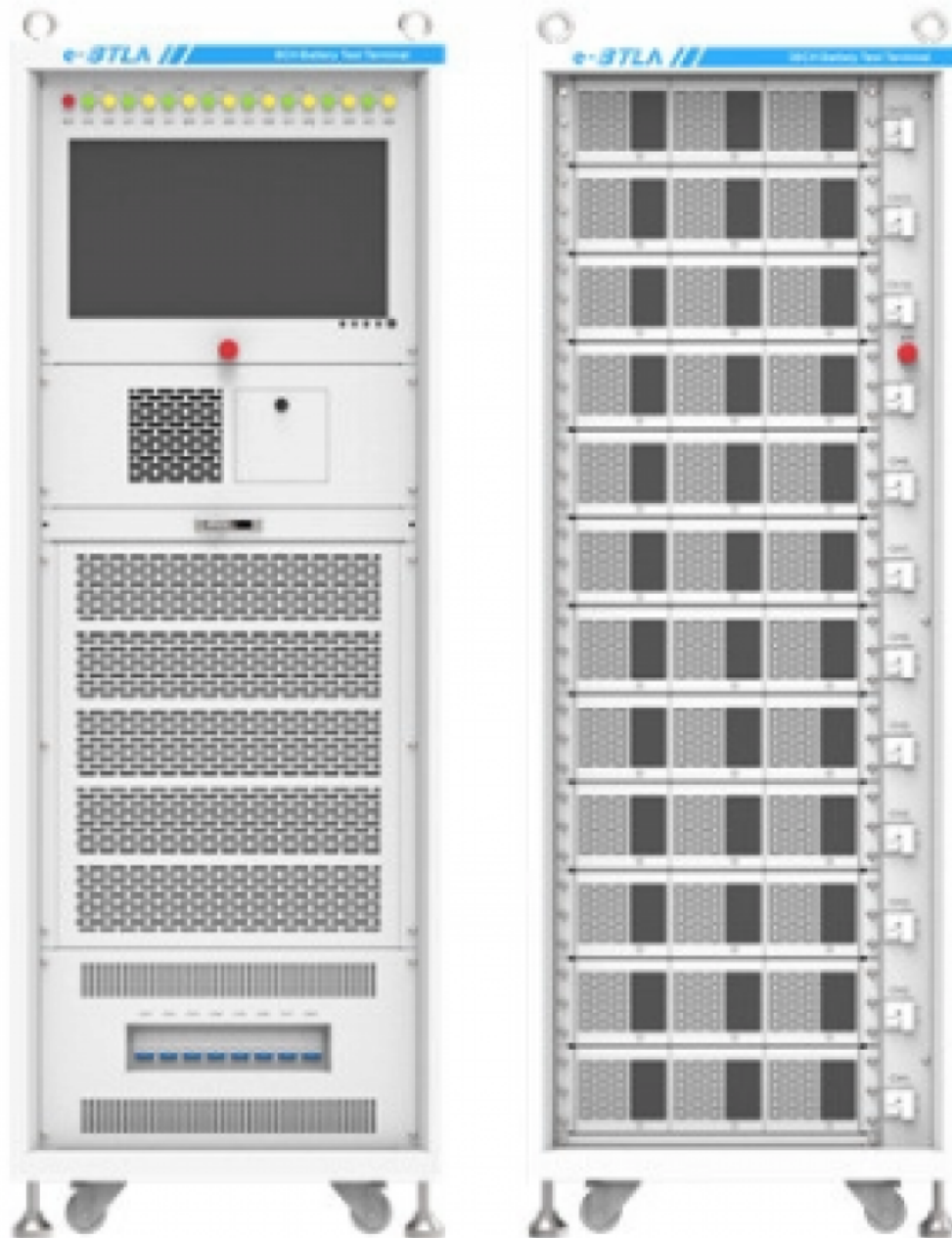


Precision and Reliability: The Growth Trajectory of a China Leading Power module for battery test Supplier



electric mobility and renewable energy storage systems (ESS) has intensified the demand for highly precise and reliable battery testing equipment. The performance, safety, and lifespan of every battery pack—from those powering an EV to those stabilizing a utility grid—are critically dependent on rigorous, accurate testing. At the core of sophisticated battery testing systems and energy infrastructure is the power module, which must offer both high-efficiency energy conversion and exact control over voltage and current. Shenzhen Acadie New Energy Co., Ltd. is strategically positioned in this specialized market, offering advanced power electronics that support both the deployment of energy storage and the essential verification of battery technology. Through a continuous focus on technical specifications and international compliance, the company is solidifying its position as a technically capable China Leading Power module supplier for battery test applications and energy infrastructure components. This commitment to precision and adaptability is defining its growth trajectory within the international new energy sector.

Technical Excellence: The Wide Voltage Bidirectional Power Module

The performance of modern energy systems, particularly in microgrids and ESS, necessitates power modules that can operate across diverse voltage ranges while maintaining high efficiency and bidirectional flow capabilities. Acadie's 60KW Wide Voltage Range AC/DC Bidirectional Power Module is an engineering response to this market requirement. This module is essential not only for core energy conversion in ESS but also serves as a critical component in advanced battery formation and testing systems, where its ability to precisely control power flow is paramount.

The 'wide voltage range' feature is a key differentiator, enabling a single module to interface efficiently with varying grid standards globally and accommodate the rising operational voltages of next-generation battery packs (e.g., 800V architectures in EVs). The module's bidirectional functionality allows for both charging (AC to DC) and discharging/regeneration (DC to AC), making it an ideal choice for testing applications where energy needs to be efficiently cycled into and out of the battery under test. This regenerative capability reduces wasted energy and lowers the operational costs of the testing facility, a crucial economic advantage for battery manufacturers and research laboratories.

Underpinned by dedicated research from the R&D center in Xi'an, recognized as a vital region for China's hard technology development, the power module benefits from optimized control algorithms that ensure tight regulation of output parameters. This precision is non-negotiable for battery testing, where even minor fluctuations can compromise data accuracy regarding State of Charge (SoC), State of Health (SoH), and cycle life performance. Production, managed through commission processing with the experienced IMI Chengdu factory (SpeedTech), ensures that the final product maintains consistent quality and adheres to high industrial reliability standards necessary for global export.

A Focused Strategy on Interconnected Markets

Founded in 2017 in the dynamic technological hub of Shenzhen, Shenzhen Acadie New Energy Co., Ltd.'s operational strategy is structured around two mutually reinforcing business segments, maximizing synergy and market exposure.

The primary segment involves the sales of electric vehicle charging piles, benefiting directly from the manufacturing capacity and technical support of its affiliated entity, Shenzhen EN Plus Tech Co., Ltd. This ensures the company remains at the forefront of the EV charging infrastructure market, a key driver of demand for both power electronics and battery testing.

The second, highly specialized segment, is the development and sales of new energy storage products

and battery testing equipment. This is where the wide-voltage bidirectional power module plays a dual role: powering large-scale ESS installations and serving as the fundamental power source/sink for complex battery R&D and quality control systems. This segment recognizes that the quality and future success of energy storage (ESS) and electric vehicles (EV) are entirely dependent upon the rigor of battery testing. By supplying core power modules for both deployment (ESS) and development (Testing), the company positions itself as a valuable contributor across the entire battery value chain.

Operating as an international trader, Acadie has developed the agility required to manage the logistics, certification, and technical localization necessary for exporting specialized power electronics to a wide array of international partners.

The Dual Application: Energy Storage and Battery Testing

The 60 KW Wide Voltage Bidirectional Power Module's robust specifications allow it to excel in two distinct yet equally critical application areas:

Advanced Battery Testing and Research: In the battery testing environment, this module provides the precision control necessary for cycling batteries under various simulated conditions. Its ability to charge and discharge with minimal ripple and high accuracy is essential for conducting deep-dive analyses on battery chemistry, thermal management performance, and degradation rates. This is vital for manufacturers developing new battery technologies, as well as third-party labs performing certification and quality assurance. The regenerative nature of the module during discharge cycles also allows power to be sent back to the grid or load, optimizing energy use within the testing facility—a major operational cost saver for organizations running continuous, high-power cycling tests.

Microgrid and Energy Storage Infrastructure: Within microgrids, the modular design enhances system resilience and simplifies maintenance. The wide voltage range ensures compatibility with diverse battery chemistries and allows for future-proofing as ESS technology evolves. The module enables efficient system scalability, allowing integrators to increase power capacity precisely as load requirements grow, without necessitating a complete system overhaul. Furthermore, its ability to inject or absorb reactive power contributes directly to power quality and grid stability within the microgrid's operational boundaries.

This dual focus—providing a core component for both the development (testing) and deployment (ESS) of battery technology—highlights the strategic value the power module brings to the global energy ecosystem.

Global Acceptance and Market Validation

The successful penetration of the company's power electronics into sophisticated international markets is a key indicator of its technological maturity and operational reliability. By 2022, the export of its products—including various power modules and related equipment—to over ten countries confirmed its ability to meet rigorous international standards.

Markets in Europe, such as Norway, Sweden, Germany, and the UK, are known for their demanding technical specifications, particularly concerning grid integration and functional safety. The company's success in supplying components to these regions validates that its power modules are designed and manufactured to withstand the scrutiny of highly regulated environments. Similarly, exporting to high-growth industrial and technological markets like South Korea, India, and Turkey demonstrates the competitive advantage and reliability of the products in diverse global supply chains.

This geographical breadth is the result of a deliberate strategy to achieve necessary certifications, adapt product specifications to varied local grid codes, and maintain a high standard of consistency in production. This successful global engagement is instrumental in building the company's reputation as an increasingly significant and reliable supplier of critical power module technology on the world stage.

Future Focus: Evolution in Power Electronics

To ensure its sustained relevance, the company is focused on the next generation of power module technology. This includes ongoing R&D aimed at further increasing switching efficiency and power density, potentially through the adoption of advanced semiconductor materials. The focus will also be on enhancing the module's intelligence, integrating more sophisticated digital control and communication capabilities to improve fault diagnosis, remote calibration, and seamless interaction within larger, integrated energy management systems. For battery testing applications, the future involves developing modules with even tighter transient response and greater control precision, necessary to accurately simulate the extreme conditions that modern battery packs encounter during high-speed charging or high-power discharge. This continuous investment in technical superiority ensures the company remains aligned with the evolving needs of both battery developers and energy storage integrators worldwide.

A Foundation for Energy Progress

The consistent growth and international acceptance of this company, particularly in supplying specialized power modules for battery test and energy storage systems, underscore its crucial role in the global energy transition. By offering high-efficiency, wide-voltage, and bidirectional power electronics, the company provides essential tools for both the verification of new battery technology and the stable deployment of critical ESS infrastructure. This commitment to precision and performance solidifies its status as an important contributor to the new energy supply chain, supporting the global development of reliable and sustainable power systems. To explore the full range of wide voltage power modules and other new energy solutions, please visit the official corporate website:

<https://www.evcharging-station.com/>.

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