



Focus on lithium battery products, create a low-carbon lifestyle

SHENZHEN TOPBAND BATTERY CO., LTD.

## **ABOUT US**

Shenzhen Topband Battery Co., Ltd. was established in 2006, and is a wholly-owned subsidiary of Shenzhen Topband Co., Ltd (002139.SZ) which is the world's leading intelligent control solution provider. Headquartered in Shenzhen, Guangdong province. It has six production bases in Shenzhen, Huizhou, Nantong, Taixing, Vietnam and India. With its focus on lithium-ion products, the company is able to conduct independent R&D and manufacturing in the three core areas of cells, BMS and system integration to ensure stable and reliable product performance. The company strives to be a first-class and reliable international provider of lithium-ion products to create low-carbon life for our customers, and its products are widely used in energy storage and light mobility fields worldwide.













### **CORE ADVANTAGES**





1700+ R&D Staff



3000+ Patent Applications



8.11% R&D Investment Ratio



18.73% R&D Staff Ratio



### Fully automated production line

We ensure the performance safety of home battery by our self-produced cell with high energy density and long cycle life. Topband Battery has accumulate industry-leading level capability in BMS technology and manufacturer production to ensure the stability and reliability of products.











#### Strict quality assurance































Global service layout



15 Production bases/ R&D centers worldwide



Products are sold worldwide more than 50 countries



# **▶** Battery Cell

Topband Battery has more than ten years of experience in battery cells R&D and production. Huizhou and Nantong production bases produce Prismatic cells, Ninghui production base produce Pouch cells and Large cylindrical battery cells, which are used for Residential energy storage, Portable power storage, Backup energy storage, Industrial and commercial energy storage and other products provide battery solutions.

## **Prismatic Cell**

Used in Residential energy storage, communication energy storage, Power energy storage, industrial and commercial energy storage products.



## Cylindrical Cell

Used in Two-wheelers, Low-speed vehicles, Forklifts, AGVs, Solar street lights, Portable energy storage, and Residential energy storage products.



## **Sodium-ion Cell**

Sodium-ion cell will be widely used in the field of Light motive power and Energy storage. It is mainly used in Portable energy storage, Two-wheelers, Low-speed vehicles and Backup energy storage.



## Pouch cell

Used in Motorcycle starting, Industrial vehicle products, Sweepers, Electric scooters, Power tools and Drone products.



## **▶** Residential ESS

Topband Battery provides Residential Energy Storage System utilizes solar power system on the roof and the low-price electricity from the grid power supply system to store surplus power into the energy storage system for peak use, which can not only be used as emergency power, but also save the household electricity bill. Even if poor weather, continuous or unexpected power outages, your daily life will not be aected, the residential energy will keep your home powered all day long.



#### KEY FEATURES



#### Safety

Compliant with CE, UN38.3, IEC62619, UL1973, UL9540A and other international safety standards.



#### More Usable Energy

100% Depth of Discharge, Intelligent optimization of battery pack.



#### Super Compatibility

Compatible with a variety of mainstream inverters on the market.



#### Flexible Installation

Diversified installation modes.



#### **Maintenance free**

6000+ Cycle Life, intelligent balance



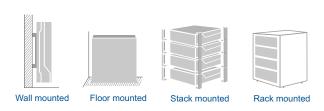
#### Intelligence

Support WIFI APP/ Cloud platform monitor.

## **RS-R Series**

### Rack-mounted residential lithium-iron battery

- 3U(133mm) standard height design
- 5~160kWh in parallel available
- Four installation methods





## **RS-SH Series**

Stack-mounted residential lithium-iron battery





## **RS-W Series**

Wall-mounted residential lithium-iron battery



### **RESS Series**

#### All in one energy storage systems

#### All-in-one design

- Photovoltaic + off-grid input mode.
- Plug-and-play, quick installation.
- Home style, stylish appearance.
- Stacked battery modules, flexible expansion accordingto power demand.

#### **High-performance battery**

- Lithium iron phosphate cells, safe and stable.
- 24-hour backup power, power outage worry-free.

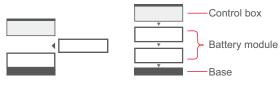
#### **Economic intelligence**

- Green energy, energy saving and emission reduction.
- Charging during the off-peak and discharging at peak hours.
- APP intelligent control, anytime, anywhere.



## **RS-S Series**

#### Stack-mounted residential lithium-iron battery







## **RS-C Series**

Floor-mounted residential lithium-iron battery

- Support 20 units parallel to 300kWh (51300).
- Support 20 units parallel to 400kWh (51400).



# ► RV, Marine, Off-grid Power Solution

Topband Battery provides advanced RV, Marine, Off-grid Power Solution, widely used in RVs, fishing boats, golf carts, solar energy storage systems, solar street lights, cleaning machines and other fields. A great variety of lightweight, high-performance, safe and reliable batteries to bring more energy and worry-free to your life.

### T Premium

- Pack certification: UN38.8, UL1973, IEC62619, CE, E-mark
  Cell certification: UN38.3, UL1973, UL9540A, IEC62133.
- Waterproof IP67, with safety valve.
- Insulated enclosure to prevent short circuit.
- Support Bluetooth APP, APP support customization.
- Communication mode: CAN/RS485. can be compatible with mainstream inverters.
- On/off switch, LED indicator, check the Soc of the battery.
- Cloud platform OTA, bluetooth upgrade BMS program.
- Support up to 4 batteries in series to form a 48V system.
- Support 4 batteries in series and parallel at the same time.
- Up to 16 batteries can be connected in parallel to form a 12V1,600Ah system.
- Our LiFeP04 battery capacity is over 80% left after 1C charge & discharge under 80% DOD condition for 6000 cycles.
  The design life is up to 15 years. But the lead-acid battery will only cycle 500 times at 80% DOD.
- Independent charge and discharge protection.
- Intelligent BMS management, with high and low voltage, high and low temperature, overload and short circuit protection functions, etc.
- Support low temperature heating, can discharge at temperatures down to -20°C(-4°F).

### B Series

- Standard lead acid cases, customized case, funtions and bluetooth app available.
- UN38.3 / IEC / CE certificated, quality guaranteed.
- Support series or parallel connection.
- Bluetooth app monitoring and up grading.
- 4000+Cycle life,80%DOD.
- Heating function optional.





### Golf Carts

- Up to 10 batteries can be connected in parallel to expand the capacity to 300Ah.
- Provide battery SOC, voltage and current through LED display.
- Compatible with multiple brands of mainstream golf carts use.
- Maintenance-free.
- 10 years life design.
  Long cycle life and high performance.
- Charge and use at any time.



### DIN Series

- UN38.3 / CE / UL1642 certificated, quality guaranteed.
- 4000+Cycle life @80%DOD.
- Heating function optional
- Standard BCI group size.
- Support in series or in parallel connection.
- Bluetooth APP function can be customized.



## S Series

- Optimal cost performance.
- 2000+Cycle life @80%DOD.
- Support multiple series or parallel connections.
- Standard design, mature and stable.
- It can operate in a low temperature environment and can discharge at a temperature of -20~65°C.
- Twice the energy density of a lead-acid battery.



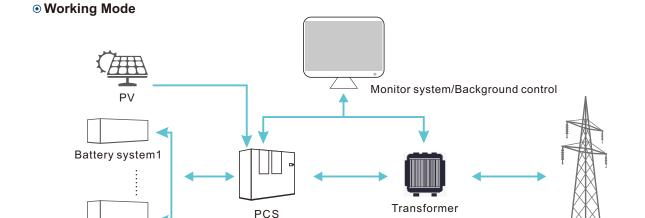
## Commercial & Industrial ESS

Topband Battery provides cells, BMS, PCS, and EMS products in industrial and commercial energy storage scenarios. Using high-quality lithium batteries as energy storage devices and utilizing the local and remote EMS management system, these products would complete the balance and optimization of power supply and demand between the grid, battery and load, convenient access to photovoltaic and other new energy equipment, in peak and valley power, distribution network capacity, power security and other aspects to bring users a safe, efficient and flexible power experience.



#### System Component Composition





#### Applications



#### **Electricity Generation**

Battery systemN

Black Start Long-cycle peak adjustment Frequency modulation Smooth output curve

#### **Electricity Transmission**

Optimizing power Frequency modulation Reactive power support

#### **Power Distribution**

Short-cycle peak adjustment Transformer capacity reduction Peak reduction and valley filling Reactive power support

#### **Electricity consumption**

Grid-tied

Electricity demand response Smoothing load curve Emergency power



## All-in-one C&I Battery Energy Storage System

M100G215A All-in-one C&l Battery Energy Storage System highly integrates LiFePO4 battery, BMS, PCS, EMS, fire protection system, temperature control system and cloud platform. The system adopts an integrated and innovative design with higher safety standards, more hassle-free management and higher profit. It can flexibly meet various needs and provide low-carbon and high-profit solutions for different application scenarios.

#### **BATTERY CELL**

#### Longer lifespan

Adopt intelligent replenishment technology of the lithium ion battery, designed for a cycle lifespan of ≥10,000 times.

#### Lower temperature rise

The low-temperature characteristics of the battery cell result in lower heat generation and better heat dissipation.

#### **RACK**

#### Individually managed per cluster

Each cluster is managed separately to minimize the risk of thermal spread and prevent backflow between clusters.

#### Modularized design

Modularized design of each part, easy to install and use, and simple maintenance.

### **PACK**

#### Better performance

Fix the shape of the battery cell for a longer operational lifespan.

#### Lower cost

Use standardized modules for a more cost-effective design, lower installation and maintenance costs.

#### **SYSTEM**

#### Intelligent management

Replace multiple platforms with a single platform for monitoring data from multiple devices, remote monitoring, cloud alerts, and quick response.

#### Multiple measures

Separate compartment isolation, multi-stage fire protection, multiple safeguards, safety and reliability.



## All-in-one C&I PV Energy Storage System

The PV storage integrated system adopts the design concept of "Handsfree, no installation required", and integrates lithium iron phosphate batteries, battery management systems, energy storage inverter modules, photovoltaic inverter modules, on-grid and off-grid switching modules, fire protection systems, and temperature control systems, lighting system and monitoring system are integrated. Adopting a modular design, it can flexibly respond to various needs in practical applications, and create low-carbon and high-yield solutions for different application scenarios.

#### ■ Flexible configuration

Strong scalability, support for multi-machine parallel use.

#### **■** Fully-featured

One system with multiple functions, supports optional functions such as PV storage, diesel storage, energy storage, off-grid, on/off grid switching (optional).

#### ■ Pre-fabricated installation

All components except battery module are pre-fabricated installed, which is convenient for installation and easy to debug and maintain.

#### **■ Efficient heat dissipation**

Air conditioning + multi-duct design, efficient heat dissipation.

#### ■ Black start function

Equipped with black start function, it can effectively guarantee the safety and stability of equipment operation.

#### ■ Intelligent management

Equipped with intelligent monitoring and management system, it can realize remote monitoring, remote troubleshooting and data analysis.



## **Indoor Battery Energy Storage System**

Adopting modular design concept, it achieves efficient integration of LiFePO4 battery and battery management system, ensuring safe and stable power supply and maximum utilization of new energy. It can flexibly respond to various needs in practical applications and create low-carbon and high-profit solutions for different application scenarios.

#### ■ Flexible configuration

It is highly scalable and supports parallel use of multiple inverters and is compatible with the mainstream inverters in the industry.

#### ■ Convenient installation

Modular design, prefabricated installation, simple maintenance.

#### ■ Longer lifespan

Adopt intelligent replenishment technology of the lithium ion battery, designed for a cycle lifespan of ≥10,000 times.

#### **■** Lower cost

Use standardized modules for a more cost-effective design, lower installation and maintenance costs.

#### ■ Safe and reliable

High-quality battery cells, high consistency and a full life cycle of 25 years.

#### ■ Intelligent management

Equipped with intelligent monitoring and management system, it can realize remote monitoring, remote troubleshooting and data analysis.



# **Backup Power**

In the backup power scenarios, Topband Battery offers CELL, BMS, and PACK products. The battery pack has an intelligent BMS that not only effectively improves battery charging and discharging performance, but also has an alarm and multiple protection functions that can ensure the safety and stability of the customer's equipment operation. Strong adaptability, excellent safety, a long life cycle, and the potential to successfully improve customer operating efficiency and cost control make these features ideal for data centers, IT rooms, and other application scenarios.



## **UPS Backup Power**

- High integration, high conversion efficiency.
- Supports up to 12 clusters for high power applications.
- Automatic battery management to improve battery life.
- Fast, flexible, distributed, rack-mountable, modular deployment for easy installation and space saving.
- Comprehensive LCD display with real-time, accurate battery status and parameters for monitoring.



BP-U512100A

- Self-developed BMS.
- Excellent low-temperature performance of battery cells.
- Support 10C high discharge rate, greatly improve the efficiency of use.
- The automatic battery management function effectively improves battery life.
- High-temperature performance under a high discharge rate.
- Same size as traditional lead-acid battery, can be a perfect replacement.



**BP-U4805A** 

## **Telecom Backup Power**



Intelligent Centralized Monitoring



Mature and Stable Solution Standardize Cabinet Installation







BP-T48100A BP-T48100A BP-T48100A

## **Portable Power Station**

Topband Battery provides the Portable Power Station as the industry's innovative portable outdoor power supply, adopts an ergonomic handle design for comfortable handling, space saving, more stable and reliable overall performance, simple operation, easy maintenance and high efficiency and environmental friendly.











#### **High Capacity**

Long battery life, meet the needs of indoor and outdoor scenes.



#### **Pure Sine Wave**

The same current as the mains does not damage the electrical equipment



#### **Strong Compatibility**

Multiple outputs can supply power for various electrical appliances.



UL certified power cell and multiple quality inspection to ensure power safety.



**HD Screen** 

The power status is clear at a glance.

#### Application Scenario













Powout-600 Powout-1200

Powout-1600







TB280W\_SP\_23V

# Light Motive Power Battery

## Light Electric Vehicle (LEV) power battery

Topband Battery provides the power battery for Light Electric Vehicle (LEV) application adopts safe and reliable cells, intelligent and efficient BMS, which has been certified by a number of patents, with stable performance and quality assurance. It is widely used in E-bike, electric motorcycle and low-speed vehicle, providing customers with safe, reliable, light and long-lasting intelligent lithium batteries solutions.









#### **Electric Bicycle**

High energy density, excellent quality lithium battery, compact, lightweight, detachable. No longer worry about the battery range, bringing reliable power for travel.







LEV-B4810A-LN



LEV-B4828A-LN

#### **Electric Motorcycle**

The main dual battery parallel system can support dual battery power supply simultaneously to provide strong power. It can also support dual battery power supply switching for extra-long usage time.



LEV-S6020A-LF



LEV-B6032A-SN



LEV-B6045A-LN



LEV-B7252A-LN

#### **Low-Speed Vehicles**

Adopt self-produced lithium iron phosphate battery system to replace the traditional lead-acid battery pack, and providing users with safe, reliable, environmentally friendly, long-range power battery, and able to meet the demand for 2-hour fast charging, greatly improving the convenience of users with the car.



LEV-C72105A-TF



LEV-C24165A-TF

## **Robot battery**

For special vehicles (electric forklifts, AGVs, etc.), Topband Battery offers high-performance, safe, dependable, environmentally friendly, and energy-saving power battery solutions to fulfill the needs for safe, high energy density, long life, and easy operation.







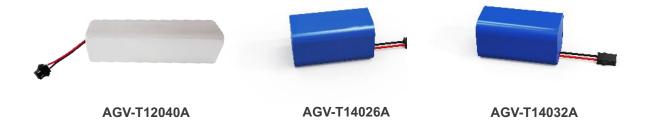
**AGV-V2430A** 



**AGV-V2460A** 



AGV-V24240A













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SHENZHEN TOPBAND BATTERY CO.,LTD. Web: www.topbandbattery.com Tel: 86-755-27651888 Add: Topband Industrial Park, LiYuan Industrial Zone, Shiyan, BaoAn District, Shenzhen, China







