The most professional Data center equipment solution supplier in China-Tuxin

What is Data center equipment or containment ?

◎Tuxin Data center equipment is a method used to optimize the cooling efficiency of data centers. By managing the flow of hot and cold air, it ensures that IT equipment is cooled effectively, reducing energy consumption and prolonging the life of the equipment.

◎Tuxin Data center solution purpose is to improve the utilisation rate of the cold air , save energy and reduce operation cost through airflow management, reduce the PUE value of the whole data centre, and build an optimized IT operation micro-environment;

◎Tuxin's Data center equipment consists of modular server rack, Roof ceiling system, Aisle sliding doors, integrated wiring devices and functional accessory systems.

Micromodule Data Center

T-MDC

MAIN FEATURES OF MICROMODULE DATA CENTER

●**Modular**   On-demand matching

●**Integrated**   Computer room system product, organic integration into a system

●**Economical**   Green energy saving, PUE reduced to 1.5, phased construction reduced initial investment

APPLICATION SCENARIOS

Financial production center

IDC room

Government data centers

Operator

Big hospitals, schools

All kinds of enterprises

The Backbone of Data Center Containment -Cold or Hot Aisle containment

●Cold Aisle Containment (CAC):

Cold aisles are typically equipped with perforated raised floor to allow conditioned air from the cooling system to rise up into the intake of the servers.
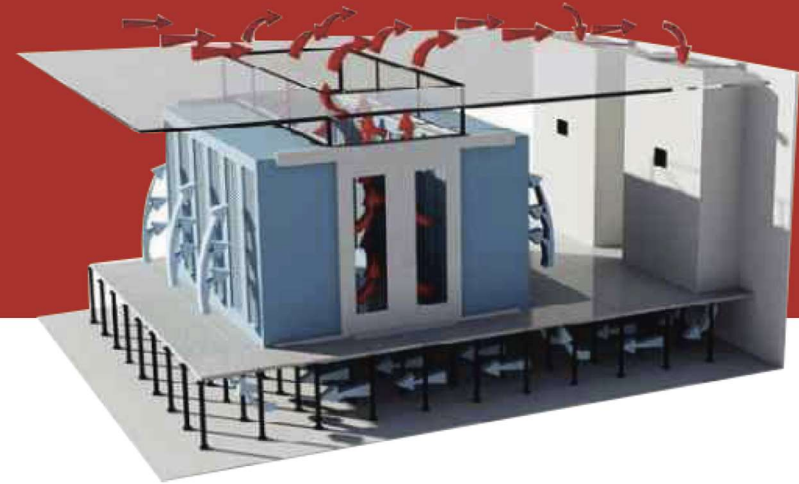
The front of racks face the cold aisle. This means that servers draw in the cold air from this aisle. Enclosing cold aisle ensure that the cold air is directed straight into the servers' intakes without any mixing with the hot air.
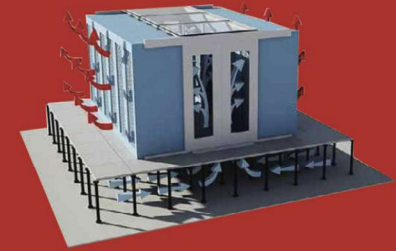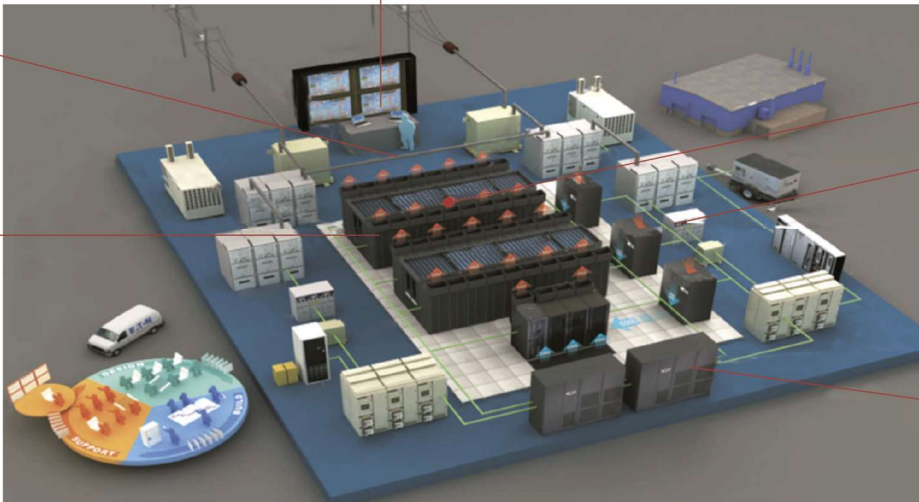

●Hot Aisle Containment (HAC):

This design ensures that the hot exhaust air from servers is directed towards the hot aisle, where it can be returned to the cooling units and be reconditioned without any mixing with the hot air.

The backs of the racks, where hot air is exhausted from servers, face the hot aisle.
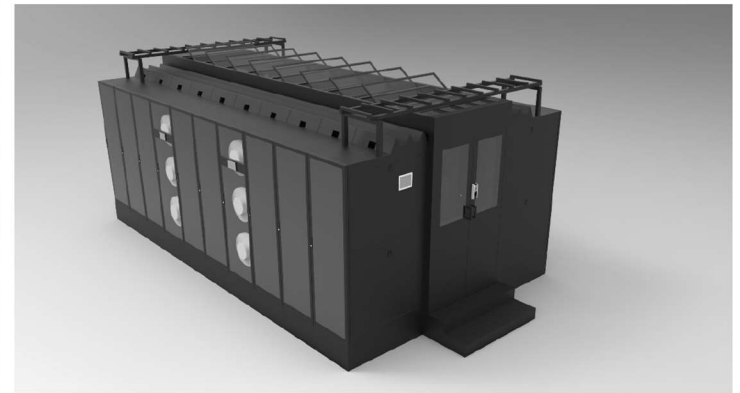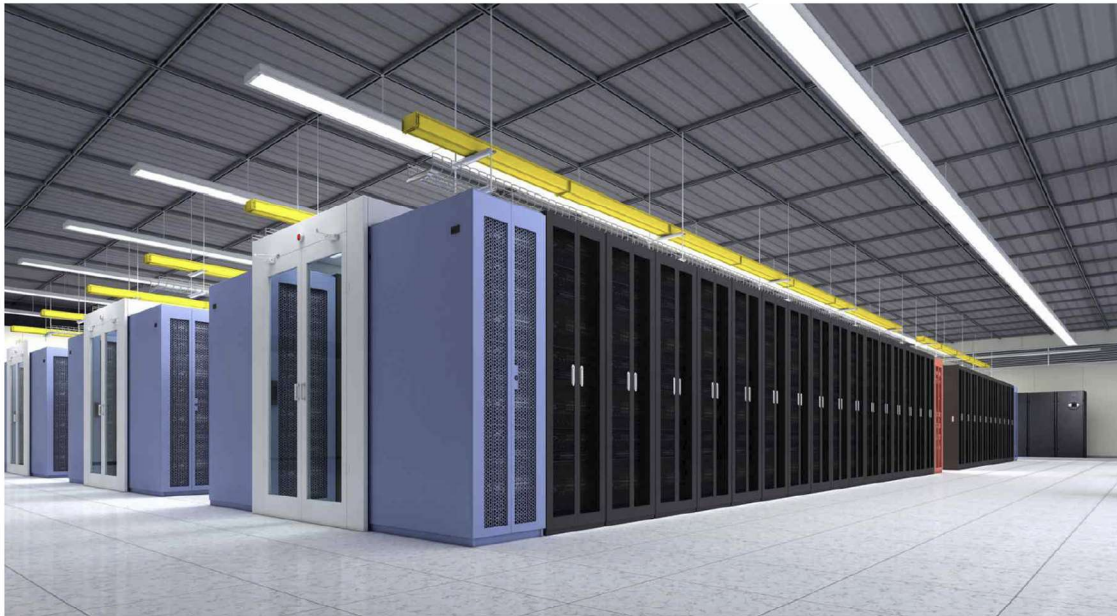
Modular Data center solution

Hot and cold aisle containment

Power management and Intelligent Monitoring System

Server rack systems

IT power supply and distribution systems

Air conditioner

PDU

UPS

Cold Aisle Containment System-CACS

Tuxin Data center equipment solution Advantages:

1 / Modular design

Most parts of the Data center equipment components are designed by modular. Each unit (Server racks, Roof ceiling and sliding door) can be independently installed and removed, and can be connected with adjacent units, which allows quick deployment on site to meet the changing needs or future expansion. The whole system of all the installations are processed through the factory into a modular form to the site.

2 / Good sealing

Hot and cold aisle roof ceiling of the unit module between the connection is tight, can effectively prevent airflow leakage. The use of good sealing between the door frame can prevent the cold air leakage of the cold data center containment.

3 / Strong security

The cold aisle roof ceiling frame is made of 1.5mm steel plate, and the internal double-layer toughened glass or White polycarbonate plastic, Light transmittance up to 82%, it will not burn to produce flames or smoke when it meets with the fire alarm. And linked with the fire system.
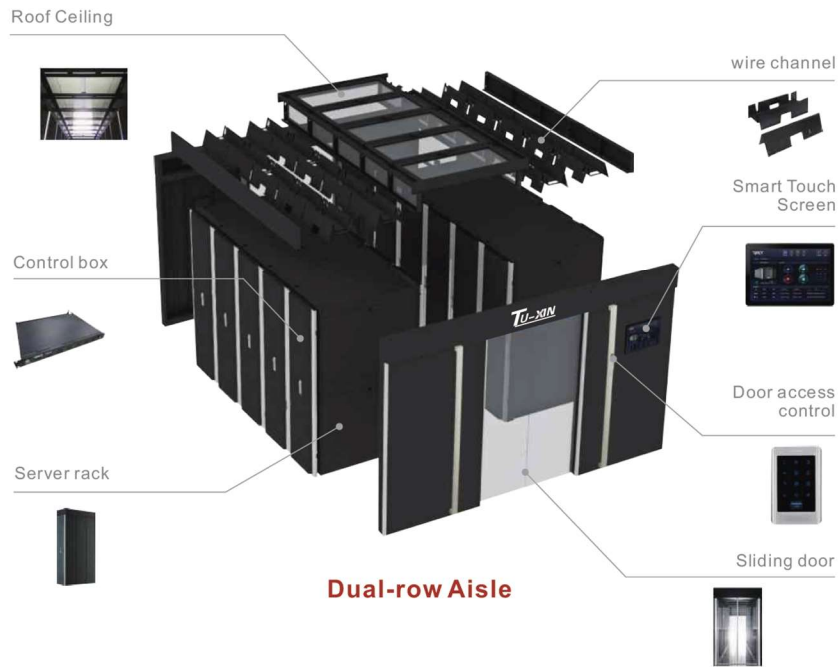
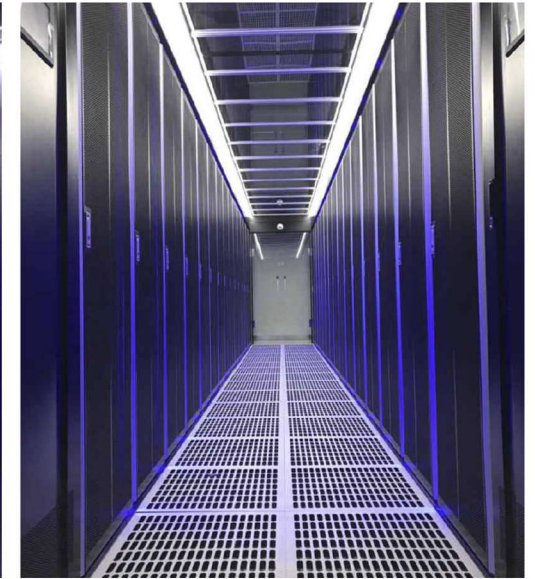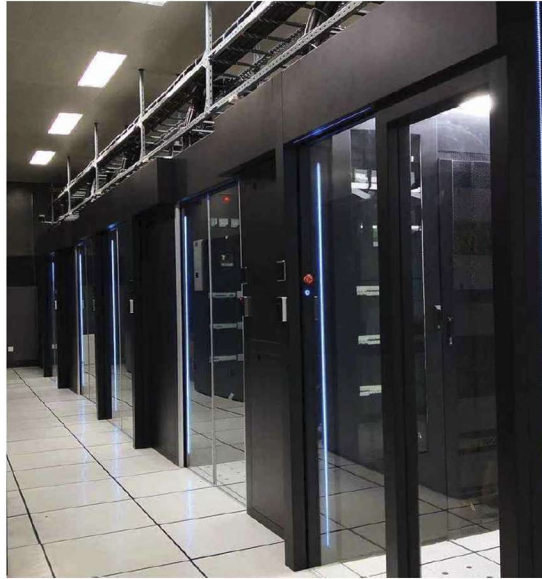| **4 / High intelligent degree** |
| --- |

Flip design on roof ceiling, to be connected with fire protection through intelligent control box. The roof ceiling will automatically open, when fire signal received. And fire-extinguishing gas will come into aisle, without conflict to the existing fire protection system.

Tuxin data center Data center equipment Application

●Tuxin's Single-row and dual-row cold data center containment is suitable for small and medium-sized data centers, widely used in branch data centre deployment needs

●Multiple module data center groups can be used, suitable for large-scale IDC server room, data center; widely used in government data center, financial and banking systems, education systems, medical institutions, telecommunications and other industries.

Roof Ceiling

wire channel

Smart Touch Screen

Control box

Door access control

Server rack

Sliding door

Dual-row Aisle

Roof Ceiling

wire channel

Aisle Side Plate

Smart Touch Screen

Control box

Door access control

Server rack

Sliding door

Single-row Aisle

FOUR FUNCTIONAL FEATURES

Green energy saving

High reliability

Can only manage

Quickly and flexibly

RANGE OF APPLICATION

Bank branch ii

Branches of township government departments

University departments

Community health service center

Small and medium-sized enterprises, enterprise branches

CRITERIA	DETAILED SPECIFICATION
Hot Aisle containment	Includes full door frames, doors, ceiling panels, empty Rack location partitions, Rack height balancing partitions to cover the hot air aisle area (Hot Aisle Containment System – HACS) of the data center and full enough control system, materials and accessories for complete deployment.
Dimension	Manufactured basing on the investor's current floor and rack layout.
Technical implementation documents	detailed drawings of each component with exact dimensions, along with instructions for installing each component, complete with illustrations will be provided before production
Intergration Capability	The hot air aisle system is equipped with additional heat sensor probes to activate and close the ceiling panels when there is a fire (In 01 hot hallway there are at least 2 heat sensor probes and 02 smoke sensor probes).
Light System	There is a lighting system inside the hot corridor, ensuring enough light to facilitate operations.
Installation accessories	Complete set, fully guaranteed for the system to operate
1. Roof ceiling	
Structure	Modular form, allowing dismantling and replacement when necessary without affecting neighboring modules. Designed with a mechanical lock to hold the ceiling panel during installation, testing, and system maintenance.
Material	Black powder-coated aluminum/steel frame. optional white polycarbonate plastic sheet with nominal thickness ≥3.0mm; Meets fire resistance standards UL94-V0, UL94-V2 or temper glass with thickness 5.0mm
Light transmission	80%
2. Doors	
Structure	Steel main frame, thickness ≥ 2mm, Aliminium glass frame, thickness ≥ 2mm black powder coated Use tempered glass thickness ≥ 5mm

CRITERIA	DETAILED SPECIFICATION
Dimension	Size is customizable according to rack cabinets and actual space on site
Doors at both ends of the hot corridor (for areas with 02 rows of racks)	02-panel door type, opening including sliding and opening to both sides, with windows and handles
Doors at both ends of the hot corridor (for areas with 01 row of racks)	01-panel door type, opening including sliding and opening to both sides, with windows and handles
The system has the following additional functions:	- Lock set with key and passcode lock set - Access control by monitor - Ability to hold door open when service is required in hot air enclosure. - Automatically open the door when there is a fire or release the magnetic lock to open the door when there is a fire."
3. Blanking plate	
Function	Cover the empty space between racks
Size	(H) 1.8m÷2.5m, width (W) ≤ 600mm
Structure	Optional: - Walls are made of black powder-coated iron/steel - Black powder-coated iron/steel frame with clear white polycarbonate plastic sheet with nominal thickness ≥ 3.0mm; Meets fire resistance standards UL94-V0, UL94-V2. - Black powder-coated iron/steel frame with tempered glass ≥3.0mm thickness
4. Balance plate	
Function	Uniform height between rack cabinets in the same row.
Size	Size is customizable according to rack cabinets and actual space on site.
Structure	Optional: - Walls are made of black powder-coated iron/steel

CRITERIA	DETAILED SPECIFICATION
	- Black powder-coated iron/steel frame with clear white polycarbonate plastic sheet with nominal thickness ≥ 3.0mm; Meets fire resistance standards UL94-V0, UL94-V2. - Black powder-coated iron/steel frame with tempered glass ≥3.0mm thickness
III - Control System	
Function	- Supplying power to the electromagnetic locks that open the ceiling panels. - Able to connect to the fire alarm system to control the opening of ceiling panels when there is a fire. - Monitor status of the ceiling panel and control to open the ceiling panels - Able to connect to the fire alarm system to open the doors when there is a fire. - Monitor status of the doors and control to close/open the doors
Installation	Can be installed on a 19" Rack Server or wall mounted
Input power supply	AC 1 phase 220V (standard), 50Hz.
Power supply capability	The power supply can supply a minimum of 20 magnetic locks
Product specifications	There is a light showing the operating status of the system. - There is a light/siren warning when the fire alarm system is activated to open the ceiling panel - Has a management screen ≥ 10inh - performs environmental management functions (temperature, humidity...) in the hot corridor, installed in parallel to work with the hot corridor control system (installed according to the required position)
Control structure	The ceiling panel control system must be capable of dropping/tilting the ceiling panels in response to a smoke/fire detection signal to allow the fire suppression system to operate.
Control impact point	The control system for opening and closing the ceiling panels is activated at 57oC (the temperature that activates the opening of the ceiling panels can be set) or from the fire extinguishing system (FM200).

CRITERIA	DETAILED SPECIFICATION
Warning	There are audible and light alarms to alert the user to the opening of the ceiling panels.
Impact time	The system can set an impact delay of 10-20 seconds after a warning from the fire alarm system to allow the operator to escape the area when a fire is detected.