ES-BOX1 (5120WH)

All-in-One
Solar Hybrid ESS
(Energy Storage System)

Private Design

2020 / 11 /10

2020

ZWAYB 中维能

GENIXGREEN ®

BSCI Business Social Compliance Initiative

ISO 9001:2015 CERTIFIED COMPANY

CONTENT

GENIXGREEN

Introduction

01

ZWAYN---- GENIXGREEN

GENIXGREEN®

VISION

Green Energy, better Life!

MISSION

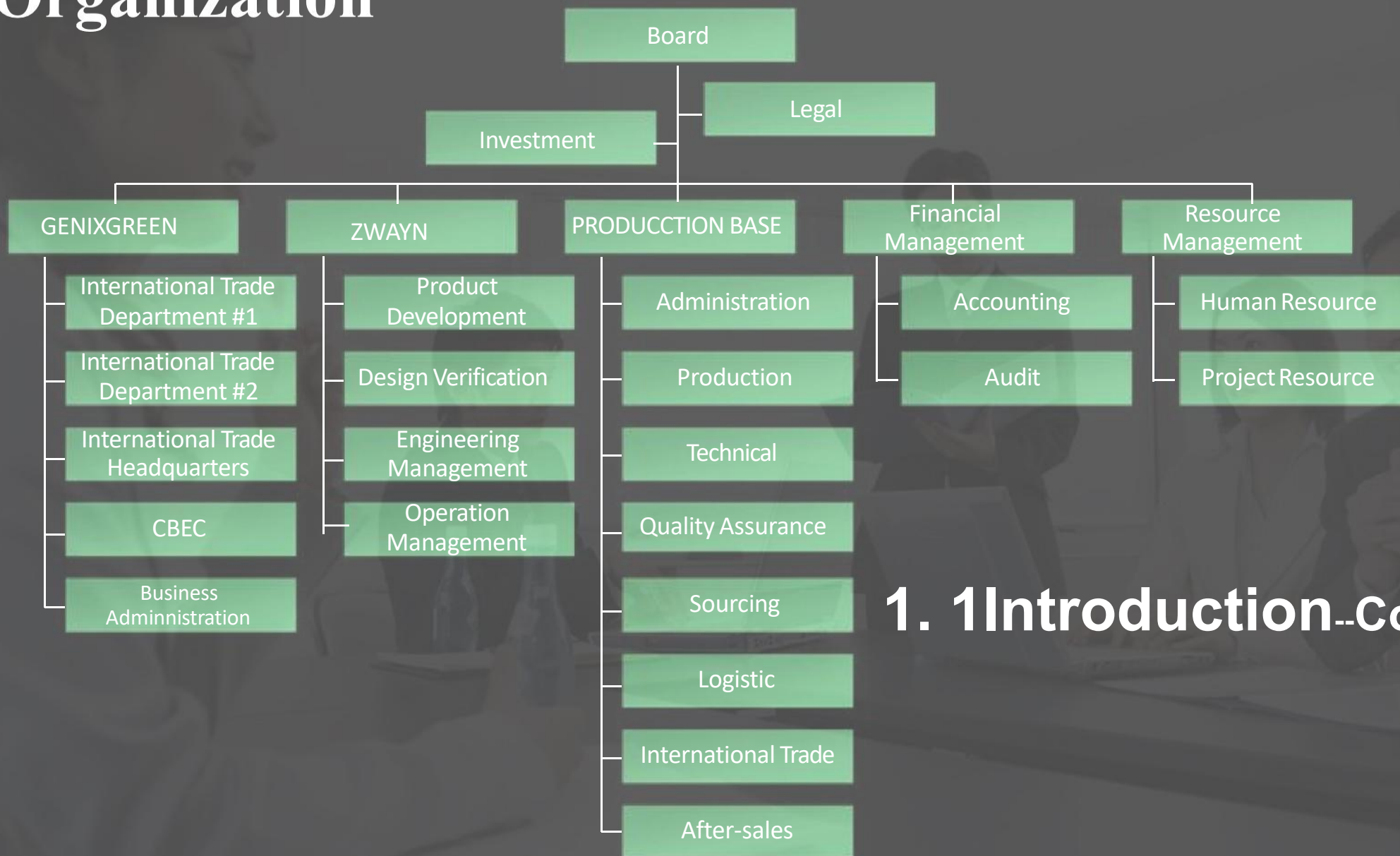ZWAYN is committed to provide safe, durable and sustainable products to our customers.

VALUES

Guided by the values of customers and evaluated by customer satisfaction.
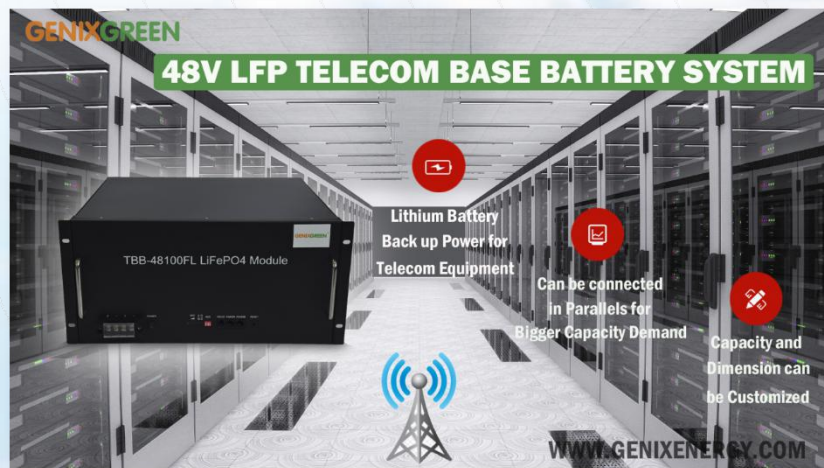
1.1 Introduction--Company Profile

BSCI
Business Social Compliance Initiative

CERTIFIED ISO 9001:2015 COMPANY

Organization

```
                              Board
                                │
                                ├──── Legal
                                │
              Investment ───────┤
                                │
   ┌──────────────┬─────────────┼──────────────────┬──────────────────┐
GENIXGREEN      ZWAYN      PRODUCCTION BASE    Financial          Resource
                                              Management         Management
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| GENIXGREEN	ZWAYN	PRODUCCTION BASE	Financial Management	Resource Management
International Trade Department #1	Product Development	Administration	Accounting	Human Resource
International Trade Department #2	Design Verification	Production	Audit	Project Resource
International Trade Headquarters	Engineering Management	Technical		
CBEC	Operation Management	Quality Assurance		
Business Adminnistration		Sourcing		
		Logistic		
		International Trade		
		After-sales		

1. 1Introduction--Company Profile

Product Line

Telecom & UPS Backup
Power System

Standard Lithium
Battery Module
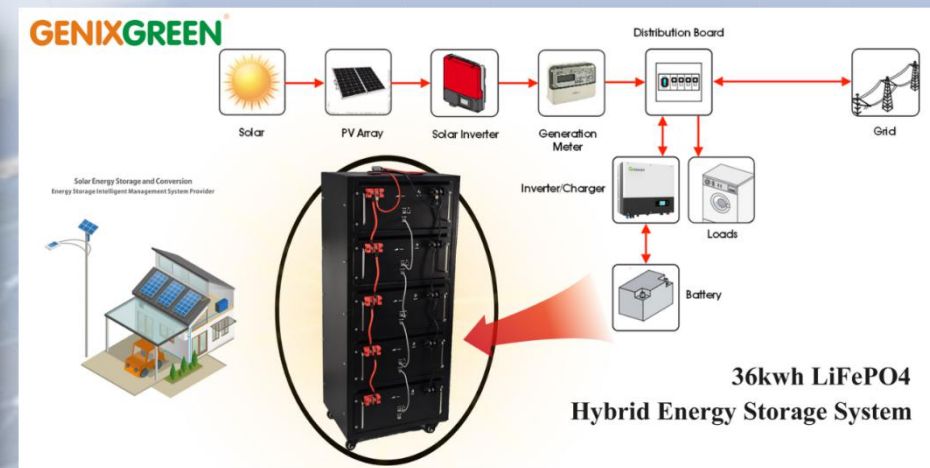
Lithium Battery Energy
Storage System

Product Line

Lithium Battery for Solar
Street Lights

All-in-one Homeuse
Solar Energy
Storage System

Portable Power
Generator/ Solar
Energy Box

ZWAYA 中维能

Product Line

Marine/ Boat Battery — GENIXGREEN
12V / 24V / 36V / 48V Battery System
Bluetooth / APP / Power Display
36V 30~60Ah   12V 80Ah~200Ah

High Power Battery — GENIXGREEN
Application:
E-Forklift / AGV / Low Speed Car/ Golf Cart, etc
24V/36V/48V/ 72V
50Ah~200Ah

NEW — NEW UPS PCBA — GENIXGREEN
Back up for 2~5hrs!
12V DC OUTPUT 19V DC OUTPUT 24V DC OUTPUT 5V USB OUTPUT 12V DC INPUT
12V 2A MINI UPS
Uninterruptible Power Supply
IP / CCTV Camera
Router/Modem/WIFI
ISO / BSCI

Boat/ Marine Lithium
Battery (High Power)

High Power Lithium
Battery for E-forklift,
AGV, Golf cart, Low
Speed Car, E-bike,
etc.

Mini UPS for CCTV,
Router, Modem

GENIXGREEN

ES-BOX1 (5120WH)

ALL-IN-ONE

ES-BOX1 (5120WH) is a fully-integrated Solar Energy Storage System. With rechargeable lithium-ion battery stationary energy storage and hybrid inverter.

ES-BOX1 (5120WH) is intended to be used for home energy storage and stores electricity for solar self-consumption, time of use load shifting, backup power, and off-the-grid use.

ES-BOX1 (5120WH)'s electrical interface provides a simple connection to any home or building. Its revolutionary compact design achieves market-leading energy density and is easy to install, enabling owners to quickly realize the benefits of reliable, clean power.

5KWH All In One Solar Battery Energy Storage System Inverter 3.2KW

ES-BOX1 (5120WH)

▲ Mobile APP WIFI Control

▲ Touch LCD Screen

▲ Battery+Inverter All In One

▲ LiFePO4 Battery Long Cycle

▲ Solar/AC Input

www.genixenergy.com

INPUT:

PV Panel: 120V~450V 2500W
AC Charge: 220V 50/60HZ
Generator

OUTPUT:

AC OUTPUT: 220V 50/60HZ
LOAD POWER: 3200W
Application: Home Appliances
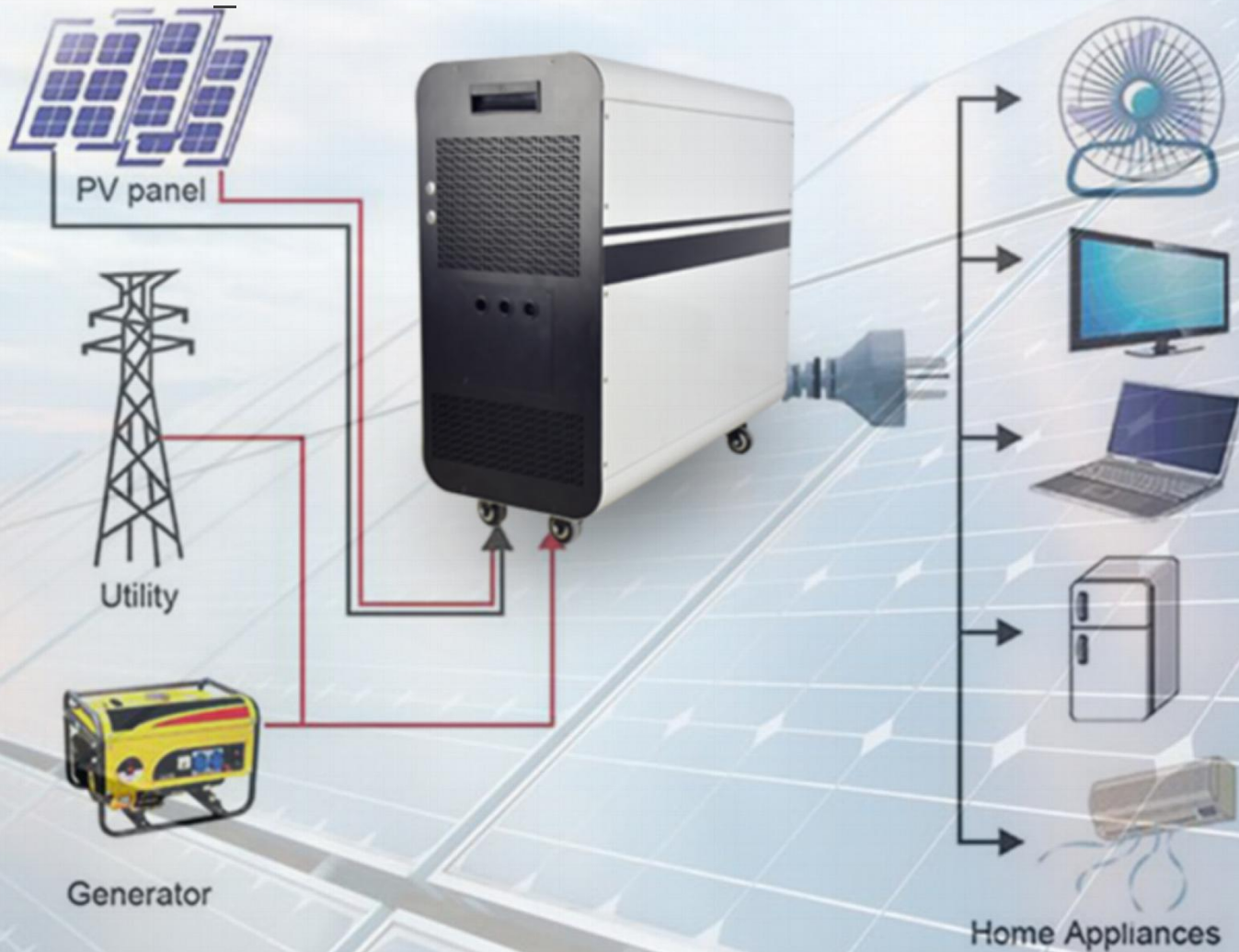
ALL-IN-ONE SOLAR ENERGY STORAGE SYSTEM

逆控一体太阳能储能系统

Introduction

■ **Product Overview**

*Easy installation
*Movable for carrying
*With App control
*Logo can be customized
*Touch screen, convenient for setting system
* Two button turn on system, easy operation

GENIXGREEN®
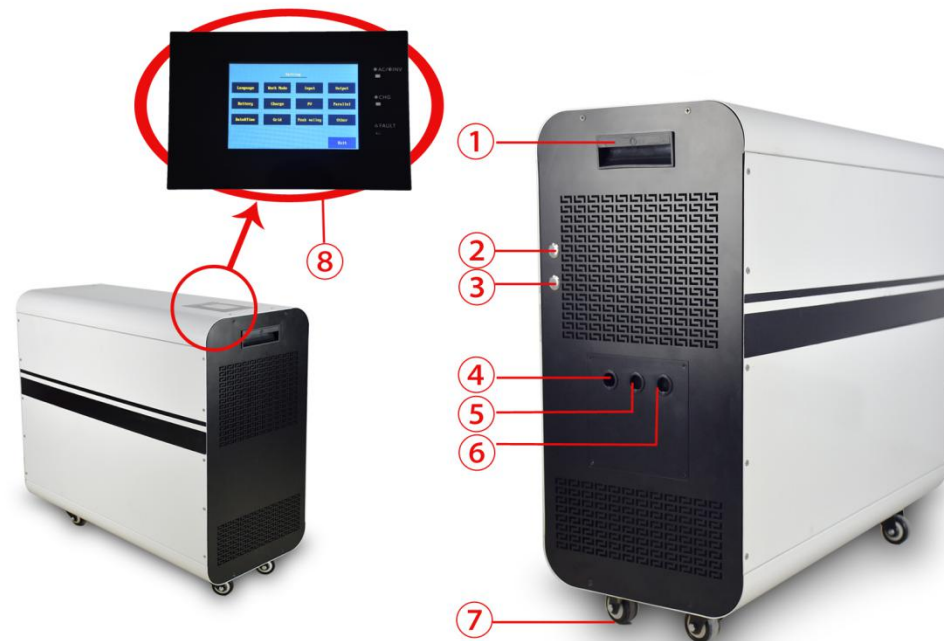
① Carrying handle
② Inverter System Button
③ Battery BMS Button
④ AC Charge Input Port

⑤ AC Discharge Output Port
⑥ PV Charge Input Port
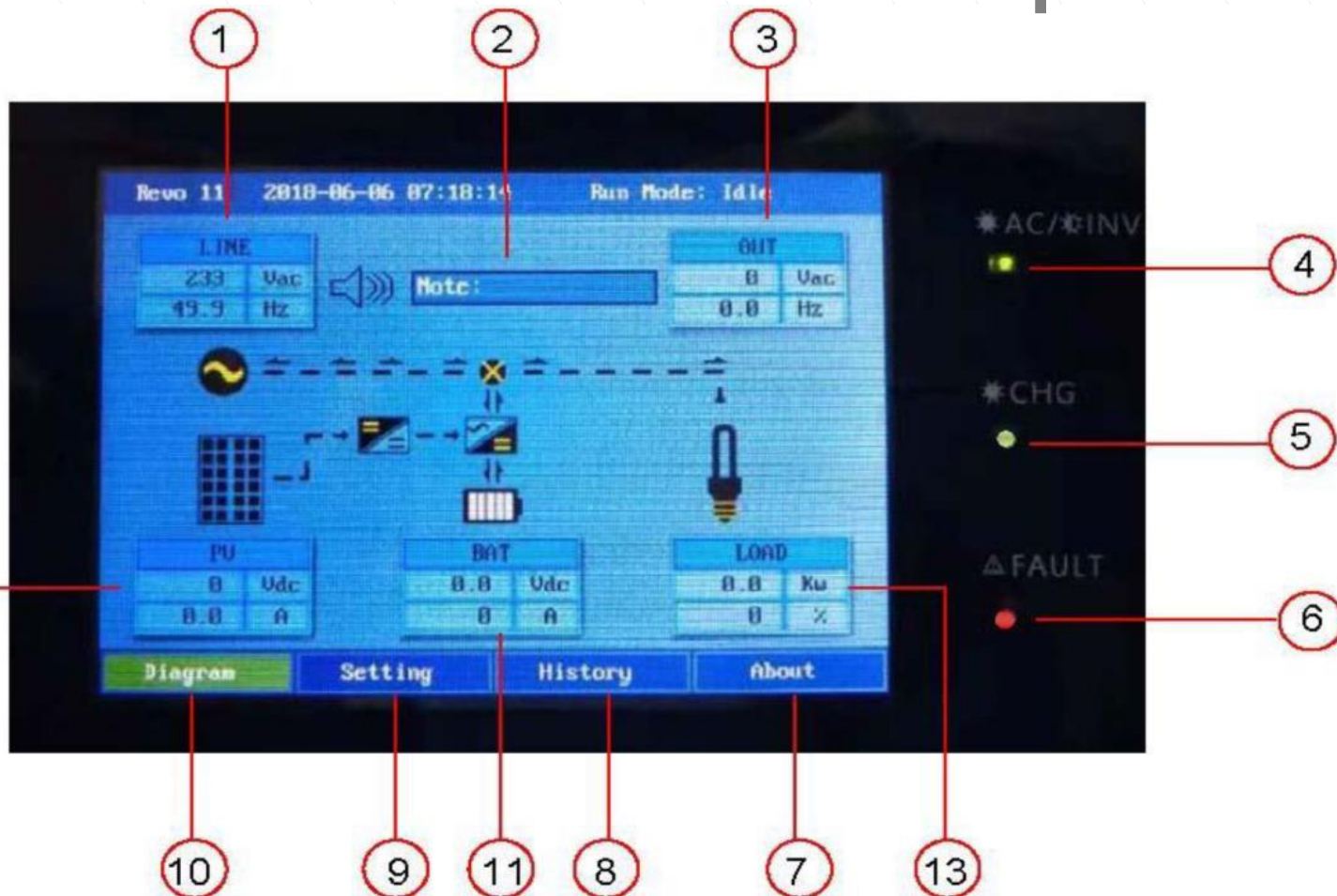⑦ Movable Wheels
⑧ LCD Touch Operation Display Screen

Once the unit has been properly installed and the batteries are connected well, simply press On/Off switch(located on the button of the case) to turn on the unit
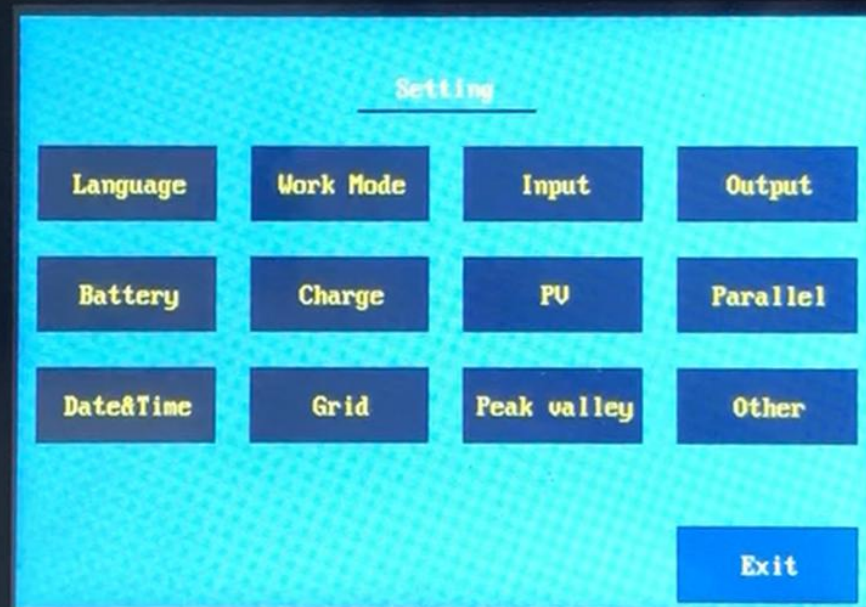
1. Powe ON/OFF

2. Operation and Display Panel

① AC Input information
② Operation information
③ AC Output information
④ AC/INV indicator
⑤ Charging indicator
⑥ Fault indicator
⑦ About button
⑧ History button
⑨ Setting button
⑩ Diagram button
⑪ Battery information
⑫ PV input information
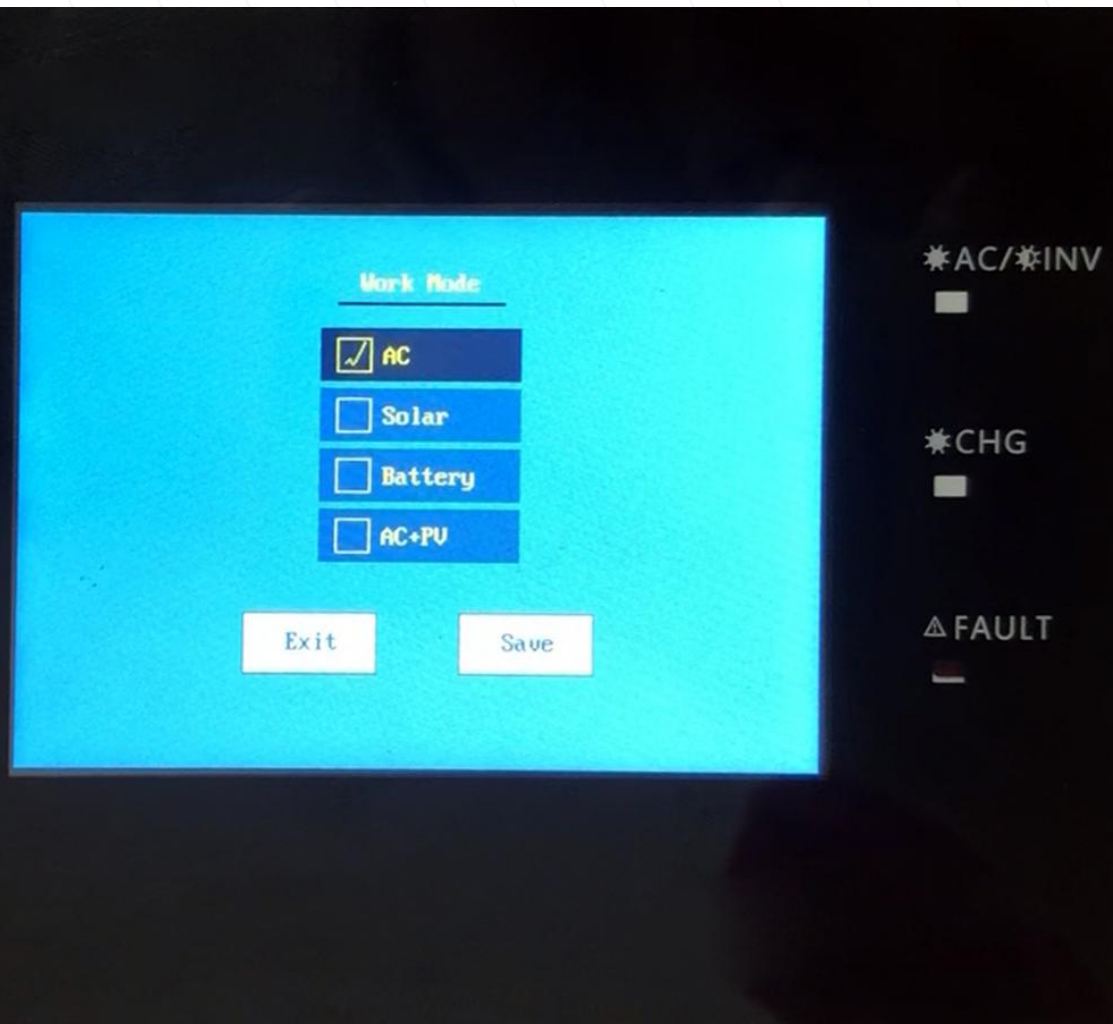⑬ Load information

Operation

2.1 Setting

① Language
② Work Mode
③ Input
④ Output
⑤ Battery
⑥ Charge
⑦ PV
⑧ Parallel
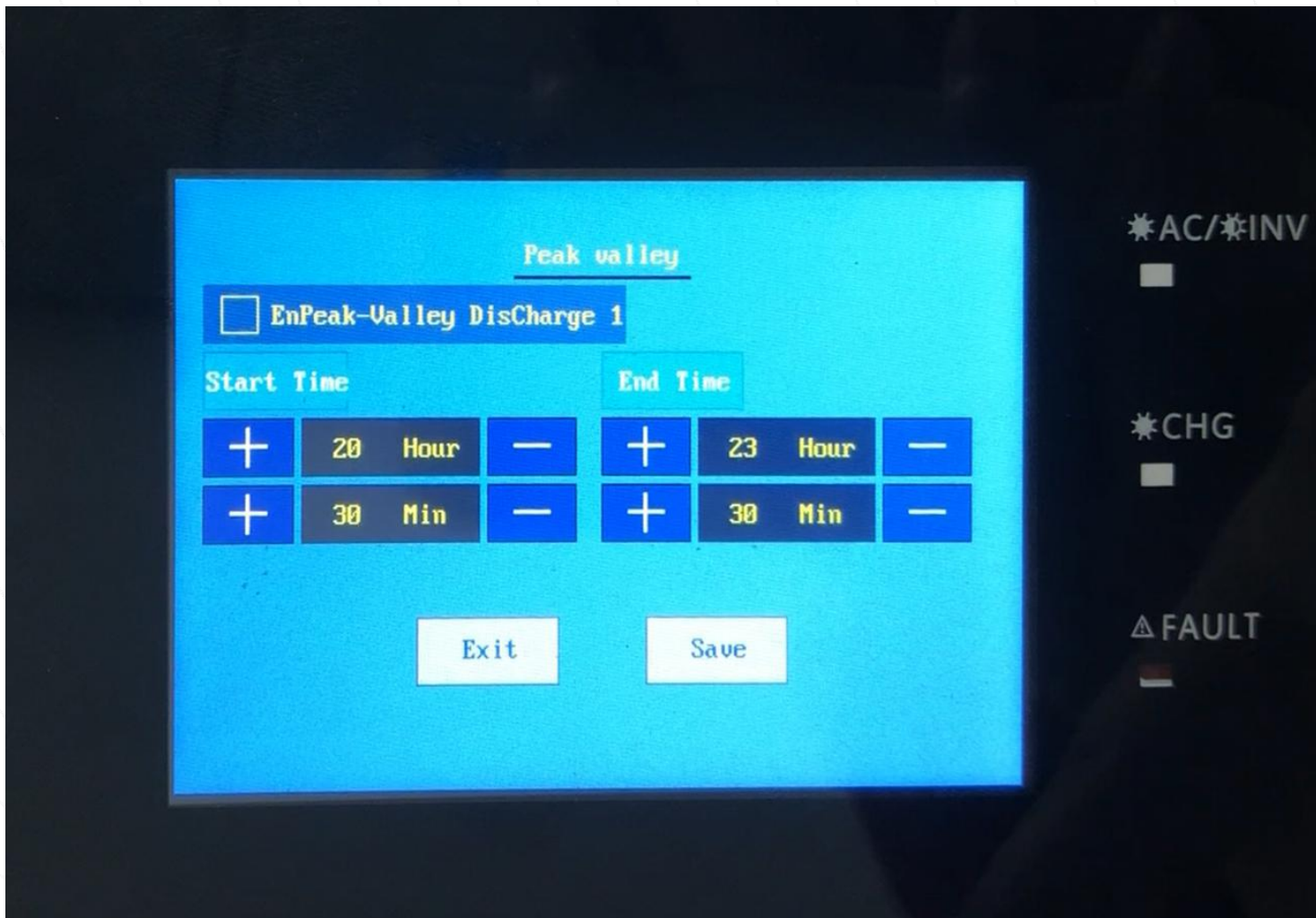⑨ Date & Time
⑩ Grid
⑪ Peak Valley
⑫ Other

Operation

① **AC:** AC priority, solar charging the battery. When solar energy is insufficient, AC and solar energy charge the battery at the same time. When AC is unavailable it will be powered by solar energy or batteries.

② **Solar:** Solar energy provides power to the loads as the first priority. When the solar energy is sufficient, the extra energy will charges the battery. When solar energy is insufficient for load, batteries and solar will supply power at the same time. When solar energy and batteries are insufficient or solar energy is unavailable, AC power supply power to the load.

③ **Battery:** Battery provides power to the loads as the first priority. AC provides power to the loads when battery voltage drop to low-level warning voltage or setting point, and the AC power will charge the battery. When the battery is fully charged, battery provides power to the load again.

④ **AC+PV:** Solar energy provides power to the load as the first priority. If solar energy is not sufficient to power all load, AC energy will supply power the load at the same time.
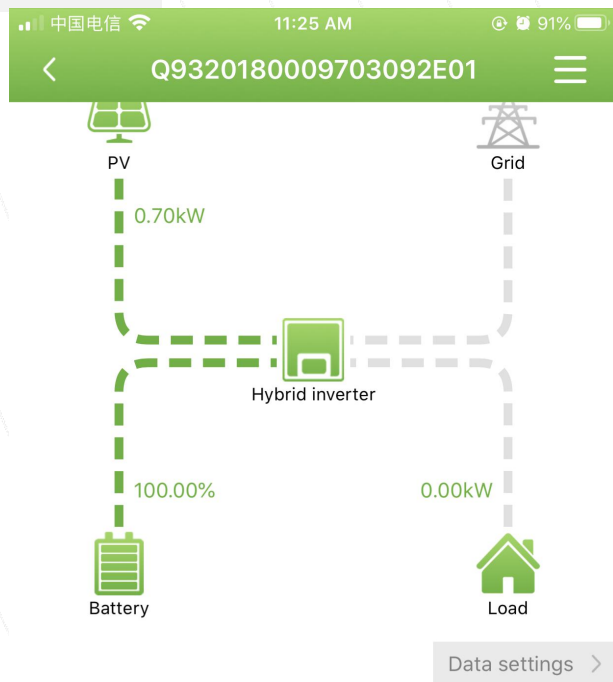
Operation

Can set 2 time periods
Can set the charge or discharge time when peak or valley (AC charge)

APP Monitor

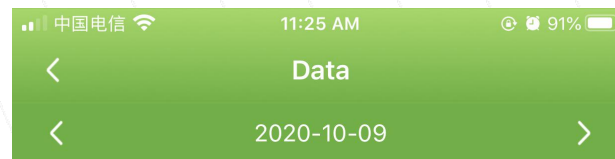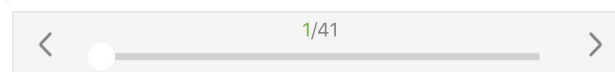Can Monitor ES-BOX1 (5120WH) on mobile APP.

Mobile phone APP

Advantages

02

"
Advantages of Solar Energy Renewable Energy Source.
Among all the benefits of solar panels, the most important thing is that solar energy is
a truly renewable energy source. ...
Reduces Electricity Bills. ...
Diverse Applications. ...
Low Maintenance Costs. ...,etc.

Solar Energy
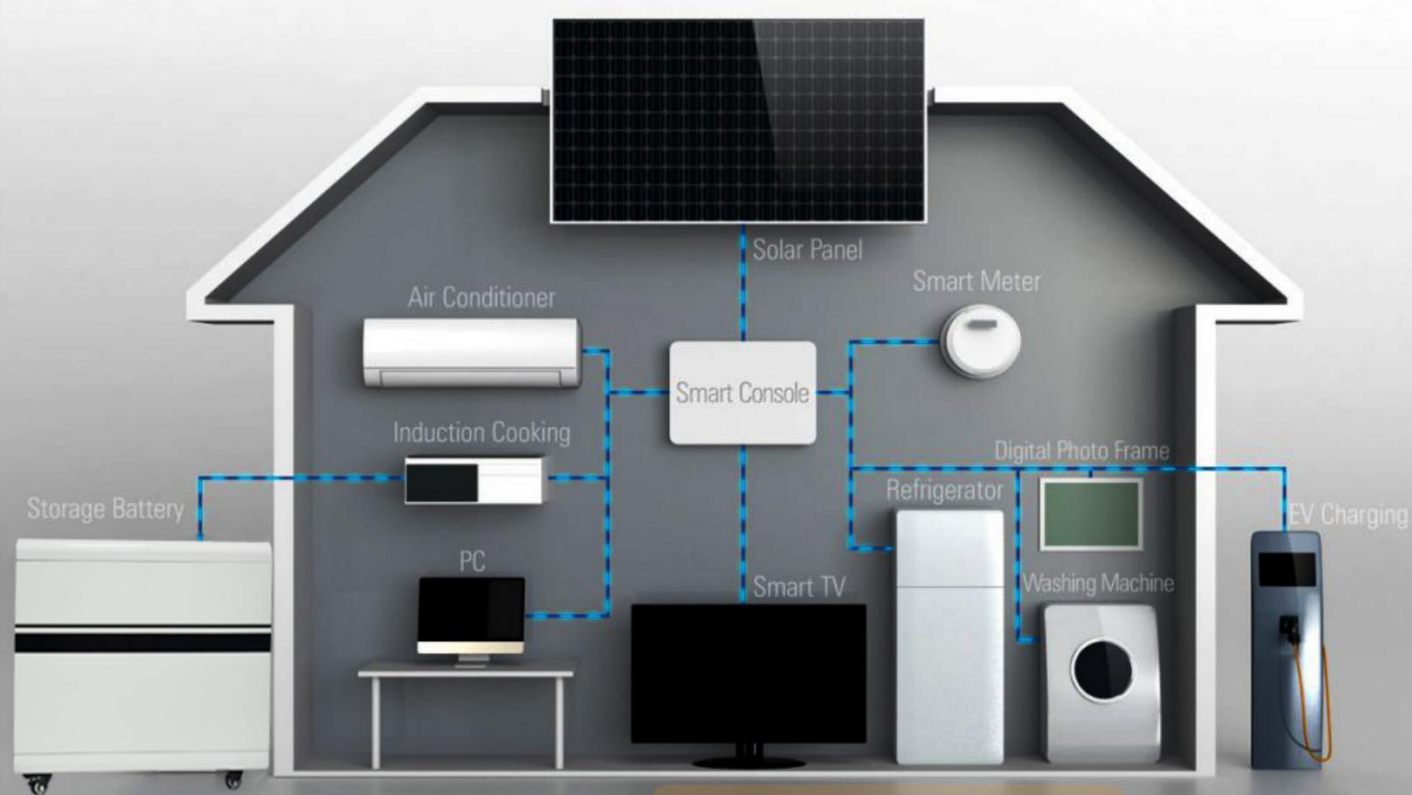
Selling Points

★Integrated Touch Screen

★Battery+Inverter All In One

★Small Size, Doesn't Take Up Space

★AI Design, Use APP Control. Very Convenient

★Use Lithium Ion Phosphate Battery(LiFePO4)

★Safe and Environmentally Friendly

★ Long Cycle Life.

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Application Solution

Residential Solution

We offers homeowners complete energy storage systems that meet the needs of a wide range of building types and demand profiles

Commercial Solution

Schools, factories, petrol stations, and other commercial buildings with high levels of energy demand can maximize their energy independence and reduce grid power demand with solar PV and battery storage.

Off-grid/Microgrid Solution

We can help you be 100% energy independent, whether you're in a region that lacks grid access or if you just want to unplug from the network.

Specification

03

Specification sheet

Table 1 Solar Mode Specifications

Normal DC voltage	48vdc
Max PV array power	2500W
Rated output power	3200W
PV operating voltage range	120-450VDC
PV normal operating voltage	280-360VDC
Normal output voltage	220/230/240VAC
Output voltage range	230 ± 5%VAC
Normal output current	14A
Power factor	1.0
Efficiency(DC/AC)	≥92%
Frequency	50/60HZ
Overload protection	MPPT will close immediately as long as the input power is greater than the maximum output power
Max input current	19.6A
Max solar charge current	90A

Specification sheet

Table 2 Line Mode Specifications

Input Voltage Waveform	pure Sine wave (AC or generator)
Normal Input Voltage	230Vac
Low Loss Voltage	120Vac±7V(wide range); 170Vac±7V(narrow range)
Low Loss Return Voltage	130Vac±7V(wide range); 180Vac±7V(narrow range)
High Loss Voltage	280Vac±7V
High Loss Return Voltage	270Vac±7V
Max AC Input Voltage	300Vac
Normal Input Frequency	50Hz / 60Hz (Auto detection)
Output short circuit protection	Circuit Breaker
Max AC charge current	60A (Optional 10A to 60A)
Efficiency (Line Mode)	>95% (Rated R load, battery full charged)
Transfer Time	≤10ms
Communication	WIFI
Operation temperature	0-50℃

Specification sheet

Table 3 LiFePO4 Battery Specifications

Nominal Energy	5120Wh (51.2V 100Ah)	
Discharge characteristic	Continuous Current	100A
	Over current protection	120A
Charge characteristic	Charge Voltage	56V
	Charge Current	≦60A
Over-charge Protection	Single cell Cut-off voltage	3.65V
	Single cell Recovery Voltage	3.58V
Over-discharge Protection	Single cell Cut-off Voltage	2.8V
	Single cell Recovery Voltage	3.0V
Over-current Protection	Cut-off current	120A
	Release condition	Release load
Short Circuit Protection	Recovery condition	Release load
Self-consumption current	Working mode power consumption	≤25mA
	Idle mode power consumption	≤200uA

Specification sheet

Table 4 Inverter Mode Specifications

Battery system voltage	51.2V
Waveform	Pure Sine wave
Output Voltage Regulation	230Vac±5%
Output Frequency	50/60Hz±1Hz
Peak Efficiency	≥90%
Power factor	1.0
Overload Protection	1s@≥150% load, 20s@101%~120% load , 10s@121%~150% load
Transfer time	≤10ms
Protection features	Low voltage protection; High voltage protection Overload protection; Over-temperature protection Short circuit protection; Over-charge protection
Dimension(WxDxH)mm	710*300*600 (Not include wheels size)
Net Weight (Kg)	74Kg

ES-BOX1 (5120WH)

Thank you

ALL-IN-ONE SOLAR SYSTEM

2020/8/15

ZWAYN 中维能
东莞市维能新能源有限公司
Dongguan ZWAYN New Energy Co.,Ltd

GENIXGREEN®
深圳市杰力斯科技有限公司
Shenzhen GenixGreen Technology Co.,Ltd

Shenzhen Office: 12/F, Yunhua building, shajing Town, Shenzhen, PRC
Dongguan Factory: 3F, Deyuxin Science and Technology Park, No. 2,
Jinxing 3rd Road, Jinmei, Changping Town, Dongguan City

Mob.: 0086 135 5446 8352   Tel.: 0086-0755-2300 3726
E-mail: sales14@genixgreen.com
Website: www.genixenergy.com

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