Pytes

MY2022 PRODUCT LIST

Shanghai PYTES Energy Co., Ltd.
BATTERY EXPERT-GREEN ENERGY PROVIDER

LI-ION BATTERY FOR ENERGY STORAGE

Pytes

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PRODUCT LIST

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CONTENTS

Pyt≈s

PYTES, a national high-tech enterprise founded in 2004, focuses on Lithium-ion battery solutions for e-bikes, e-motorcycles, 3C products, vacuum cleaners and energy storage systems, etc. Headquartered in Shanghai, PYTES has been expanding globally, setting up three production bases in Shanghai (China), Shandong (China) ,and Vietnam, two marketing & service centers in Europe and North America. PYTES is strong in R&D, with advanced laboratories certified by TUV, DEKRA, SGS & BV, etc.

$41M
Total investment

17 Years
Industry experience

1000+
Staff

$220M
Turnover in 2021

1.82Gwh
Annual capacity
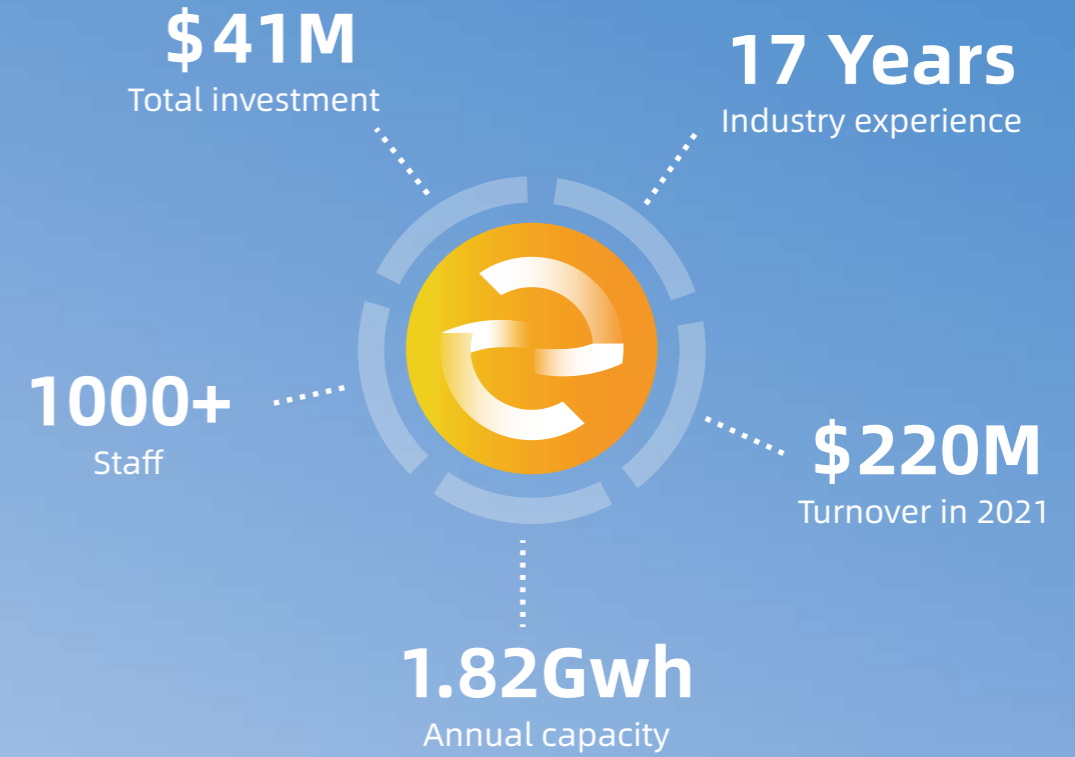
Global Marketing & Service

PYTES EU office
(The Netherlands)

Europe
Marketing center

Factory in Shandong

China

North America
Marketing center

PYTES USA office (USA)

Vietnam

Headquarter in Shanghai

Factory in Ho Chi Minh City

· Global pre-sales & after-sales services

· 7*24H，Efficient feedback

Testing Labs

SGS
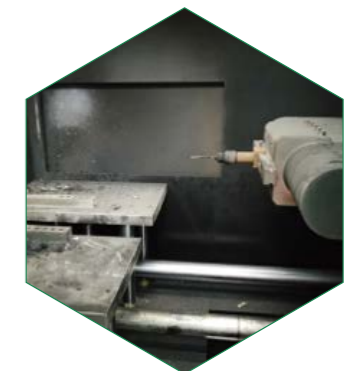

BV

TUV

DEKRA

Safety Tests

Short circuit Test

Impact Test

Needle Test

Mechanical Tests

Vibration Test

Drop Test

Shocking Test

Environmental Tests

Altitude Simulation

Thermal Shock

Electrical Tests

Pytes

Qualification & Certification

ISO9001:2015

ISO14001:2015

ROHS

CB

UL

PSE

KC

REACH

UN38.3

GB31241

CU

IEC62133

Standard Products Introduction

E-BOX-48100R

Introduction

E-BOX series, the new generation LFP battery for home energy storage system. It provides safe,well-designed and high-performance standard LFP battery pack for you. The battery pack is compact, easy to install, free of maintenance, and could be deployed to the building block of energy storage system by being assembled in parallel. It is widely applied in home applications, small commercial and industrial energy storage system as well as Telecom stations.

Features

Self-Consumption
store excess energy generated by solar panels and use it whenever needed

Back-Up Power Supply
provide emergency power supply during grid outage

Electricity Bills Reduction
charge the battery during off-peak period and discharge the battery during peak period

Smart Energy Management
measure, monitor and manage the system in real-time
optimize the system life span by intelligent algorithms

Longest Life and Highest Safety
more than 6000 cycles @90%DOD

Wide Compatibility
compatible with 16 mainstream inverters in the market

10 Years Warranty

CE · CLEAN ENERGY COUNCIL · UL · SAA · UN38.3 · IEC

Batteries

E-BOX-4850
440mm * 420mm * 89mm (2U)
48V50Ah 2.4kWh

05-024528-11

05-024527-11

E-BOX-48100R
L440mm* W620mm * H117mm (2.6U)
51.2V100Ah 5.12kWh

Operation Panel

Start Switch ---- ---- Power Indicator ---- Power Interface

Power Button ----

RS-232C Communication Port ----

Cascade Terminals

External CAN / RS-485 Communication Port
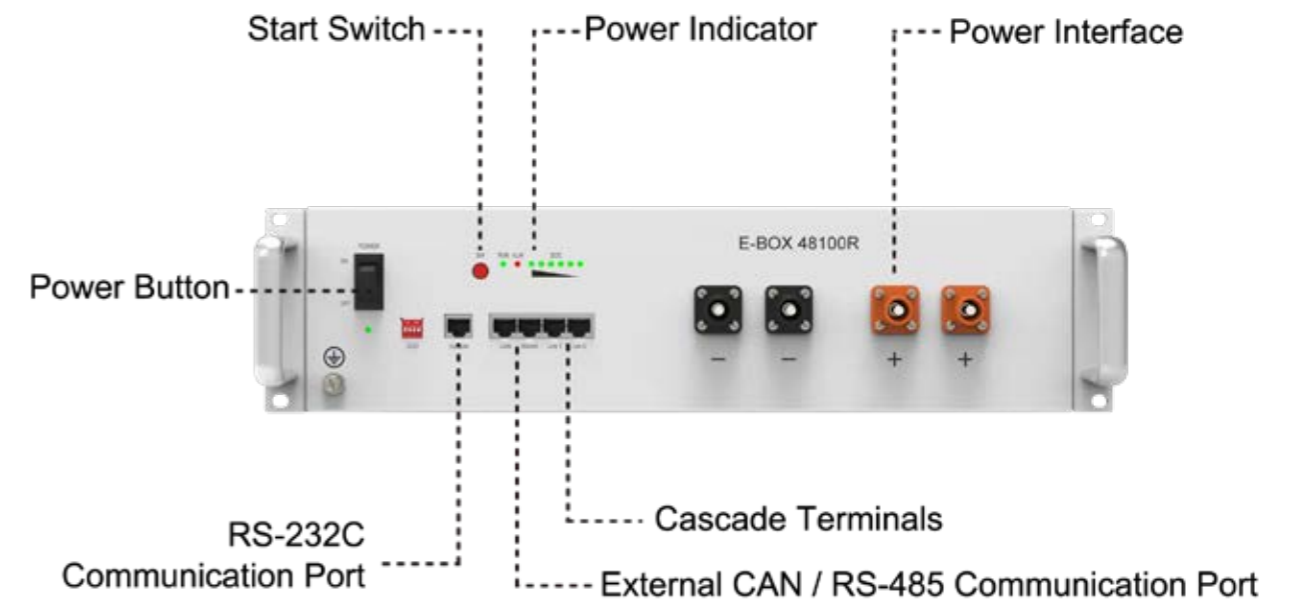
Technical Specifications

Battery Model	E-BOX-48100R	E-BOX-4850
Chemistry	LFP	LFP
Nominal Voltage	51.2V	48V
Voltage Range	47.5V-57.6V	45V-54V
Nominal Capacity	100Ah	50Ah
Nominal Energy	5.12kWh	2.4kWh
Unit Dimension	L440mm* W620mm * H117mm (2.6U)	440mm* 420mm * 89mm (2U)
Unit Weight	51kg	25kg
Maximum Charge Current	100A	50A
Support Charge Current	50A	25A
Maximum Discharge	100A	50A
Support Discharge Rate	50A	25A
Round-Trip Efficiency	≥95%	≥95%
Communication Protocol	RS232, RS485, CAN	RS232, RS485, CAN
Cycle Life	≥6000cycles	≥6000cycles
Calendar Life	≥10years	≥10years
Operating Temperature	-10°C~50°C	-10°C~50°C
Connect style	Parallel	Parallel
Storage Temperature	Within 1month: -20~55°C, 1-3months: 0~35°C, 3-12months: 20~25°C	Within 1month: -20~55°C, 1-3months: 0~35°C, 3-12months: 20~25°C

Cabinets

Introduction

The R-BOX is a state-of-the-art home energy storage system solution. It has a total usable energy capacity of 10kWh. Product features include quick and easy installation, a compact and elegant home style design and great extensibility. The R-BOX can provide smart configurable backup power during grid outages and power smart homes with solar energy, day and night.

Technical Specifications

Model	R-BOX
Total capacity	10.24kWh
Usable capacity	9.22kWh
Chemistry	Lithium iron phosphate(LFP)
Nominal voltage	51.2V
Max. charge/ discharge current	100A
Communication	CAN, RS485
Certificate	UL1973, IEC62619, CE, UN38.3
Operating Temperature	Charge:0~45°C; Discharge:-10~50°C
Altitude	Max.2000 meters
Compatibility	Deye, Solis, Victron, Voltronic, Sol-ark, Growatt, SRNE, Luxpower, Kelong, Goodwe, Studer, SMA,Sermatec, Megarevo etc.

Mechanical Design	Parameter
Dimensions(W*D*H)	280*510*700mm 310*510*780mm(including holder)
Weight	120kg
Mount	Wall/Floor mount
Enclosure rating	IP20
Enclosure material	Cool-rolled steel
Cooling	Natural convection
Warranty	6000 cycles or 10 years

F-BOX

Battery Capacity	4.8kWh	7.2kWh	9.6kWh	14.4kWh
Protect Level	IP20			

3D image

Mechanical drawing

700mm
780mm

510mm

280mm
310mm
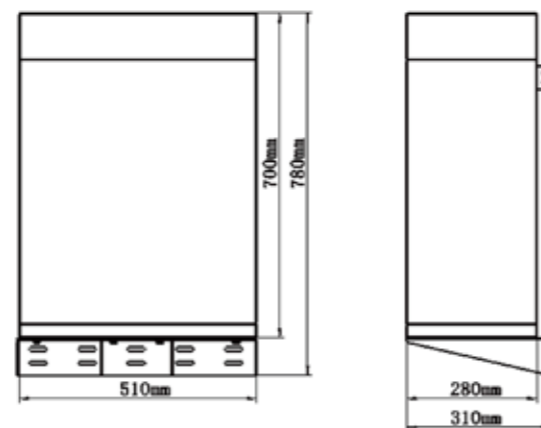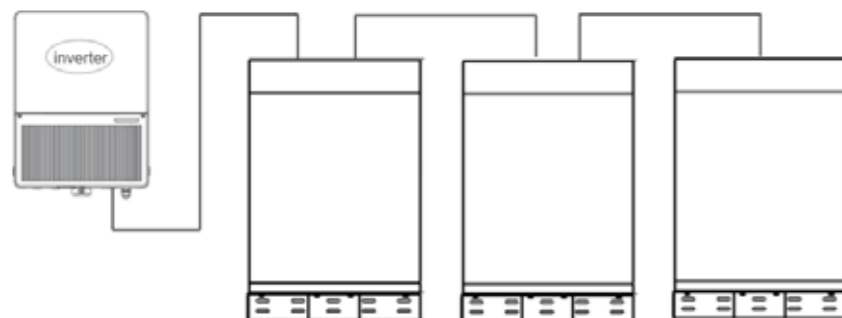
Battery Expansion

Home Energy Storage System can connect R-BOX up to 3 pcs without additional kit.
You can use our 1uHUB to get max 27 R-BOX connected in parallel.

inverter

Pytes

R-BOX-IP65

Introduction

The PYTES R-BOX-IP65 is a state-of-the-art home energy storage system solution. It has a total usable energy capacity of 10kWh. Product features include quick and easy installation, a compact and elegant home style design and great extensibility. The PYTES R-BOX-IP65 can provide smart configurable backup power during grid outages and power smart homes with solar energy, day and night.
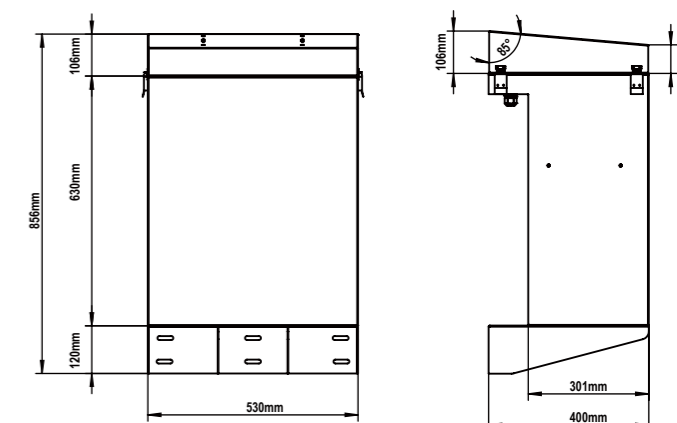
Technical Specifications

Model	IP65
Total capacity	10.24kWh
Usable capacity	9.22kWh
Chemistry	Lithium iron phosphate(LFP)
Nominal voltage	51.2V
Max. charge/ discharge current	100A
Communication	CAN, RS485
Certificate	UL1973, IEC62619, CE, UN38.3
Operating Temperature	Charge:0~45℃; Discharge:-10~50℃
Altitude	Max.2000 meters
Compatibility	Deye, Solis, Victron, Voltronic, Sol-ark, Growatt, SRNE, Luxpower, Kelong, Goodwe, Studer, SMA,Sermatec, Megarevo etc.

| Mechanical Design	Parameter
Dimensions(W*D*H)	310*530*736mm 310*530*856mm(including holder)
Weight	120kg
Mount	Wall/Floor mount
Enclosure rating	R-BOX-IP65
Enclosure material	Cool-rolled steel
Cooling	Natural convection
Warranty	6000 cycles or 10 years

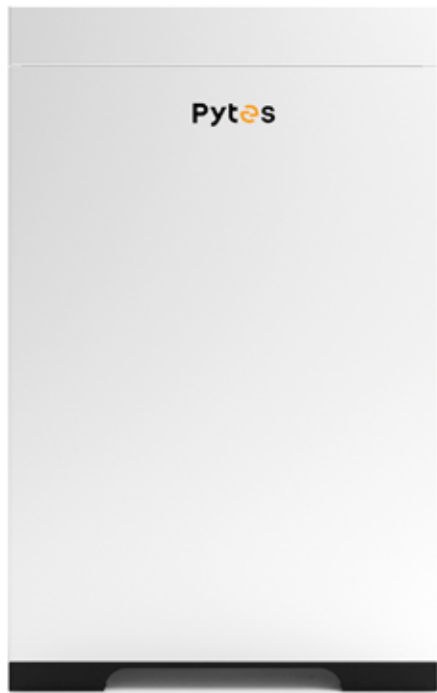## 3D image

Mechanical drawing

Battery Expansion

PYTES Home Energy Storage System can connect R-BOX IP65 up to 3 pcs without additional kit. You can use our PYTES 1uHUB to get max 27 IP65 connected in parallel.
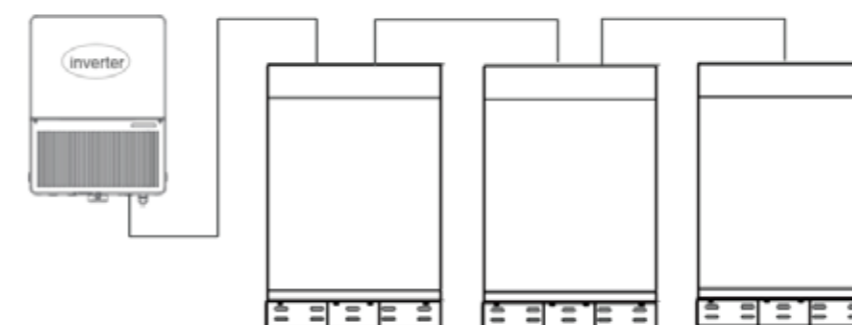
Forest RB

- Easy to install
- Expandable up to 6 units E-BOX-48100R (30kWh in total)
- Long usage life
- Adapt to multiple inverters

Application Scenario

Villa

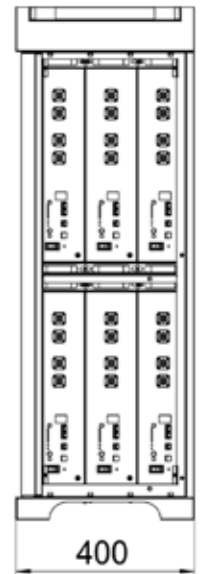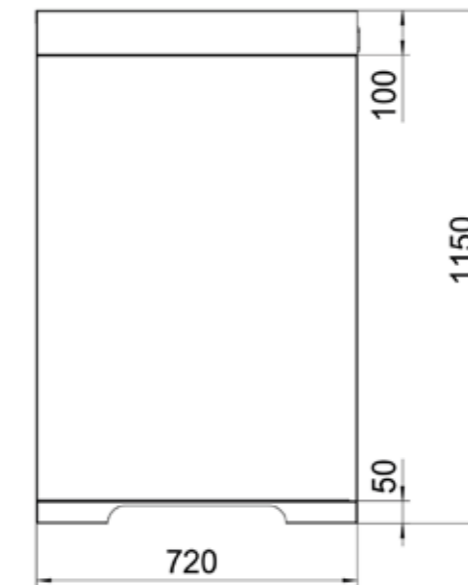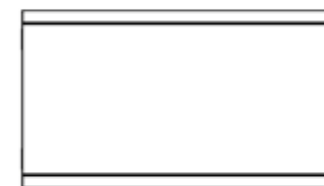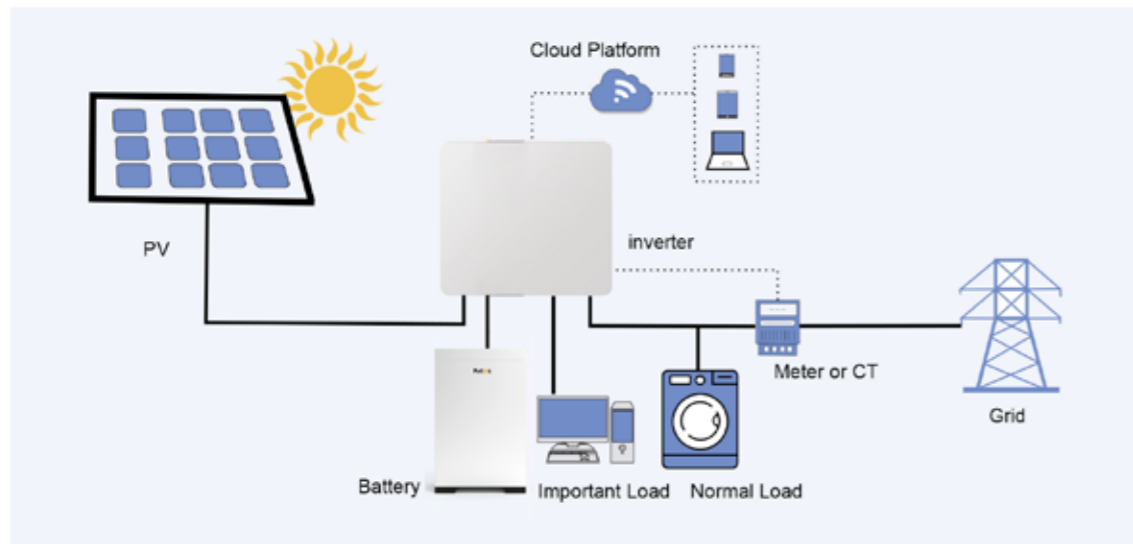Communication base station

Residential electricity

Farm

Introduction

Expand your energy storage with the Forest RB Cabinet! This iron enclosure stores up to 6 E-BOX-48100R batteries. The Forest RB Cabinet paired with multiple batteries can build a 48V UPS server rack or provide storage capacity to home solar arrays.

Product Topology

Product Topology

	B2	B3	B4	B5	B6
Battery capacity	10.24kWh	15.36kWh	20.48kWh	25.6kWh	30.72kWh
Nominal voltage	51.2V				
Standard Charge/Discharge Current	100A	150A	200A	250A	300A
Maximum Charge/Discharge Current	100A	150A	200A	250A	300A
Operating Temperature	Charging:0~45℃; Diacharge:-10~50℃				
Warranty	Cabinet: 3 years Battery: 10 years				
Positive and Negative Battery Busbars	2*8 points; M8 terminal rings				
Weight	120kg	170kg	220kg	270kg	320kg
Dimensions(W*D*H)	720mm*400mm*1150mm				
Enclosure Protection	IP20 (indoor)				
Alltitude	<4000m				
Certificate	UL1973, IEC62619, CE, UN38.3				

Forest R

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Technical Specification

	R2	R3	R4	R5	R6
Capacity	10.24kWh	15.36kWh	20.48kWh	25.6kWh	30.72kWh
Nominal voltage			51.2V		
Weight (approximate)	180kg	230kg	280kg	330kg	380kg
Dimensions W"/H"/D" (approximate)			720*400*2000mm		

Inverter	8K	10K	12K
PV input power	10400W	13000W	15600W
PV input voltage		550V(150V~800V)	
MPPT voltage range		200V~650V	
Start-up voltage		160V	
No.of MPPT trackers		2	
No.of strings per MPPT tracker	1+1	2+1	2+1
Rated AC output power	8000W	10000W	12000W
AC output rated current	12A	15A	18A
Grid type		Three Phases	

Introduction

The Forest R, a new generation of energy storage products that integrate inverters and batteries, and is a landmark "New Home appliance". Forest R can manage your energy usage throughout the day, provide smart configurable backup power during grid outages and power smart homes with solar energy, day and night.
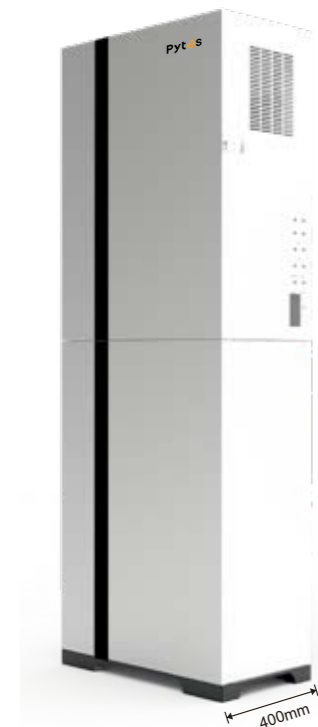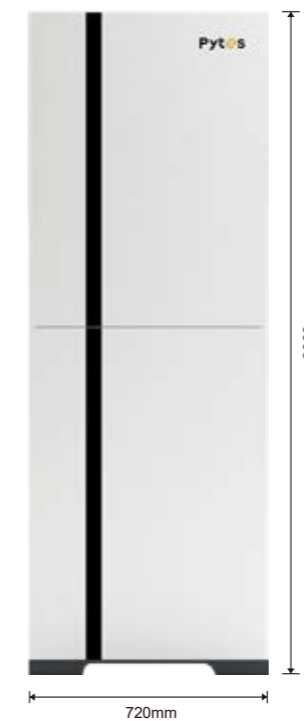
Specification

General Specification

Capacity	5.12kWh per battery module, up to 6 modules
Transfer switch	Automatic, integrated
Listed and recognized certificates	Battery modules: UL1973, IEC62619, CE, UN38.3 Inverter：IEC62109, IEC61727, TOR, IEC62116, IEC60068, IEC61683, NRS 097-2-1
Warranty	Battery: 10 years or 6,000 cycles Inverter: 5 years Cabinet: 10 years
Temperature range	Charge: 0~45℃ Discharge: -10~50℃

Battery Module Specification

DC battery input voltage	47.5–57.6V
Max charge current	50 A per module
Cell discharge	5.12kWh with 90% DoD
Overcharge Protection	MOSFET & Fuse protection

2000mm

720mm

400mm

Brackets

E-BOX PLUS

Introduction

The E-BOX PLUS is a state-of-the-art wall-mounted home energy storage system solution. It has a total usable energy capacity of 5.12KWh. Product features include quick and easy installation, a compact and elegant home style design and great extensibility. The E-BOX PLUS can provide smart configurable backup power during grid outages and power smart homes with solar energy, day and night.

Product Display

Installation Steps

Step 1

Fix the square wall mount bracket in place on the wall by screws.

Step 2

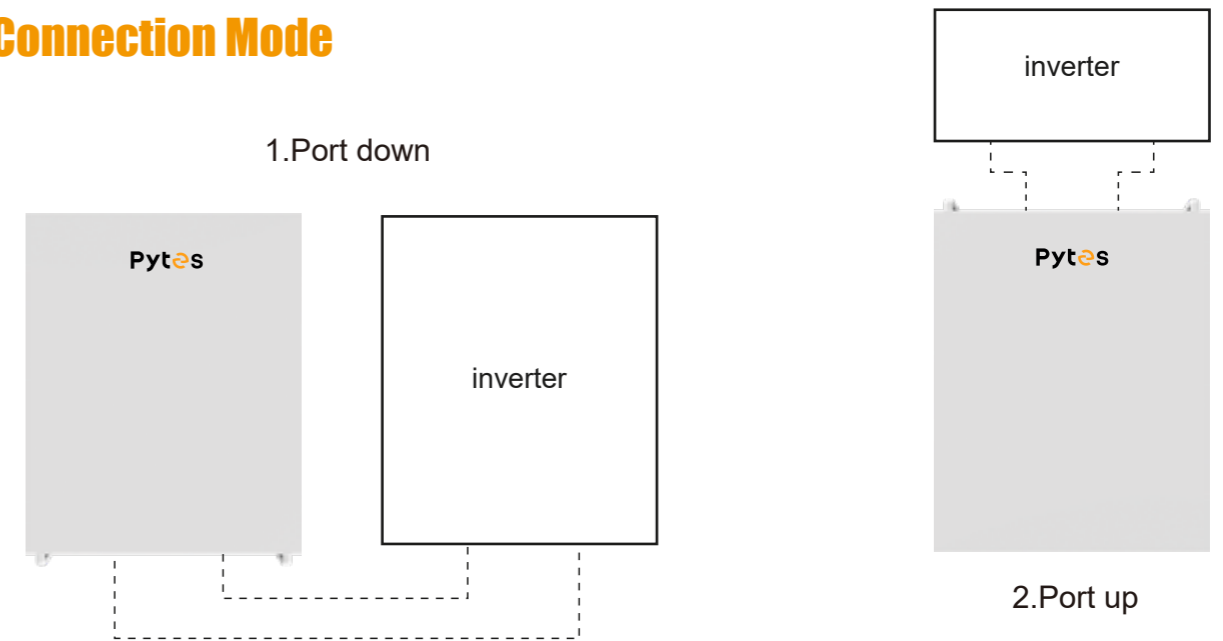Fix the battery bracket on the battery by screws.

Step 3

Hang the battery with battery bracket and cabinet on the square wall mount bracket.

Battery Expansion

E-BOX PLUS can be parallel up to 8 pcs without additional kit.

Connection Mode

1.Port down

inverter

inverter

2.Port up

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R Bracket

Introduction

In order to install the E-BOX-48100R Battery more conveniently and reduce installation costs, PYTES has developed this battery bracket. You can use it on a single battery or on multiple battery packs. Compared with cabinet storage, besides taking up less space, the bracket can ventilate and reduce the heat much more easily.

Parameters

Unit Dimension	532mm*725mm*135mm
Unit Weight	8kg
Installation	1.Install the parts by following the guide of the installation manual; 2.Screws are needed to assemble single battery and rack; 3.Multi-layer battery rack: after assembling all the single batteries and racks, stack them up vertically. Connection board is needed to install in between each two layers of battery racks; 4.Secure multi-layer battery rack with accessories to the wall; 5.Connect multi-layer battery rack to the distribution box.

Can bear more weight

Mechanical drawing

720mm
725mm
525mm
535mm
130mm
135mm
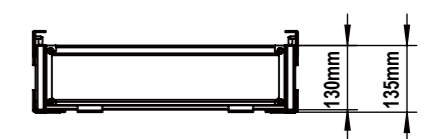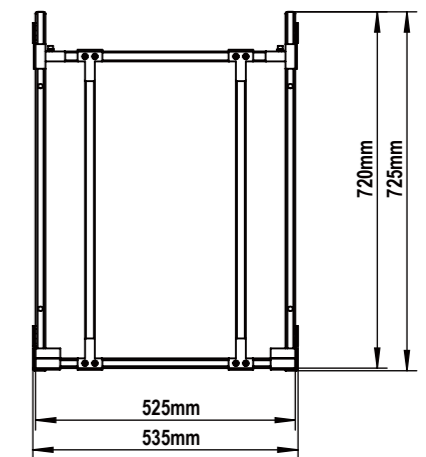
For E-Box-4850 (2U)

22-ABUJ00390：Front Bracket
22-ABUJ00389：Rear Bracket

For E-Box-48100R (2.6U)

14-171385-31: Front Bracket
14-171384-31: Rear Bracket

HUB

05-041380-11：HUB

Each communication hub connects maximum 7 battery groups
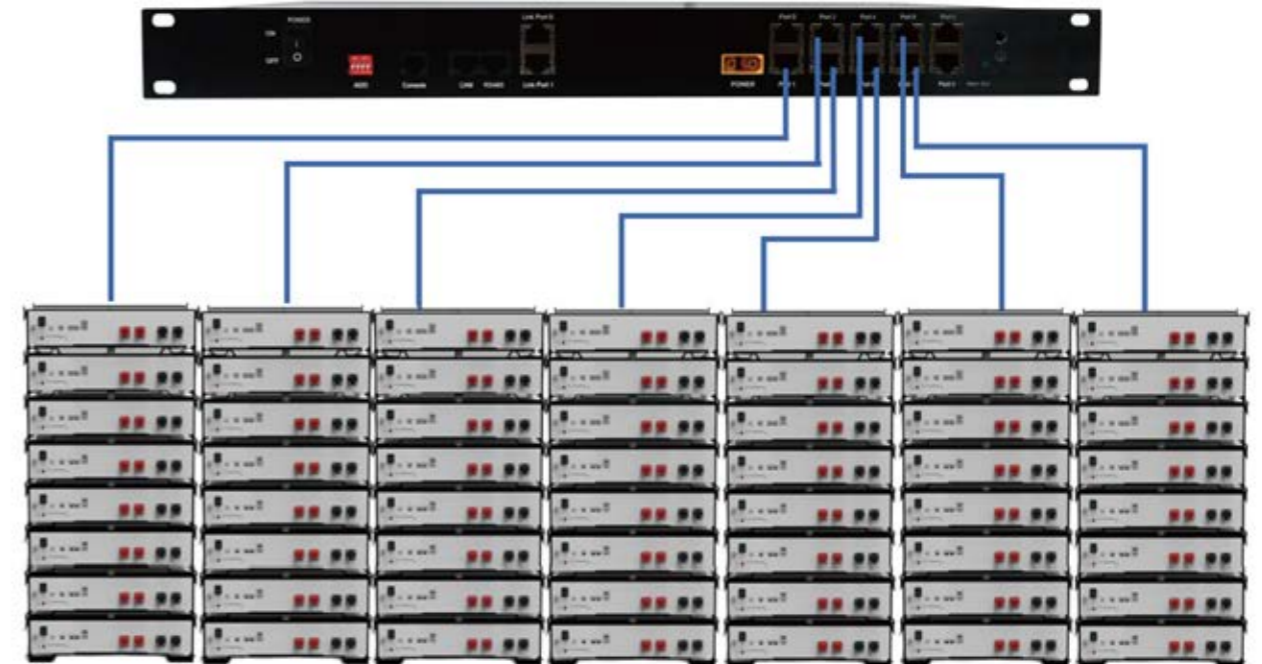
Each group supports maximum 8 pcs E-BOX-4850 or E-BOX-48100 in parallel

Accessories

Battery to Battery

18-041343-31： 160mm Positive Power Cable
18-041344-31： 160mm Negative Power Cable
22-ABUJ00401： 240mm Positive Power Cable
22-ABUJ00402： 240mm Negative Power Cable
18-041341-31： 560mm Positive Power Cable
18-041342-31： 560mm Negative Power Cable

Battery to Inverter

18-041339-31： 500mm Positive Power cable
18-041340-31： 500mm Negative Power cable
18-041336-31： 2000mm Positive Power cable
18-041337-31： 2000mm Negative Power cable

Battery to Battery

18-041315-31： 220mm Standard communication cable
18-041318-31： 350mm Standard communication cable
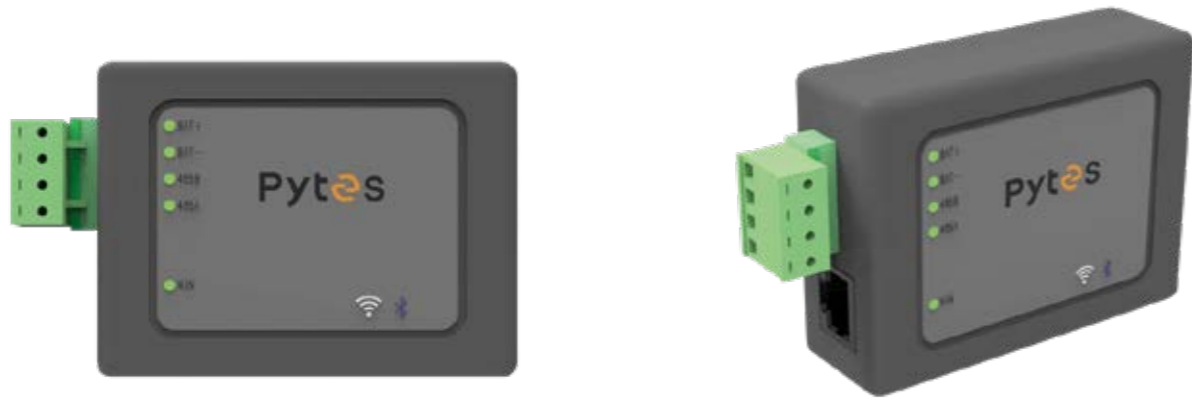22-ABUJ00366： 500mm Standard communication cable

Battery to Inverter

18-061203-31： A Class 1500mm (5′)
Compatible:HUB、deye、solis、goodwe、growatt、SMA can

18-061207-31： A Class 3500mm (11′5.79")
Compatible:VoltronicOffGrid 485

18-061208-31： A Class 3500mm (11′5.79")
Compatible:VoltronicOffGrid 485

18-061209-31： A Class 3500mm (11′5.79")
Compatible:HUB、deye、solis、goodwe、growatt、SMA can

18-021089-31： A Class 1000mm (3′3.37")
Compatible:deye、luxpower、growatt 485

22-ABUJ00386： A Class 2000mm (6′6.74")
Compatible:victron can

18-021080-31 ： B Class 500mm (1′6.68")
Compatible:deye、solis、growatt 485/can SMA、 goodwe can
SRNE 485

18-061206-31 ： B Class 500mm (1′6.68")
Compatible:deye、solis、growatt 485/can SMA、 goodwe can
SRNE 485

18-041316-31： B Class 3500mm (11′5.79")
Compatible:deye、solis、growatt 485&can、SMA、goodwe can、
SRNE 485

05-070000-11： RS 232 communication cable

18-041317-31： 1000mm Earth Cable (3′3.37")

05-041382-11： Smart Meter

05-060000-11： 48V 300A Bus Bar
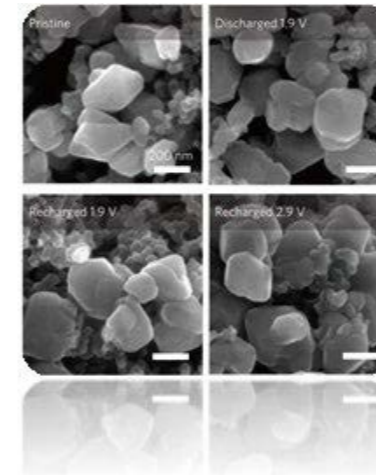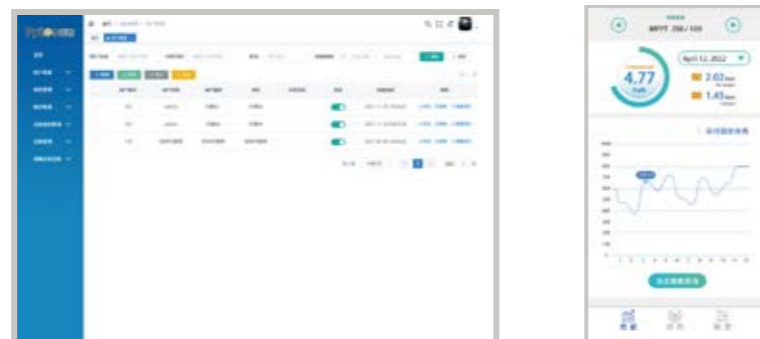
SMART MONITOR

Smart Monitor feature

1. Battery remote upgrade;
2. Battery fault monitoring;
3. Historical fault inquiry;
4. Historical power inquiry;
5. Mobile APP and cloud monitoring;
6. Wireless and Bluetooth two ways of connection；
7. Multi-level management；

Diagram

Monitor   Server   PC

Mobile

WEB/APP

Cells& Packs

- The olivine structure and the stability of P-O bond of LFP cells guarantee much higher safety than those of NCM cells.
- 17 years experiences of pack R&D ensure longer cycle life of the battery.

Self-designed BMS

- Equipped with automotive grade chips by TI® system.
- Double protection by master chips. When the main chip fails, the back-up chip keeps protecting the system.
- Real-time temperature, current, voltage measuring and monitoring.
- Accurate SoC and SoH calculation.

Quality Assurance

- UL1973/ IEC62619/ CE/ UN38.3 Certificates
- TÜV, SGS, BV International Certified Cooperative Testing Laboratories.

ck Response

local after-sales response/ 24hours*7days.

24*7

Pytes

victron energy
BLUE POWER

Voltronic Power
Advancing Power

Sermatec

STUDER

MEGAREVO

MPP Solar

Sol-Ark
LIMITLESS POWER

phocos

GROWATT

LUXPOWER TEK

tbb
PURSUIT OF PERFECTION

SRNE

Deye 德業

GOODWE
your solar engine

KEHUA TECH

Afore

solis

SMA

More Catalogs

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