



New Cold Aisle DC Power Distribution Unit for Server Racks

Article Overview

Leading manufacturers of Cold Aisle Data Center PDUs include Eaton, Rittal, Supermicro, Legrand, and ACT, offering modular, high-density, and energy-efficient solutions for server racks.

Eaton

Eaton provides a wide range of rack-mounted PDUs suitable for cold aisle environments, from basic to advanced switched PDUs. Their ePDU G4 technology supports High Density (HD) Metered and Managed PDUs, as well as Universal Input PDUs (UPDU). Features include tool-less installation, color-coded outlets, remote monitoring, outlet-level switching, and daisy-chaining up to eight PDUs under a single IP address, making them ideal for both small network closets and enterprise data centers .

Rittal

Rittal offers modular PDUs designed for zero-U installation in server racks, which integrate seamlessly with aisle containment systems. Their solutions focus on energy efficiency and climate control optimization, ensuring consistent separation of hot and cold air in the data center .

Supermicro

Supermicro's Data Center Building Block Solutions (DCBBS) include 33kW Power Shelves and Battery Backup Units for 48V DC power, integrated with in-rack Coolant Distribution Units (CDUs) and rear door heat exchangers. These PDUs are optimized for high-density AI and HPC racks, supporting liquid cooling, scalable multi-rack deployments, and turnkey integration with networking and thermal management .

Legrand

Legrand specializes in cold aisle containment systems that work in conjunction with PDUs to direct cold air to server inlets, improving cooling efficiency and reducing energy consumption. Their Contain-IT FLEX system is modular, pre-fabricated, and scalable, allowing flexible deployment and reconfiguration for evolving data center layouts .

ACT (Advanced Cooling Technologies)

ACT manufactures Coolant Distribution Units (CDUs) for direct-to-chip liquid cooling, including Two-Phase in-rack CDUs for high-density server racks. These units provide precise thermal management, uniform chip temperatures, and energy-efficient cooling, suitable for edge, storage, telecom, and hyperscale environments .



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Summary

For new cold aisle DC PDUs, these manufacturers provide solutions that combine high-density power distribution, modularity, monitoring, and integration with advanced cooling systems. Selection depends on your data center's rack density, cooling strategy, and monitoring requirements, with options ranging from basic PDUs to fully managed, high-density, liquid-cooled systems.

Providing reliable and cost effective power distribution, the Basic PDU offers IEC outlet grips, tool-less installation in server racks,

We are here to support your new rack PDU design, based on your unique end-user requirements. Whether

Hot aisle containment is used to capture and direct hot exhaust air back to the cooling units. This popular option is ideal for data

Learn how to design scalable high-density power infrastructure for AI workloads and avoid stranded capacity through

When we consider the air distribution through hot/cold air aisles there is a much efficient way to achieve this by using

RakworX's Prefabricated Smart Modular Data Center (MDC) is an energy-efficient, high-performance solution with natural air cooling

Rack Power Distribution Unit - We manufacture both basic and metered rack PDUs for applications where a stable supply of quality

Cold aisle containment creates an enclosed corridor in front of server cabinets, ensuring that the coldest air goes directly into

Explore our comprehensive Rack PDU Selection Guide for server racks. Find the perfect power distribution unit from

Executive summary Looking to save money, enhance sustainability and ease compliance with environmental regulations, data center

Rittal provides efficient and effective rack based PDUs that are strategically designed for seamless integration



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within IT enclosures to

At Data Room Direct, we supply high-quality Power Distribution Units (PDUs) designed for network cabinets, server racks, and data

Compare 2025's top power distribution units for server racks. Discover features, scalability, energy efficiency, and

Without advanced rack power distribution technologies, data centers are at risk of being unable to keep up with the ever-expanding

A Rackmount Power Distribution Unit (PDU) is essential for managing electrical power in server racks or

Power Distribution Units (PDUs) are the crucial link between your facility's electrical infrastructure and your IT equipment. These

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