

Smart City Intelligent Cold Aisle Dimensions



AI Overview

Cold aisles in data centers typically have a width of 1.2 meters and a maximum length of 16 meters for optimal airflow and accessibility.

Standard Dimensions

Width: The recommended minimum width for a cold aisle is 1.2 meters, which allows for two full raised floor tiles between cabinet fronts, ensuring proper airflow and personnel access. Wider aisles may be required if ceiling heights exceed 3.7 meters to accommodate overhead systems and maintenance equipment.

Length: Continuous rows of equipment cabinets should not exceed 16 meters in length. If one end of the aisle is closed or lacks a personnel exit, the maximum safe length is 6 meters to ensure safe access and evacuation.

Containment Considerations

Cold aisle containment systems enclose the aisle to trap cold air directly in front of server racks, preventing mixing with hot exhaust air and maintaining consistent inlet temperatures. Components typically include IT cabinets, network cabinets, power distribution units, and end doors, all integrated to optimize airflow and energy efficiency.

Modular and Smart Designs

Modern Smart City data centers often use modular containment solutions, such as ground-supported or ceiling-supported assemblies, which can be customized to rack layouts and heights. These systems allow for pre-fabricated door sets, integrated service support beams, and scalable designs to meet project-specific requirements.

Benefits of Proper Cold Aisle Design

Energy Efficiency: Controlled airflow reduces cooling system workload, lowering energy consumption.

Equipment Longevity: Consistent inlet temperatures reduce thermal stress on servers.

Safety and Accessibility: Adequate aisle width and modular containment ensure safe maintenance and emergency egress. By adhering to these dimensions and containment strategies, Smart City data centers can achieve...

Article Content

Cold Aisle Containment in Data Centers | Subzero

Minimize your data center's footprint, establish optimal operating efficiencies and save money with cold aisle containment. Learn more here!

Smart Aisle | Vertiv IT Infrastructure

The SmartAisle offering optimizes infrastructure deployment and management with an intelligent row-based system that integrates data center racks, power, row

SmartAisle | Access Inc.

The SmartAisle offering optimizes infrastructure deployment and management with an intelligent row-based system that integrates data center racks, power, row

SmartAisle S

SmartAisle configurations can be scaled to fit any size IT environment from a row of racks to large enterprise data centers. The SmartAisle offering brings together the widest range of innovative

Smartaisle Containment Brochure English | PDF | Data

These usually leased, while the reasons both dimensions (height and width) cabinets are often of non-standard pertaining to server applications are

Vertiv announces upgrade to its Vertiv SmartAisle solution

Vertiv announced a significant upgrade to its Vertiv SmartAisle solution, designed specifically for edge computing applications up to 180 kW.

Vertiv[™] SmartAisle[™] Containment

In terms of physical infrastructure the answer lies in the Vertiv SmartAisle from Vertiv. In the data-center, the SmartAisle forms the room, the power supply and the cooling system for servers, storage and the

FusionDC1000A

FusionDC1000A-40ft-IT-N+X Plan View FusionDC1000A-40ft-IT-2N (1) Smart cooling product outdoor units (4) Cold aisle (7) Battery cabinets (2) IT cabinets

SMART SOLUTIONS REFERENCE SUMMARY

This Reference Summary provides you with one example of how Smart Solutions can help achieve efficiency and availability for small to medium data centers. This design optimizes capacity – to

AISLE CONTAINMENT

Aisle containment in the data center requires that cabinets are aligned in a hot aisle/cold aisle layout. Containment panels or strips create a partition to isolate either the server supply air (cold aisle

Single-Row 1200 mm Wide Aisle Containment

The single-row 1200 mm wide aisle containment can be a cold or hot aisle containment that involves the following components: IT cabinet, network cabinet, PDU, smart cooling product,

SmartAisle | Integrated Infrastructure

The SmartAisle offering optimizes infrastructure deployment and management with an intelligent row-based system that integrates data center racks, power, row

[smartaisle-brochure](#)

SMARTAISLE Aisle Containment Systems Separates hot and cold air streams for better cooling operation and higher ceilings in Modular, Vertical and Retractable systems contain data center racks

COMBINING COLD AISLE CONTAINMENT WITH INTELLIGENT CONTROL

A comprehensive efficiency management platform that combines cold aisle containment with intelligent environmental controls can deliver greater than 30 percent energy savings and 25 percent capacity

A DEEP DIVE INTO THE WORLD OF HOT & COLD AISLE

BENEFITS OF DATA CENTER HOT & COLD AISLE CONTAINMENT ZONE. Energy Cost Reduction: Lower energy consumption and operational costs through targeted cooling strategies. Improved

SmartAisle

The SmartAisle offering optimizes infrastructure deployment and management with an intelligent row-based system that integrates data center racks, power, row cooling, aisle containment, monitoring

Data Center Design: Hot Aisle & Cold Aisle – Length

Efficient airflow management in data centers relies heavily on proper Hot Aisle and Cold Aisle configurations. To maintain thermal performance, equipment

Vertiv SmartAisle Containment

Vertiv™ SmartAisle™ – A form of containment proven to lead to substantial savings in energy costs Achieved energy savings through patented, controlled cold aisle containment in many projects

SMARTAISLE™ Intelligent, Integrated Infrastructure for the Data Cent

Cold Aisle Containment – inexpensively supports capacity increases by separating hot and cold air for increased efficiency Flexible platform for easy configuration – Full-depth DCFTM racks maximize

Hot Aisle vs Cold Aisle Containment Explained (Data

In this guide, we'll break down how hot aisle and cold aisle configurations work, what containment systems do, and why airflow

Cold Aisle Containment Smart Modular Data Center Solution

Cold Aisle Containment Smart Modular Data Center Solution INTRODUCTION with simple, efficient, and reliable data center solutions. It's a modular-designed, highly integrated solution which comprises

The Vertiv™ SmartAisle™ is a Pre-Engineered Edge Data Center

Complete Containment Fully contained hot and cold aisles enable more efficient cooling. EIA310 19-inch IT racks included for IT equipment.

Contact Us

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