

New power storage cabinet for use in IDC data centers



Overview

Power Storage Solutions offers DC power cabinets and rack systems from trusted manufacturers, delivering reliable enclosures for batteries and critical power.

Key Takeaways

Modern IDC power storage cabinets offer modular, high-density lithium battery solutions with integrated management systems for reliable backup and energy efficiency.

Overview of IDC Energy Storage Needs

Data centers require stable, high-density power storage to ensure uninterrupted operation, manage peak loads, and integrate renewable energy sources.

Traditional AC UP

S systems often incur 5–10% float loss and cannot fully optimize energy usage. Modern energy storage cabinets can replace or complement AC UPS systems, providing rapid power switching (as fast as 15ms) and enabling smoother integration with the grid or renewable energy sources, improving both reliability and economic efficiency. Key Solutions and Features¹.



Sunwoda Intelligent IDC High-Voltage Modular Lithium Battery

Designed for medium to large-scale data centers and edge data centers. Provides 10–15 minutes of backup power with modular flexibility. Hot-swappable modules with individual fire protection for safety and reliability.

Fully digitalized management for resource control and operational efficiency. Compatible with both new and legacy batteries, allowing parallel operation and independent maintenance. Supports green and low-carbon strategies with high energy and power density, even in high-temperature environments.

2.

Vertiv Energy

Core Battery Cabinets Factory-assembled LFP (Lithium-Iron-Phosphate) modules with integrated battery management system. Optimized for high-density computing and compact deployment (24" wide cabinets). Provides five minutes of end-of-life runtime at 263kWb per cabinet.

Operates across a wide temperature range, suitable for high-density environments. No external control wiring required, reducing installation time and cost. Features interactive touch screen HMI and remote monitoring via Vertiv Alber Battery Explorer Enterprise for predictive analytics and state-of-health reporting.

3.

Industrial ES

S Cabinets High-capacity Energy Storage System (ESS) cabinets for large-scale applications. Supports peak shaving, valley filling, and backup power. Integrates with solar, grid, and backup power systems for cost optimization.

Includes lithium-ion batteries, BMS, and smart energy controls for safe and efficient operation. Scalable and suitable for factories, power plants, and data centers requiring hundreds of kWh to MWh of storage.

Benefits for IDC Operations

Enhanced reliability: Rapid power switching and backup capabilities reduce downtime risk. Operational efficiency: Modular and hot-swappable designs minimize maintenance time and costs. Energy optimization: Supports integration with renewable energy and grid management for cost savings.

Safety and compliance: Fire-protected modules and digital monitoring ensure secure operation. Scalability: Cabinets can be deployed individually or in parallel to meet growing data center demands.

Conclusion

For modern IDCs, modular lithium battery cabinets like Sunwoda's Intelligent IDC system or Vertiv EnergyCore, as well as industrial ESS solutions, provide high-density, reliable, and energy-efficient power storage. These systems not only ensure uninterrupted power supply but also enable smart energy management, cost optimization, and green data center strategies, making them ideal for medium to large-scale data centers and edge deployments.

Article Content

Battery energy storage solution from Sunwoda Energy specifically ...

The Intelligent IDC High-Voltage Modular Lithium Battery is specifically designed for medium to large-scale data centers and edge data centers, providing backup power for scenarios

Vertiv introduces fully populated, high power density lithium battery ...

Meeting the urgent need for solutions supporting high-density computing in increasingly crowded data center facilities, Vertiv (NYSE: VRT), a global provider of critical digital infrastructure and continuity

Vertiv Introduces Fully Populated, High-Density Lithium Battery ...

“With our Vertiv EnergyCore battery cabinets, we are delivering exactly what our customers and our industry need – compact, high-density energy storage capable of operating safely

Sunwoda Energy unveils two new network energy products

The Intelligent IDC High-Voltage Modular Lithium Battery is specifically designed for medium to large-scale data centers and edge data centers, providing backup power for scenarios

DC Power Cabinets & Racks | Power Enclosures

Power Storage Solutions offers DC power cabinets and rack systems from trusted manufacturers, delivering reliable enclosures for batteries and critical power.

Cabinet-type lithium battery as backup power supply and UPS ...

Cabinet-type lithium battery is an energy storage device or power supply device designed in the form of a cabinet with lithium-ion battery as the core. It is usually designed to meet the energy

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kW per Rack Explained: Optimize Colocation Power & Costs

Learn how kW per rack impacts colocation pricing, energy efficiency, and performance. Discover best practices to manage power, reduce costs, and future-proof your IT infrastructure.

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AI-ready data centers

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IDC's insight on architecting the data center of the future

This blog was written by a guest author from IDC for publication on micron To date, data center system architectures have adapted to the disruption of artificial intelligence (AI) by

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AIDC vs IDC: Data Center Transformation and Challenges in the AI Era

IDCs primarily use general-purpose servers, with a single cabinet power consumption of 4-8kW, focusing on basic storage. AIDCs require high-power GPU/TPU servers, with single cabinet

Industrial Data Center Product Profile

Industrial Data Center and Managed Services On its own, the Industrial Data Center provides scalable, enterprise-grade virtualization tailored for industrial environments. When combined with

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