREMELY WEATHER RESISTANT

WARRANTY

12-year material and workmanship warranty

25-year linear power warranty (attenuation ≤ 2% in the first year, ≤ 0.55% per year thereafter)





ACCESSORIES

2 in 1 PV Connector

2m MC4 to MC4

Cable Tie x13

TECHNICAL PARAMETERS

SPECIFICATION		ELECTRICAL SPECIFICATIONS	
Model	ULTRA LIGHT 210W	Rated Peak Power (Pmax)	210 W
MECHANICAL SPECIFICATIONS		Open Circuit Voltage (Voc)	49.2V
Solar Cell Type	Monocrystalline 166mm half cell	Short Circuit current (Isc)	5.36 A
Number of batteries	72 (12 x 6)	Maximum Power Voltage(Vmp)	414V
Dimensions (W/H/D)	42.6x43.5x0.1 in (1083x1104x3mm)	Maximum Power Current (Imp)	5.07 A
Net Product Weight	4.3 kg	Module Efficiency	19.3%
Backsheet Color	White/Black	Operating Temperature	-40°F to 185°F (-40°C to 85°C)
Frame	Frameless	Maximum system voltage	DC1000 V (EC)
Protection Level	IP67	Maximum series fuse current rating	20 A
Output cable	TuV 4.0 mm^2	Application Level	Class A
Wire length	(+)450m, (-)450mm, or customized	Power Tolerance	±5%
Connector	MC4 compatible	Standard Test Conditions	1000w/M^2, 25°C, AM.5

NOVOEN

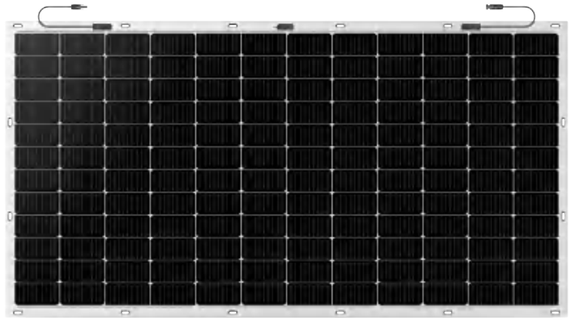
ULTRA LIGHT 425W

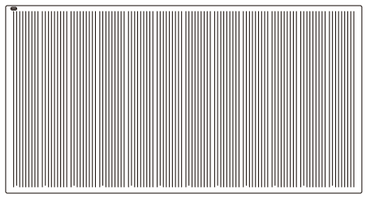
SunWave-SOLAR PANEL

- ULTRA-LIGHT
- FLEXIBLE TECHNOLOGY
- IP67
- PLUG AND PLAY
- EASY TO INSTALL
- EXTREMELY WEATHER RESISTANT

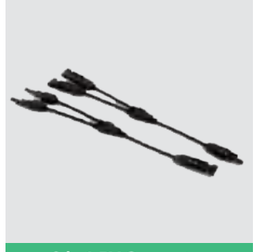
WARRANTY

12-year material and workmanship warranty
25-year linear power warranty (attenuation ≤ 2% in the first year, ≤ 0.55% per year thereafter)



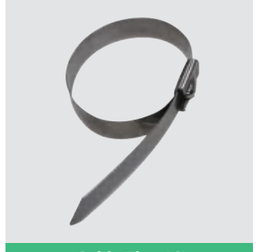


ACCESSORIES



2 in 1 PV Connector

2m MC4 to MC4



Cable Tie x13

TECHNICAL PARAMETERS

SPECIFICATION		ELECTRICAL SPECIFICATIONS	
Model	ULTRA LIGHT 425W	Rated Peak Power (Pmax)	425 W
MECHANICAL SPECIFICATIONS		Open Circuit Voltage (Voc)	49.2 V
Solar Cell Type	Monocrystalline 166mm half cell	Short Circuit current (Isc)	10.76 A
Number of batteries	144 (12 x12)	Maximum Power Voltage(Vmp)	414 V
Dimensions (W/H/D)	82.6x43.5x0.1in (2097x1104x3mm)	Maximum Power Current (Imp)	10.3 A
Net Product Weight	8.4 kg	Module Efficiency	19.3%
Backsheet Color	White/Black	Operating Temperature	-40°F to185°F(-40°C to 85°C)
Frame	Frameless	Maximum system voltage	DC 1000 V (IEC)
Protection Level	IP67	Maximum series fuse current rating	20 A
Output cable	TUV 4.0 mm^2	Application Level	Class A
Wire length	(+)450m, (-)450mm, or customized	Power Tolerance	±5%
Connector	MC4 compatible	Standard Test Conditions	1000w/m2, 25°C, AM1.5

RESIDENTIAL ENERGY STORAGE SYSTEM

ALTAIR HVS BATTERY -2.56kWh

HIGH VOLTAGE BATTERY

7.68 to 25.6 kWh

SAFE

- Modular design with plug-in connections
- Quick connections between battery and inverter
- Quick & easy-to-install with basic tools
- 10 years warranty

RELIABLE

- IP65 rated design
- High quality cell inside
- Aerosol Protection as fire extinguisher

USER-FRIENDLY

- Stackable and expandable up to 25.6 kWh (10 modules)
- Multi-use applications: self consumption, peak shaving
- Online monitoring via Novgen apps

TECHNICAL DATASHEET

	BATTERY MODULE	Altair HVS Battery - 2.56 kWh							
SYSTEM DATA	Cell Type	LiFePo4							
	Module Quantity	3	4	5	6	7	8	9	10
	Nominal Energy [1]	7.68 kWh	10.24 kWh	12.8 kWh	15.36 kWh	17.92 kWh	20.48 kWh	23.04 kWh	25.6 kWh
	Usable Energy [2]	6.91 kWh	9.21 kWh	11.52 kWh	13.82 kWh	16.12 kWh	18.43 kWh	20.73 kWh	23.04 kWh
	Nominal Voltage	153.6V	204.8V	256V	307.2V	358.4V	409.6V	460.8V	512V
	Operating Voltage	144V ~ 172.8V	192V ~ 230.4V	240V ~ 288V	288V ~ 345.6V	336V ~	384V ~ 460.8V	432V ~ 518.4V	480V ~ 576V
	Max. Charging / Discharging Power	6.14kW	8.19kW	10.24kW	12.28kW	14.34kW	16.38kW	18.43kW	20.48kW
	Dimensions (W/H/D)	525×650×370 mm	525×790×370 mm	525×930×370 mm	525×1070×370 mm	525×1210×370 mm	525×1350×370 mm	525×1490×370 mm	525×1630×370 mm
	Weight	110 kg	140 kg	170 kg	200 kg	230 kg	260 kg	290 kg	320 kg
	Battery Module Weight	29kg							
	Installation Location	Indoor / Outdoor							
	Mounting Method	Floor mounted							
	Operating Temperature Range	Charge: 0°C ~ 55°C Discharge: -20°C ~ 55°C							
	Storage Temperature Range	-20°C ~ 45°C							
	Cooling Concept	Natural convection							
GENERAL DATA	Degree of Protection	IP65							
	Relative Humidity	5% ~ 95 %, non-condensing							
	Communication	CAN							
	Certification	IEC 62619 / EN 61000 IEC 62040 / UN38.3							
	Life Cycle [3]	6000 times							
	DOD	90 %							
	Compatible Inverters	Novgen, Megarevo, Solplanet, Growatt							

1. Nominal energy is defined under the following conditions: cell voltage 2.0-3.65V, 1C charge & discharge at +25°C.
2. Usable energy is defined under the following conditions: 90 % DOD, 1C charge 8 discharge at +25°C.
   Usable energy may vary depending on discharge, charge, environmental conditions and SOC % limits defined by the user.
3. Life cycle is defined under the following conditions: 70 % DOD, 0.5C charge & discharge at +25°C.

Version: August 2023

ALTAIR HVS BATTERY-5.12kWh

HIGH VOLTAGE STACKED ESS

10.24 to 30.72 kWh

High Scalability
Range from 10.24 kWh to 30.72 kWh

Ingress Protection
IP65, support outdoor usage

Stacking Design
Play & plug wireless connection
Easy installation, save more space

Adaptive
Automatically match voltage

Safe
LFP cells with multi-layers BMS

High Compatibility
Match with mainstream inverter brands

TECHNICAL DATASHEET

	BATTERY MODULE	Altair HVS Battery - 5.12kWh				
SYSTEM DATA	Model	HVT10	HVT15	HVT20	HVT25	HVT30
	Module Quantity	2	3	4	5	6
	Rated Voltage	204.8V	307.2V	409.6V	512.0V	614.4V
	Rated Capacity	10.2 kWh	15.3 kWh	20.4 kWh	25.5 kWh	30.6 kWh
	Max. Con. Charge/ Discharge Power	8.19kW	12.29kW	16.38kW	20.48kW	24.58kW
GENERAL DATA	Dimensions (W/H/D)	700×540×370 mm	700×700×370 mm	700×860×370 mm	700×1020×370 mm	700×1180×370 mm
	Weight	134.2kg	185.4 kg	236.6 kg	287.8 kg	339 kg
	Battery Module Weight	49kg				
	Installation Location	Indoor / Outdoor				
	Mounting Method	Floor mounted				
	Operating Temperature Range	Charge: 0°C ~ 55°C Discharge: -20°C ~ 55°C				
	Storage Temperature Range	-20°C ~ 45°C				
	Cooling Concept	Natural convection				
	Degree of Protection	IP65				
	Relative Humidity	5% ~ 95 %, non-condensing				
	Communication	CAN				
	Certification	IEC 62619 / EN 61000 IEC 62040 / UN38.3				
	Life Cycle [3]	6000 times				
	DOD	100 %				
	Compatible Inverters	Novgen, Megarevo, Solplanet, Growatt				

DOD 100%

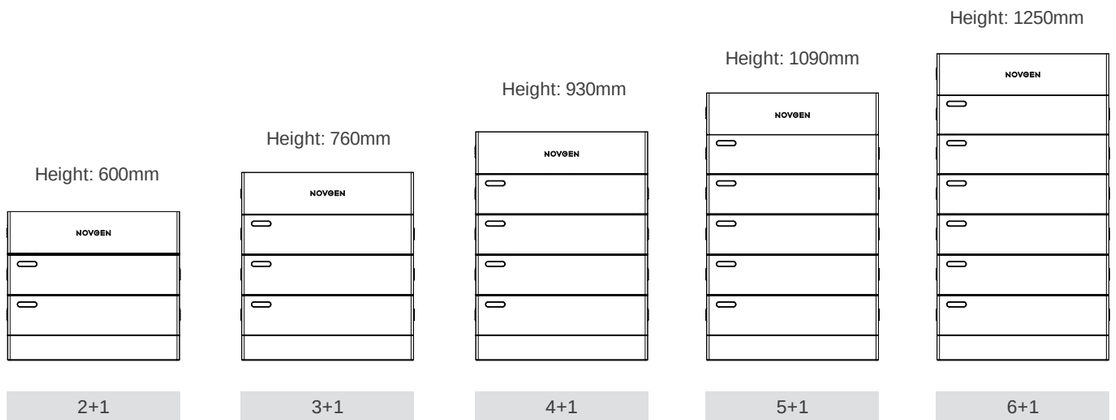
Cycle Life >6000 times

Warranty 10 years

Rated Capacity 50Ah

Communication Protocol CAN/RS485

UN38.3, CE, IEC62619 and other safety performance certifications



THREE PHASE HYBRID INVERTER - T2EU

THREE PHASE HYBRID INVERTER

MODELS: Polaris-5k-T2EU / Polaris-6k-T2EU / Polaris-8k-T2EU / Polaris-10k-T2EU / Polaris-12k-T2EU

EASY-TO-INSTALL

- Phoenix Contact connectors for reliable tool-free DC connection
- Compact wall mount design
- Simple battery connection for faster installation
- Compatible with our high voltage batteries

RELIABLE

- Up to 150 % PV array oversizing for higher yields
- 100% unbalanced three phase AC output
- Improved generation under non-ideal conditions
- UPS level switching time < 10 ms
- IP66 rated design for outdoor use

USER-FRIENDLY

- Setup, commissioning and monitoring via the Novgen app
- Intelligent work modes and customizable battery management for DOD / Time of Use / Power setting
- Max. 20 A input current, ideal for bifacial and large area PV modules

TECHNICAL DATASHEET

MODEL	Polaris-5k-T2EU	Polaris-6k-T2EU	Polaris-8k-T2EU	Polaris-10k-T2EU	Polaris-12k-T2EU
PV INPUT					
Max. PV array power	7500 Wp	9000 Wp	12000 Wp	15000 Wp	18000 Wp
Max. input voltage	1100V				
MPp voltage range / rated input voltage	150V to 950V / 600V		200V to 950V / 600V		
Min. input voltage / start voltage	60V / 250V				
No. of independent MPPT trackers / strings per MPPT input	2/1				
Max. input current per MPP tracker	20 A				
Max. short-circuit current per MPP tracker	30 A				
BATTERY INPUT					
Battery voltage range	120 V to 600 V				
Max. charging / discharging power	5000 W	6000 W	8000 W	10000 W	12000 W
Max. charging current / Max. discharging current	36 A				
Rated charging current / Rated discharging current	30 A				
Battery type	LiFePO4				
AC OUTPUT					
AC voltage range / Nominal AC voltage	270 V to 480 V /3/N/PE, 220 / 380 V ; 230 / 400 V ; 240 / 415 V				
Rated AC grid frequency	50 Hz / 60 Hz				
AC grid frequency range	45~55 Hz / 55~65 Hz				
Rated apparent power	5000 VA	6000 VA	8000 VA	10000 VA	12000 VA
Max. apparent power	5500 VA	6600 VA	8800 VA	11000 VA	13200 VA
Rated grid output current (@400V)	7.3 A	8.7 A	11.6 A	14.5 A	17.4 A
Max. grid output current(@400V)	8.0 A	9.6 A	12.8 A	16.0 A	19.2 A
Harmonics THDi (@ Nominal power)	< 3 % (of nominal power)				
AC INPUT					
Rated grid voltage	3/N/PE, 220 / 380 V ; 230 / 400 V ; 240 /415 V				
Rated grid frequency	50 Hz/60 Hz				
Max. input power from grid	10000 W	12000 W	16000 W	20000 W	24000 W
Max. input current from grid	14.5 A	17.4 A	23.2 A	29.0 A	34.8 A
EPS OUTPUT					
Nominal output voltage	3/N/PE, 220 / 380 V ; 230 / 400 V ; 240 /415 V				
Nominal output frequency	50 Hz/60 Hz				
Rated apparent power	5000 VA	6000 VA	8000 VA	10000 VA	12000 VA
Peak output apparent power	2 times of rated power, 10 s				
Rated Current (@400V)	7.3 A	8.7 A	11.6 A	14.5 A	17.4 A
Max. switch time	< 10 ms				
Output THDv (@ Linear load)	2%				
EFFICIENCY					
MPPT efficiency	99.9 %				
Euro efficiency / Max. efficiency	97.2 % / 98.0 %	97.5 % / 98.2 %	97.9 % / 98.4 %		
SAFETY PROTECTION					
DC surge protection(Type II, according to EN/IEC 61643-11)	●				
Insulation resistance detection	●				
PV string input reverse polarity protection	●				
Battery input reverse polarity protection	●				
Ground fault monitoring	●				
Residual current monitoring unit	●				
AC short circuit protection	●				
Anti-islanding protection	●				
GENERAL DATA					
Power factor at rated power / adjustable displacement	1/ 0.8 leading to 0.8 lagging				
Dimensions (W/H/D)	545 mm / 478 mm / 205 mm				
Weight	26 kg				
Operating temperature range	-25 °C ... +60 °C				
Cooling concept	Natural convection				
Degree of protection (as per IEC 60529)	IP66				
Max. relative humidity	100 %				
Max. operating altitude	4000 m				
FEATURES					
User interface	LED & App				
BMS interface	CAN				
Smart meter interface	RS485				
Internet communication interfaces	Wifi /LAN /4G				
Digital output (dry contact) / No. of outputs	● / 2				
Digital input (dry contact) / No. of inputs	● / 4				
Integrated power control / export power control	● / ●				

THREE PHASE HYBRID INVERTER - T3EU

THREE PHASE HYBRID INVERTER

MODELS: Polaris-8k-T3EU / Polaris-10k-T3EU / Polaris-12k-T3EU

EASY-TO-INSTALL

- Phoenix Contact connectors for reliable tool-free DC connection
- Compact wall mount design
- Simple battery connection for faster installation
- Compatible with our high voltage batteries

RELIABLE

- Up to 150 % PV array oversizing for higher yields
- 100% unbalanced three phase AC output
- Improved generation under non-ideal conditions
- UPS level switching time < 10 ms
- IP66 rated design for outdoor use

USER-FRIENDLY

- 3 independent MPPT's for flexible PV array design, more kWp
- Setup, commissioning and monitoring via the Novgen app
- Intelligent work modes and customizable battery management for DOD /Time of Use/Power setting
- Max. 16 A input current, ideal for bifacial and large area PV modules

TECHNICAL DATASHEET

MODEL	Polaris-8k-T3EU	Polaris-10k-T3EU	Polaris-12k-T3EU
PV INPUT			
Max. PV array power	12000 Wp	15000 Wp	18000 Wp
Max. input voltage		1100 V	
MPp voltage range / rated input voltage		200 V to 950 V / 600 V	
Min. input voltage / start voltage		60 V / 250 V	
No. of independent MPPT trackers / strings per MPPT input		3/1	
Max. input current per MPP tracker		16 A	
Max. short-circuit current per MPP tracker		24 A	
BATTERY INPUT			
Battery voltage range		120 V to 600 V	
Max. charging / discharging power	8000 W	10000 W	12000 W
Max. charging current / Max. discharging current		36 A	
Rated charging current / Rated discharging current		30 A	
Battery type		LiFePO4	
AC OUTPUT			
AC voltage range / Nominal AC voltage		270 V to 480 V /3/N/PE,220 / 380 V ; 230 / 400 V ; 240 / 415 V	
Rated AC grid frequency		50 Hz / 60 Hz	
AC grid frequency range		45~55 Hz / 55~65 Hz	
Rated apparent power	8000 VA	10000 VA	12000 VA
Max. apparent power	8800 VA	11000 VA	13200 VA
Rated grid output current (@400V)	11.6 A	14.5 A	17.4 A
Max. grid output current(@400V)	12.8 A	16.0 A	19.2 A
Harmonics THDi (@ Nominal power)		< 3 % (of nominal power)	
AC INPUT			
Rated grid voltage		3/N/PE, 220 / 380 V ; 230 / 400 V ; 240 /415 V	
Rated grid frequency		50 Hz/60 Hz	
Max. input power from grid	16000 W	20000 W	24000 W
Max. input current from grid	23.2 A	29.0 A	34.8 A
EPS OUTPUT			
Nominal output voltage		3/N/PE, 220 / 380 V ; 230 / 400 V ; 240 /415 V	
Nominal output frequency		50 Hz/60 Hz	
Rated apparent power	8000 VA	10000 VA	12000 VA
Max. output apparent power@linear load	8000 VA	10000 VA	12000 VA
Peak output apparent power		2 times of rated power, 10 s	
Rated Current (@400V)	11.6 A	14.5 A	17.4 A
Max. switch time		< 10 ms	
Output THDv (@ Linear load)		2%	
EFFICIENCY			
MPPT efficiency		99.9 %	
Euro efficiency / Max. efficiency	97.9 % / 98.4 %	97.9 % / 98.4 %	97.9 % / 98.4 %
SAFETY PROTECTION			
DC surge protection(Type II, according to EN/IEC 61643-11)		●	
Insulation resistance detection		●	
PV string input reverse polarity protection		●	
Battery input reverse polarity protection		●	
Ground fault monitoring		●	
Residual current monitoring unit		●	
AC short circuit protection		●	
Anti-islanding protection		●	
GENERAL DATA			
Power factor at rated power / adjustable displacement		1/ 0.8 leading to 0.8 lagging	
Dimensions (W/H/D)		545 mm / 478 mm / 205 mm	
Weight		26 kg	
Operating temperature range		-25 °C ... +60 °C	
Cooling concept		Natural convection	
Degree of protection (as per IEC 60529)		IP66	
Max. relative humidity		100 %	
Max. operating altitude		4000 m	
FEATURES			
User interface		LED & App	
BMS interface		CAN	
Smart meter interface		RS485	
Internet communication interfaces		Wifi /LAN /4G	
Digital output (dry contact) / No. of outputs		● / 2	
Digital input (dry contact) / No. of inputs		● / 4	
Integrated power control / export power control		● / ●	

ALTAIR AIO TP

THREE PHASE HOME
BATTERY ENERGY STORAGE SYSTEM

THREE PHASE RESIDENTIAL ENERGY STORAGE SYSTEM

Altair AIO, a high-efficiency three-phase high voltage hybrid all-in-one ESS, supports 1-6 battery modules per unit, with a maximum of 4 units in parallel, covering a capacity range of 4.99-119.8 kWh. Always ready for power upgrade for your home and business, better function for bigger clean energy usage.

INTELLIGENT

Max.1.67 DC/AC Ratio, Max 18A DC input current per string. Up to 110% three-phase unbalanced output

FLEXIBLE

Modular design, stacking is wiring, easy to install and maintain

FRIENDLY

IP65, indoor or outdoor application
＜25dB, no noise pollution

SCALABLE

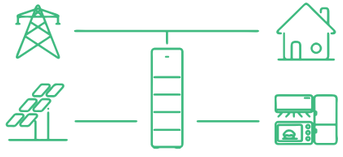
Customised your need, support paralleling. Better for commercial and industrial scenarios

SAFE

4-layer protection deisgn
Long life cell, UL9540A highest standard

SMART

VPP, EV and Diesel Generator ready
Remote updates & self-diagnosis



- Altair AIO will store photovoltaic or grid energy. If there is not enough solar energy to support consumption, the stored battery power will be discharged to meet the power demand.
- Autonomous strategy, automatically optimising energy use based on the users needs and preferences.

TECHNICAL PARAMETERS

MODEL	Altair AIO 5.0	Altair AIO 6.0	Altair AIO 8.0	Altair AIO 10.0	Altair AIO 12.0	Altair AIO 13.0
PV INPUT						
Absolute Max Voltage (V)	1000					
MPPT Voltage Range (V)	180...980					
Max. Dc Input Power (W)	7500	9000	12000	15000	20000	20000
Full Power MPPT Voltage Range (V)	210-850	255-850	335-850	420-850	560-850	560-850
Start-up Voltage (V)	145					
Rated Operating Voltage (V)	620					
Max. Input Current (A)	18/18					
Isc PV (A)	22/22					
NO. of MPP Trackers	2					
NO. of Strings per MPP Tracker	1					
BATTERY						
Battery Type	LFP					
Battery Voltage Range (V)	160~700					
Battery Module	4.992kWh, 45kg					
Number of Battery Module	2~6					
Battery Capacity (kWh)	9.98~29.9					
Max. Charge/Discharge Current (A)	25/25					
AC INPUT/OUTPUT						
Rated Output Power (W)	5000	6000	8000	10000	12000	13000
Rated Apparent Power to Grid (VA)	5000	6000	8000	10000	12000	13000
Max. Apparent Power to Grid (VA)	5500	6600	8800	11000	13200	14300
Rated Apparent Power from Grid (VA)	10000	12000	16000	17900	17900	17900
Max. Apparent Power from Grid (VA)	11000	13200	17600	17900	17900	17900
Rated Voltage (V)	3/N/PE: 220/380,230/400,240/415					
Rated Frequency (Hz)	50/60					
Rated AC Current to Grid (A)	7.3	8.7	11.6	14.5	17.4	18.9
Max. AC Current to Grid (A)	8.1	9.6	12.8	16	19.2	20.8
Rated AC Current from Grid (A)	14.6	17.4	23.2	26	26	26
Max. AC Current from Grid (A)	16.2	19.2	25.6	26	26	26
AC Output Maximum Output Overcurrent Protection (A)	37					
THDi	＜3%					
EPS OUTPUT(WITH BATTERY)						
Rated. Output Power (W)	5000	6000	8000	10000	12000	13000
Single- phase Peak Output Power (W)	2000	2400	3200	4000	4800	5000
Peak Output Apparent Power (VA) @60 sec	10000	12000	16000	16000	16000	16000
Rated Voltage (V)	3N/PE: 220/380,230/400,240/415					
Nominal Frequency (Hz)	50/60(±0.2%)					
Rated Output Current (A)	7.3	8.7	11.6	14.5	17.4	18.9
Inrush Current(A)	16 a.c.A (peak), 11.3 us (duration)					
Max. Output Fault Current(A)	52 (peak), 37 (rms)					
EPS Output Maximum Output Overcurrent Protection(A)	37					
Switch Time (ms)	<10					
THDv @ Linear Load (%)	<2					
EFFICIENCY						
PV Max. Efficiency (%)	98					
Pv Europe Efficiency (%)	97					
PV Max. MPPT Efficiency (%)	99.9					
Battery Charge by Pv Max. Efficiency (%)	98.5					
Battery Discharge Efficiency (%)	97.7					
PROTECTION						
Over/under Voltage Protection	Yes					
Dc Isolation Protection	Yes					
DC Injection Monitoring	Yes					
Residual Current Detection	Yes					
Anti-islanding Protection	Yes					
Over Load Protection	Yes					
Battery Input Reverse Polarity Protection	Yes					
PV Reverse Polarity Protection	Yes					
Surge Protection	Yes					
Over Heat Protection	Yes					
GENERAL DATA						
Dimension (W/H/D)	600x1900x300 mm (four battery modules, with foundation)					
Operation Temperature (°C)	-10...+55					
Relative Humidity (%)	0...95					
Altitude	<=3000 m					
Ingress Protection	IP65					
Cooling	Natural					
Inverter Topology	Non-isolated					
Over Voltage Category	II(AC)I(DC)					
Protective Class	Class I					
Active Ant-islanding Method	Frequency shift					
Human Interface	LED/APP					
BMS Communication Interface	RS485/CAN					
Meter Communication Interface	RS485					
Noise Emission	<25 dB					
Standby Power Consumption	<10 W					

1200W Portable Power Station

This portable power station boasts a robust 1075Wh battery capacity and offers a total of

13 outputs, making it the ideal companion for your outdoor camping adventures or essential power needs during emergencies.

Bidirectional AC withfast charging feature

Multi-layers Battery management system

UPS function included (Switching time<15ms)

13 output ports in total (AC/DC/USB/PD)

Large 1075 Wh battery capacity

Solar charging ready

TECHNICAL PARAMETERS

MODEL	NOVP-1200
GENERAL DATA	
Product Name	Portable Power Station NOVP-1200
Battery Type	Lithium iron phosphate battery (LiFePO4)
Battery Capacity / Energy	336000mAh/3.2V; 1075.2Wh/22.4V
Product Size (W/H/D)	260x278x330mm
Weight	16±0.5kg (With package), 13.5±0.5kg (Only device)
INPUT	
AC Charging Power	220-240V~ 50Hz (600W Max)
DC	12-28V (150W Max)
USB-C1	5V/3A, 9V/3A, 12V/3A, 15V/3A, 20V/5A(100W Max)
OUTPUT	
AC Output Rated Power	220-240V~ 50Hz (1200W Max)
USB-C1	5V/3A, 9V/3A, 12V/3A, 15V/3A, 20V/5A(100W Max)
USB-C2	5V/2.4A, 9V/3A, 12V/2.25A(27W Max)
USB-A1/USB-A2	5V/3A, 9V/2A,12V/1.5A(18W Max)
USB-A1+USB-A2	Total output 5V/3A
USB-A3/USB-A4	5V/2.4A
USB-A3+USB-A4	Total output 5V/3A
AC1/AC2	220-240V~50Hz(Total output 1200W Max)
Car Charger 1/Car Charger 2/DC1/DC2/DC3	12V/10A(Total output 120W Max)
UPS Switchover Time	≤15ms

UN38.3

OUTPUT SOCKET IS OPTIONAL

2200W Portable Power Station

This portable power station boasts a robust 2160Wh battery capacity and offers a total of

15 outputs，making it the ideal companion for your outdoor camping adventures or essential power needs during emergencies.

- Bidirectional AC with fast charging feature
- Multi-layers Battery management system
- UPS function included (Switching time<15ms)
- 15 output ports in total
- Up to 800W super fast solar charging
- Wireless phone charging*2
- IOT function with APP is ready to go
- Battery capacity expansion-ready

TECHNICAL PARAMETERS

MODEL	NOVP- 2200
GENERAL DATA	
Product Name	Portable Power Station NOVP-2200
Battery Type	Lithium iron phosphate battery (LiFePO4)
Battery Capacity/Energy	675000mAh/3.2V;2160Wh/48V
Product Size (W/H/D)	263x313x480mm
Parallel Connection Capacity Expansion	Up to 4320Wh
Weight	26±0.5kg (With package), 23±0.5kg (Only device)
INPUT	
AC Charging Power	230V~ 50Hz (1200W Max)
Solar Panel Charging	MMPPT 12-60V / 800W Max
OUTPUT	
AC Output Rated Power	230V 50Hz (2200W Max)
USB-C1 Output	5V/3A, 9V/3A, 12V/3A, 15V/3A, 20V/5A (PD100W)
USB-C2/C3 Output	5V/3A, 9V/3A, 12V/3A, 15V/3A, 20V/5A(PD100W)
USB-C2+C3 Output	Total output 5V/3A x 2 Max
USB1/USB2/USB3 Output	5V/3A, 9V/2A, 12V/1.5A(18W Max)
Wireless Charger Output	15W*2
Car Charger Output	13.6V/10A
DC1 / DC2 Output	13.6V/10A
DC1 / DC2 / Car Charger	Total output 13.6V/10A (136W Max)
UPS Switchover Time	≤15ms
LED Flood Light	6W
	UN38.3

OUTPUT SOCKET IS OPTIONAL

PROFESSIONAL SERVICE

01 PRE-SALE

02 ON SALE

03 AFTER SALES