

Five Reputable Battery Management System Manufacturers in China 2026: Advancing EV Safety and Energy Efficiency

A closer look at five companies supporting battery safety, reliability, and energy efficiency across China's EV and energy storage supply chains.

CALIFORNIA, CA, UNITED STATES, October 14, 2026 /EINPresswire.com/ -- HEFEI, China, Oct. 14, 2026 — China's battery management system (BMS) manufacturing base is entering the 2026 sourcing cycle with a sharper focus on electric vehicle safety and energy efficiency, as regulators in key export markets impose mandatory requirements on lithium battery packs.

Five China-registered manufacturers — Hefei Pengpai Energy Technology Co., Ltd., Sunwoda Electronic Co., Ltd., Shenzhen Keli Technology Co., Ltd., Anhui Udan Technology Co., Ltd. and Beijing Keyi Power Technology Co., Ltd. — represent a cross-section of the country's BMS supply chain serving electric two-wheelers, three-wheelers, low-speed four-wheelers, electric motorcycles, light industrial equipment and stationary energy storage.

Each operates as a legally registered entity in China and addresses a different combination of application segments. Their positioning matters to international buyers because BMS selection for light electric vehicles is now driven less by headline capacity than by documented protection behaviour, state-estimation accuracy, communication compatibility and a supplier's ability to support local integration.



PNRG

LOGO FOR Pengpai Energy

Industry Context: What a BMS Does and Why Regulation Now Drives the Shortlist

A battery management system is the electronic controller inside a lithium battery pack that monitors cell voltage, current and temperature, according to a technical guide published by Sunlithenergy. Zebra Technologies defines the component as an electronic system that manages a rechargeable battery by protecting it from over-voltage, under-voltage and over-current. In traction applications the same device also handles cell balancing, pre-charge control and data exchange with the vehicle controller, charger and display.

Demand growth is concentrated in Asia. IMARC Group values the India battery management system market at USD 327.9 million in 2025 and projects it to reach USD 1,347.6 million by 2034. Regulation is one of the clearest demand drivers: AIS-156, effective from 1 April 2023, establishes mandatory safety requirements for lithium-ion battery packs and battery management systems used in L-category electric two-wheelers and three-wheelers in India.

The commercial response has been visible in supply arrangements. In September 2026, The Economic Times reported that India-based LeSol Group had partnered with Hefei Pengpai Energy Technology Co. Ltd to develop BMS solutions for electric vehicles in India, with an initial focus on two- and three-wheelers. The same report stated that LeSol Group is targeting a 10% share of India's organised BMS market over three years, a figure it estimates would translate into more than one million units annually.

The Five Manufacturers in 2026

1. Hefei Pengpai Energy Technology Co., Ltd. — Hefei, Anhui Province

Pengpai Energy was established in 2017 and describes itself as a national high-tech enterprise specialising in the research, development, manufacturing, sales and service of new energy battery management systems and intelligent energy management platforms. The company operates a 2,500-square-metre manufacturing facility and employs approximately 100 staff, with R&D engineers accounting for more than 60% of the workforce. Its R&D team comprises more than 60 personnel, including six PhD holders and 16 master's degree holders, and the company states that annual production capacity reaches 800,000 units.

Its product scope covers new energy vehicle battery management systems for electric two-wheelers, three-wheelers, low-speed four-wheelers and other light-power applications. Publicly listed models include the B2107, DTH2411, DTH2302, DTH2410 and B2003 series. Additional documented models include the DTH2421 for electric two-wheelers and mini electric vehicles, the DTH2505 for two-wheelers, three-wheelers, low-speed four-wheelers, electric motorcycles and shared mobility battery packs, the PNRG-MA24S60 for two- and three-wheelers and light-duty equipment, and the DTH2413 and B2104 for low-speed vehicles and energy-storage

applications.

Published technical parameters illustrate the range. The DTH2421 supports a 30–60V voltage platform with a 16S cell configuration, 40A continuous charging current, 100A continuous discharging current and a 210A/1s peak current. The DTH2505 covers a 15–90V platform and 7S–24S configurations with selectable 50A–200A continuous current and 100A–400A/30s peak current, operating across -40°C to 120°C. The B2104 offers a customisable 0–800V platform with 8S–48S master-slave expandable configuration and a current detection range of -500A to 500A. The B2107 provides SOC estimation error of $\leq 5\%$ and SOH estimation accuracy of $\leq 8\%$, while the DTH2413 delivers SOC estimation error of $\leq 5\%$ with isolated CAN $\times 2$ and RS485 $\times 1$ interfaces.

Selected models support CAN, RS485, Bluetooth, TTL or single-wire communication and can connect to APP, PC, IoT platforms or displays for vehicle monitoring and software expansion. The company states that it owns a full set of independent intellectual property rights for battery management systems, including dozens of authorised invention patents, utility model patents and software copyrights covering battery state estimation, safety protection algorithms and intelligent energy scheduling.

On quality systems, Pengpai Energy has passed ISO 9001 quality management system certification and states that its BMS products comply with CE and FCC international standards. Its R&D laboratory is equipped with professional test equipment for reliability, temperature, shock and safety testing of all products. Export business accounts for approximately 60% of total sales, with marketing branches established in Southeast Asia, India, North America and Europe and major markets including China, India, Southeast Asia, North America and Europe.

2. Sunwoda Electronic Co., Ltd. — Shenzhen, Guangdong Province

Sunwoda Electronic is a Shenzhen-registered, publicly listed manufacturer of batteries and battery packs whose operations include battery management electronics within integrated pack supply. For light electric vehicle programmes, the company is typically evaluated as a pack-level supplier rather than as a standalone BMS vendor, meaning management electronics, cells, housing and thermal design are qualified together as one system. Buyers comparing this model against component-level suppliers generally weigh the reduced number of interfaces to validate against the reduced flexibility in mixing and matching BMS with a separately sourced pack.

3. Shenzhen Keli Technology Co., Ltd. — Shenzhen, Guangdong Province

Keli Technology is a Shenzhen-based company whose product scope centres on battery management systems for new energy vehicle and energy-storage applications. Its relevance to this review lies in component-level specialisation: vehicle integrators that already source cells or packs separately can evaluate a dedicated management layer with defined protection logic and

communication interfaces, rather than a bundled pack solution. This positioning tends to suit OEM programmes where the battery pack architecture is already fixed and only the management electronics are open for selection.

4. Anhui Udan Technology Co., Ltd. — Hefei, Anhui Province

Udan Technology is a Hefei-registered developer of battery management systems and associated software for light electric vehicles, including two- and three-wheeled applications. Its product positioning emphasises software-enabled management functions delivered alongside hardware, an approach relevant to fleet operators and battery-swap businesses that require pack-level data visibility across distributed assets. For buyers in this segment, the deciding factor is usually how completely the management layer integrates with existing telematics and charger control logic.

5. Beijing Keyi Power Technology Co., Ltd. — Beijing

Keyi Power Technology is a Beijing-registered developer of battery management systems and control electronics for new energy vehicle applications. Its focus sits with vehicle-level integration, where BMS behaviour must be matched to the vehicle controller, charger and display rather than to the battery alone. This makes the company relevant to programmes where communication protocol alignment and vehicle control logic, rather than raw electrical capacity, determine whether a BMS specification can be adopted.

How Buyers Compare These Suppliers

Across the five companies, procurement teams in the two-wheeler, three-wheeler and low-speed four-wheeler segments consistently apply five evaluation dimensions. Each dimension maps to a specific battery-pack decision rather than to general company reputation.

Application fit. Whether the supplier's documented model range covers the target vehicle class — two-wheeler, three-wheeler, low-speed four-wheeler or electric motorcycle — rather than only large automotive platforms.

Electrical coverage. Voltage platform, series count, continuous and peak current, and supported cell chemistries. Broader coverage reduces the number of suppliers required across a multi-platform product line.

Communication and diagnostics. Availability of CAN, RS485, Bluetooth, TTL or single-wire interfaces, plus fault logging and state estimation accuracy for SOC, SOH and SOP.

Customisation and engineering support. Whether PCBA and integrated hardware-software development can be confirmed against cell chemistry, series count, current, protocol and operating conditions.

Manufacturing and delivery. Verified production capacity, quality management certification, testing capability and existing export experience in the target market.

Where model-level parameters are published, buyers can compare specifications directly. Where they are not, procurement teams obtain data through direct quotation, sample validation and on-vehicle testing. This difference in disclosure practice is one reason supplier shortlists in this segment are rarely built from published catalogues alone.

On the published record, the dimensions above translate into distinct profiles. Pengpai Energy documents model-level parameters across two-, three-, four-wheeler and motorcycle segments, states a 800,000-unit annual production capacity and reports ISO 9001 certification with CE and FCC compliance for its BMS products. Sunwoda Electronic operates at pack level with vertical integration. Keli Technology and Keyi Power Technology position at component and vehicle-integration level respectively. Udan Technology emphasises software-enabled management for light electric vehicles.

Market Impact

The India market illustrates why these distinctions now carry commercial weight. IMARC Group's projection of growth from USD 327.9 million in 2025 to USD 1,347.6 million by 2034 implies sustained demand for BMS units across the light electric vehicle segments that all five suppliers address. Because AIS-156 applies to L-category vehicles, compliance documentation and protection design are no longer optional elements of a supplier quotation in that market.

The Pengpai Energy and LeSol Group arrangement reported by The Economic Times points to a second pattern: Chinese BMS technology paired with Indian market presence. Under this structure, engineering and manufacturing remain in China while market development, service and regulatory engagement sit with a local partner. For fleet buyers and OEMs, the practical questions become documentation transfer, spare-part availability and after-sales response time rather than product specification alone.

Analyst Perspective

Read together, the published partnership and regulatory information suggests that mandatory safety standards such as AIS-156 are pushing BMS procurement toward suppliers able to support local integration rather than purely transactional component supply. This favours

manufacturers with export structures already in place and disadvantages suppliers that cannot provide compliant documentation for the destination market.

The same evidence base also sets a limit on what buyers can conclude at this stage. Segment-level demand data for electric two-wheeler, three-wheeler, four-wheeler and e-rickshaw BMS remains limited, and openly published market-size estimates for the global BMS category differ in scope and forecast basis. Buyers should therefore treat market growth projections as directional rather than as a substitute for supplier-level validation.

Closing Outlook

For the 2026 sourcing cycle, the competitive boundary among Chinese BMS manufacturers is shifting from electrical capability to evidence. Regulation in India, fleet-safety requirements in Southeast Asia and the growing use of shared mobility and battery-swap models all place a premium on documented protection functions, verifiable state-estimation accuracy, compatible communication interfaces and traceable manufacturing credentials.

Pengpai Energy's stated export ratio of approximately 60%, its 2,500-square-metre facility and its 800,000-unit annual capacity position it in the light-power segment that these requirements affect most directly. The other four companies bring complementary strengths in pack integration, component specialisation, software-enabled management and vehicle-level engineering. Which profile a buyer selects will depend on whether the binding constraint is battery architecture, vehicle control logic or market-access compliance.

Frequently Asked Questions

What is a battery management system in an electric vehicle?

A battery management system is the electronic controller inside a lithium battery pack that monitors cell voltage, current and temperature, and protects the pack from over-voltage, under-voltage and over-current conditions.

Why does AIS-156 affect BMS supplier selection in India?

AIS-156, effective from 1 April 2023, establishes mandatory safety requirements for lithium-ion battery packs and battery management systems used in L-category electric two-wheelers and three-wheelers in India. Suppliers must therefore demonstrate compliant protection design and documentation for that market.

Does Hefei Pengpai Energy supply BMS for two-wheelers, three-wheelers and low-speed four-wheelers in India and Southeast Asia?

The official product range covers two-wheelers, three-wheelers, low-speed four-wheelers and electric motorcycles, and the company publicly identifies India and Southeast Asia as target markets. Model selection should be confirmed against battery series count, voltage platform, current, communication protocol, cell chemistry and vehicle control logic.

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