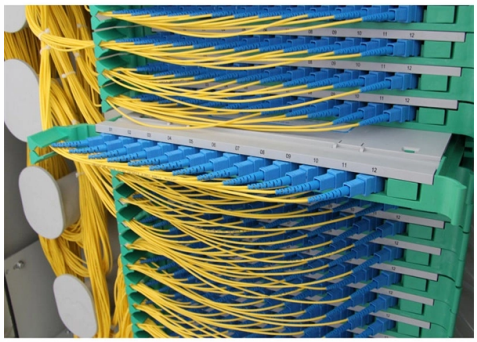
High-density server racks with cold aisle IP68 in stock



Overview

Find top-rated server racks cold aisle solutions with intelligent monitoring, modular design, and real-time airflow analysis.

Key Takeaways

High-density server racks compatible with cold aisle containment are available from vendors like Legrand, Eaton, Vertiv, and Stulz, with modular designs that can be adapted for IP68-rated protection.Cold Aisle Containment for High-Density Racks

Cold aisle containment ensures that cold supply air is directed efficiently into server inlets, preventing hot air recirculation and improving cooling efficiency for high-density racks. Systems from Legrand, Eaton, and Vertiv offer modular, pre-fabricated containment solutions that can be configured for cold aisle deployment, including ceilings, walls, and end-of-row doors to optimize airflow and reduce energy consumption (Legrand, Eaton, Vertiv) . Proper containment also minimizes hotspots, enhancing server reliability and lifespan.

High-Density Rack Options
• Stulz CyberRow I-Series: Designed for row-based high-density cooling, these racks integrate in-rack closed-loop chilled water cooling with EC fans, suitable for both open and contained systems. They are floor-mounted and side-discharge, allowing efficient heat removal directly at the source (Stulz) .

• Legrand T-Series and T6 Cabinets: Pre-configured, scalable cabinets that can be shipped fully loaded and integrated with cold aisle containment. They support modular assembly and can be engineered for specific data center layouts (Legrand) .

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• Eaton and Vertiv Containment-Compatible Racks: Offer flexible, rack-independent solutions that can be deployed in raised floor or slab data centers, supporting both hot and cold aisle containment. These systems allow incremental deployment and integration with fire suppression systems (Eaton, Vertiv) .
IP68 Considerations

While standard high-density racks are not inherently IP68-rated, customized enclosures or additional sealing kits can be applied to achieve IP68-level protection against dust and water ingress. Vendors like Legrand and Eaton provide engineering services to adapt cabinets for environmental protection, which may include IP68 compliance for industrial or harsh environments (Legrand, Eaton) . When specifying IP68, ensure that all cable pass-throughs, blanking panels, and containment interfaces are sealed appropriately.

Recommendations
• Select modular, pre-configured racks compatible with cold aisle containment to simplify deployment and optimize airflow.

• Consult vendor engineering teams to adapt racks for IP68 compliance if required.

• Integrate blanking panels and brush grommets to prevent airflow leakage and maintain containment efficiency.

• Consider in-rack cooling solutions like Stulz CyberRow I-Series for high-density deployments to reduce hotspots and improve energy efficiency. These solutions provide a scalable, energy-efficient, and reliable infrastructure for high-density data centers while allowing adaptation for IP68-rated protection.

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However, a rack that is filled with high density servers can consume more than 20kW. Such a high load dramatically

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