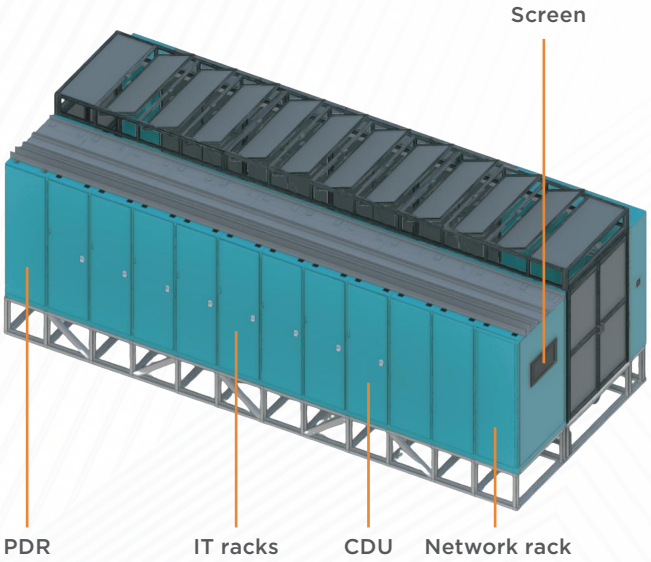
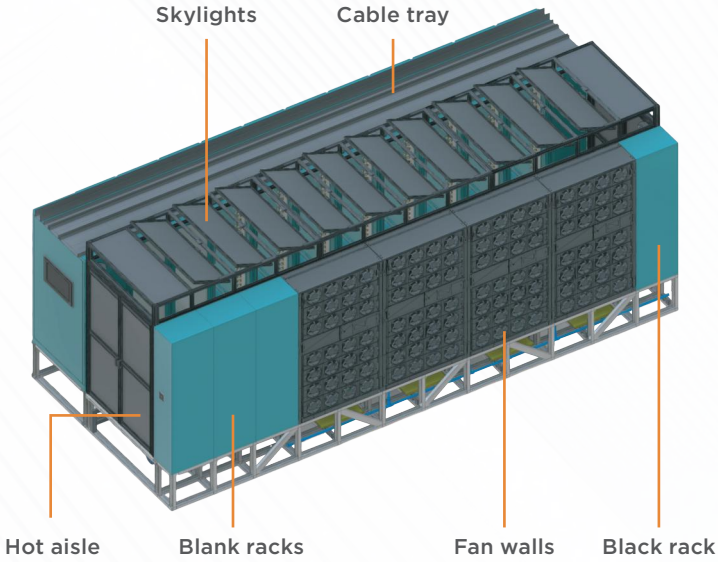
Fabricated data center fanwall AI all-in-room

Product Introduction

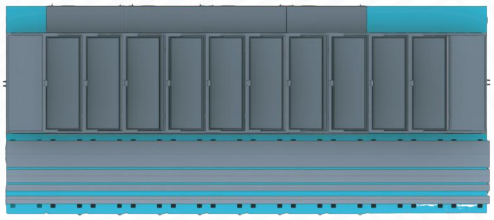
The pre-integrated indoor computing power center infrastructure solution integrates functions such as power supply and distribution, chilled water air walls and pipelines, CDU and secondary pipelines, manifolds, cabinets, and environmental monitoring. It supports AI equipment by providing a stable, reliable, and energy-efficient infrastructure environment.

Layout introduction

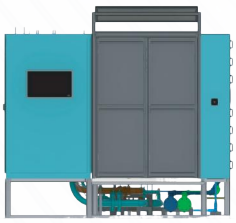




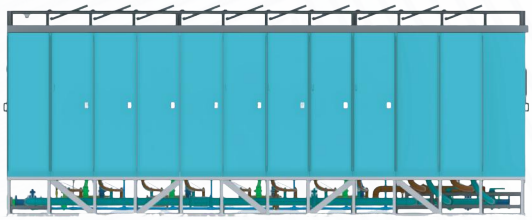
Top view

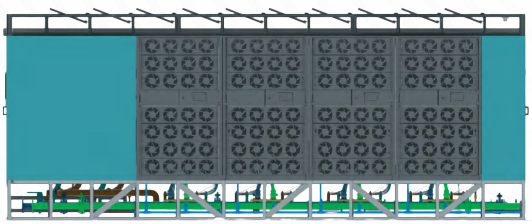


End view



Side view





Application Scenarios

Enterprise: Small and medium-sized computing power centers
Government: Smart city and safe city computing power centers
Education: University/research institution computing power centers
Energy: On-site production/exploration computing power centers
Finance: Business production computing power centers
Transportation: Airport/rail/port scenarios with no equipment room computing power centers
Telecom: Edge computing power centers

Features

Rapid Deployment

Fully prefabricated infrastructure in factories, 1 module equals 1 data center
Flat layout, skid-mounted segmented transport and positioning, multi-story buildings, on-site assembly of components
Supports flexible deployment and quick expansion

Sustainability

Utilizes liquid cooling with cold plates, supplemented by air cooling, achieving an air-to-liquid ratio of 1/9 and low PUE for modules
Employs chilled water air wall cooling, compatible with air-cooled servers

Intelligence

Comprehensive monitoring system enabling remote surveillance
Proximal pad management, unmanned equipment room
Intelligent operation and maintenance, reducing costs and improving resource utilization

Parameter Table

System	Unit	Parameter
Operating environment	Altitude range	≤1000 meters
	Ambient temperature	18-35℃
	Ambient humidity	5%-95%RH
Structure	Module external dimensions	Total module dimensions: 7400mm L * 3100mm W * 2550mm H, transportable in sections, standard shipping container transport
	Closed aisle	Closed hot aisle, width 1500mm, flip skylight
	Aisle door	Double doors on both sides of the aisle
	Raised floor	Height 550mm
Cabinet	Cabinet power density	40KW/cabinet, expandable to 80KW/cabinet
	Cabinet dimensions	Standard 19" cabinet (600mm x 1200mm x 2000mm), 42U
	Cabinet usable height (U)	336
	Number of cabinets	8
	Cabinet front and rear doors	Front door single-opening mesh, no rear door
Power distribution	Power distribution cabinet	2-way UPS independent power supply for IT cabinets, air wall ATS switchover power supply, 380V/415V/50Hz
	Power distribution capacity	UPS 2*800A
	PDU	A/B dual circuit, 40A/3P
	Modular UPS	None
	Backup time	None
Cooling	Cooling method	Liquid cooling (cold plate) + air cooling (chilled water air wall)
	Load air/liquid ratio	Air/liquid ratio: 10%/90%~30%/70%
	CDU	Reserved CDU cabinet space, cabinet power expandable to 80KW, CDU cooling capacity 300kW/unit, 2 units
	Secondary side pipeline	SUS304 stainless steel
	Secondary side medium	25% concentration, propylene glycol
	Air wall	Cooling capacity 100KW/unit, air volume 25000m /h, 3+1 redundancy, inlet/return water temperature 15°C/21°C, indoor supply/return air temperature 24°C/37°C, humidity 25%RH
	Air wall chilled water pipeline	Carbon steel + Insulating layer
Environmental monitoring	Temperature and humidity	Equipped
	water leakage	Equipped
	video	Equipped
	access control	Equipped
	power distribution system monitoring	Equipped
	air conditioning system monitoring	Equipped
	integrated collector	1U, Linux system, multiple standard interfaces, WEB remote access, can connect to the centralized management platform upward through the northbound interface
	industrial tablet	Windows, 15.6 inches, touch screen, resolution 1920x1080, with RJ45 network port and HDMI interface