

Wise Series

Data Center Solution





About Kehua

Kehua Data Co., LTD. (“Kehua”) was founded in 1988 and listed in Shenzhen A-share market in 2010 (stock code 002335). It is the enterprise technology center recognized by the state, the key project undertaking unit of the National Torch Plan, the national high-tech enterprise, the national technological innovation demonstration enterprise and the first batch of national “two integration management system” standard enterprises, serving users in more than 100 countries and regions around the world.

Based on the core technology of power electronics, Kehua integrates the cutting-edge technology application of artificial intelligence and Internet of Things, and is committed to “digital and scenario-oriented intelligent electric energy comprehensive management system”. Integrate into different scenarios to provide stable power and support the transformation and upgrading of various industries. In the three major fields of cloud basic services, high-end power and new energy, Kehua provides services for government, finance, industry, communications, transportation, Internet to provide safe and reliable intelligent power integrated management solutions and services.

Cloud computing based services, Kehua data has invested in Beijing, Shanghai and Guangzhou, operating 10 cloud data centers, operating more than 20 data centers, service of China mobile in more than 10 cities in China. More than 100 provincial data center rooms serve China Mobile, China Telecom, China Unicom, and six state-owned banks, commercial banks, securities, insurance and other financial institutions. Product solutions are settled in large domestic Internet enterprises, large cloud computing service providers, The State Bureau of Surveying and Mapping, the State Administration for Industry and Commerce, the head office of industrial and Commercial Bank of China, the Second Academy of China Aerospace, Tsinghua University, Chinese Academy of Sciences, Commercial Aviation of China, Metallurgical Group and other projects

Wise Series Data

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TIER IV Ready

Uptime Institute TIER IV Ready for Kehua
Wise Modular Data Center Solution

250,000+ m²

data center area

No.1

Among Large-scale Retail Data Center Service Provider in
China with an Average Cabinet Utilization Rate of 80%
(Frost & Sullivan)

30,000+

data center racks

Center Solution

WiseCabinet Mini Data Center Solution

Solution introduction

WiseCabinet Data Center Solution suitable for mini data center, integrates power supply and distribution, cabinets, and monitoring systems, which can save room space.

Each sub-system is prefabricated and debugged in the factory to achieve rapid deployment on site.



touch screen version

Application scenarios



Government



Medicine

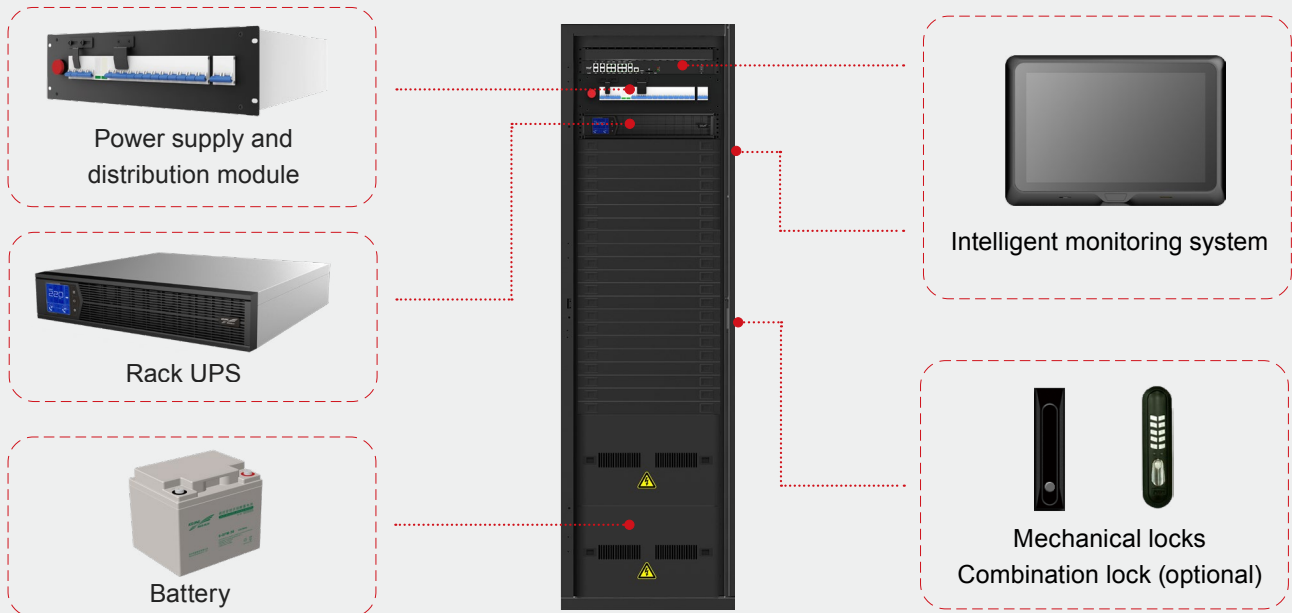


Education



Data Center

Configuration



Customer value

- All components are pre-installed, pre-debugged, and ready on site to achieve rapid deployment
- Modular design, flexible configuration, rapid capacity expansion
- Real-time monitoring of related moving ring equipment, the key information of each equipment at a glance
- Local 10-inch large screen + remote WEB+ SMS, realizing more flexible O&M and status awareness

Specifications

Items	Wise Cabinet Mini Data Center Solution
Cabinet	
Cabinet quantity	1
Door lock	Mechanical locks/Combination lock (optional)
Dimension (mm) (W*D*H)	600 x 1000 x 2000
Power distribution system	
Mains input	1* mains supply, 1* diesel engine, Class C lightning protection
UPS capacity	3kVA/6kVA (optional)
Battery deployment mode	Internal battery cabinet + battery breaker (50A/2P)
Main input distribution	Mains 50A/1P*1 + diesel engine 50A/1P*1, Mains and diesel engine support mechanical interlock
UPS distribution	Input 50A/1P*1, maintenance bypass 50A/2P*1, output 32A/1P*1
IT power distribution branch	32A/1P*1+16A/1P*3
Mains distribution branch	32A/1P*1+16A/1P*3
Power distribution monitor configuration	Supports mains power distribution monitor
Power module height	3U
PDU	Input 32A, PDU socket type for different region
Monitor system	
Access method	Supports remote WEB access
Local interface	10inches touch screen
Environment monitor	Temperature and humidity, smoke, water leakage
Alarm	SMS alarms, audible and visual alarms, email alarms
Optional	
Optional	1U sealing plate, cable tray, laminate, guide rail, battery monitoring unit, SMS module

WiseRow Modular Data Center Solution

Solution introduction

In order to meet the demand of edge data center of “low delay, high bandwidth, localization and real-time computing”, Kehua Data launched WiseRow Modular Data Center series. Through flexible module configuration, reliable performance, high efficiency and energy saving as well as operation and maintenance intelligence of data center are displayed. The modular design integrates power supply and distribution, cooling, cabinet, fire control, and monitoring systems into one, saving room space. IT supports IT devices such as servers, KVM, routers, and switches, and supports flexible device expansion and configuration based on application scenarios.

Application scenarios



Government



Medicine



Education



Enterprise



Finance



IDC



Communication operator



Specifications

Items	WiseRow1+2	WiseRow1+4	WiseRow2+6	WiseRow2+8	WiseRow2+10
Channel type	Sealed cold and hot channel				
IT quantity	2	4	6	8	10
Dimension (mm)(W*D*H)	1200*1400*2000	2400*1400*2000	3600*1400*2000	4800*1400*2000	6600*1400*2000
Power distribution modular					
Capacity (kVA)	10		20		40
Mains input	Single input		Single/dual input optional, ATS optional for double		
Input	1P+N+PE		3P+N+PE		
Air conditioning power distribution	40A/1P*3				40A/3P*3
IT power distribution branch 1 (Mains power supply)	32A/1P*5		32A/1P*8		32A/1P*12
IT power distribution branch 2 (UPS power supply)	32A/1P*5		32A/1P*8		32A/1P*12
Installation height (U)	3		6		9
Lighting protection grade	Class C, in 20kA				
PDU					
Installation	Vertical installation				
Rated input (A)	16/32				
UPS					
Capacity (kVA)	10	10	20	20	40
Rated input voltage (Vac)	220/230/240		380/400/415		
Input voltage range (Vac)	80~275		80~280		
DC input (Vdc)	192 (192~240 optional)		±192 (±144~±240 optional)		
Output PF	0.9				
Output voltage (Vac)	220/230/240		380/400/415		
Efficiency	95%		96%		
Height (U)	2		3		
Backup time (h)	0.5/1/2				
Battery deployment mode	Battery cabinet (in-line/out-of-line)				Battery cabinet (out-of-line)
Air conditioner					
Quantity	1	1	2	2	2
Cooling capacity/per AC	3.5	12.5	7.5	12.5	25
Dimension (mm)(W*D*H)	440*760*217(5U)	442*714*440(10U)	440*760*350(8U)	442*714*440(10U)	300*1400*2000
Max airflow rate (m³/h)	800	2200	1500	2200	5000
Installation	Rack				In-Row
Air supply mode	Frontal air supply in cabinet, rear air return				Frontal air supply, rear air return
Monitor system					
Display	10.1 inch TFT capacitive multi-touch screen				
Resolution ratio	1280*800				
Dimension (mm)(W*D*H)	286x196x50				
Weight (kg)	1.5				
Certification	CE, FCC				
Access method	Support resmote WEB interface access, multiple modules support unified NMS monitoring, mobile phone APP				
Local interface	10inches touch screen				
Alarm	SMS alarms, audible and visual alarms, email alarms				
Standard configuration	Temperature and humidity sensor, water leakage sensor, smoke sensor				
Optional configuration	Door status sensor, video				

WiseAisle Modular Data Center Solution

Solution introduction

WiseAisle Modular data center solution integrates independent units such as IT cabinets, power distribution units (PDB), closed components, refrigeration units, cabling, and integrated operation and maintenance (O&M) into a single module to achieve full IDC data center functions. All components of the module are prefabricated in the factory, which can be flexibly disassembled and transported, and put into use after quick assembly on site.



Application scenarios



Government



Medicine



Education



Enterprise



Finance



IDC



Communication
operator

Features

Unique appearance

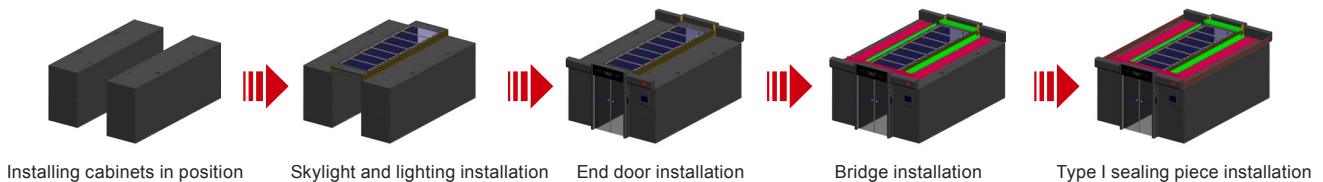
- Three-dimensional prominent front door shape, combined with the T-shaped lintel and LED atmosphere light, highlight the quality of the machine room; The color of the full-color atmosphere lamp is associated with the alarm level, and the operating status is visible; Editable LED, 10-inch HD display screen and automatic card issuing machine are optional, which make the room more scientific and technological.

AI+ Adaptive dehumidification technology

- The innovative application of artificial intelligence "adaptive dehumidification" technology enables WiseMDC modular data center to operate stably and have dehumidification capability under 10%-20% low load, and the dehumidification function does not require heating, heating and other additional energy consumption, which further reduces the energy consumption of the air conditioning system.

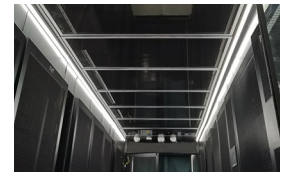
Save 50% delivery time

- WiseAisle Micro Modular Data Center Solution implementation standard modular, easy deployment, only need according to the customer's IT requirements, architectural space, and can provide modular construction scheme, module flexible disassembly, transport, expansion, and site put into use after the rapid assembly, from cold channel assembly and debugging process is optimized, reduce the delivery time by 50%.



Sunroof narrow frame, explosion-proof glass design

- The narrow frame design of the sunroof further expands the visual space experience inside the cold passage, and greatly improves the lighting and permeability. Explosion-proof glass is used for cold aisle sunroof to effectively prevent personal injury in emergency situations.



O&M visualization and user-friendly design

- Supports 3D centralized management of monitoring, 3D cabinet number customization and 3D rotation, alarm filtering, convergence, and linkage, which facilitates the operation and maintenance of the equipment room and simplifies and facilitates the viewing of customer information. With configuration software interface display can be configured, flexible presentation; Multi-dimensional 3D interface display, such as cabinet temperature cloud picture and three-dimensional simulation cabinet capacity view; Supports storage of historical device data for up to five years, ensuring long-term operation and maintenance of device data, reducing operation and maintenance costs and time, and improving data traceability.

Optional mini-bus bar solution

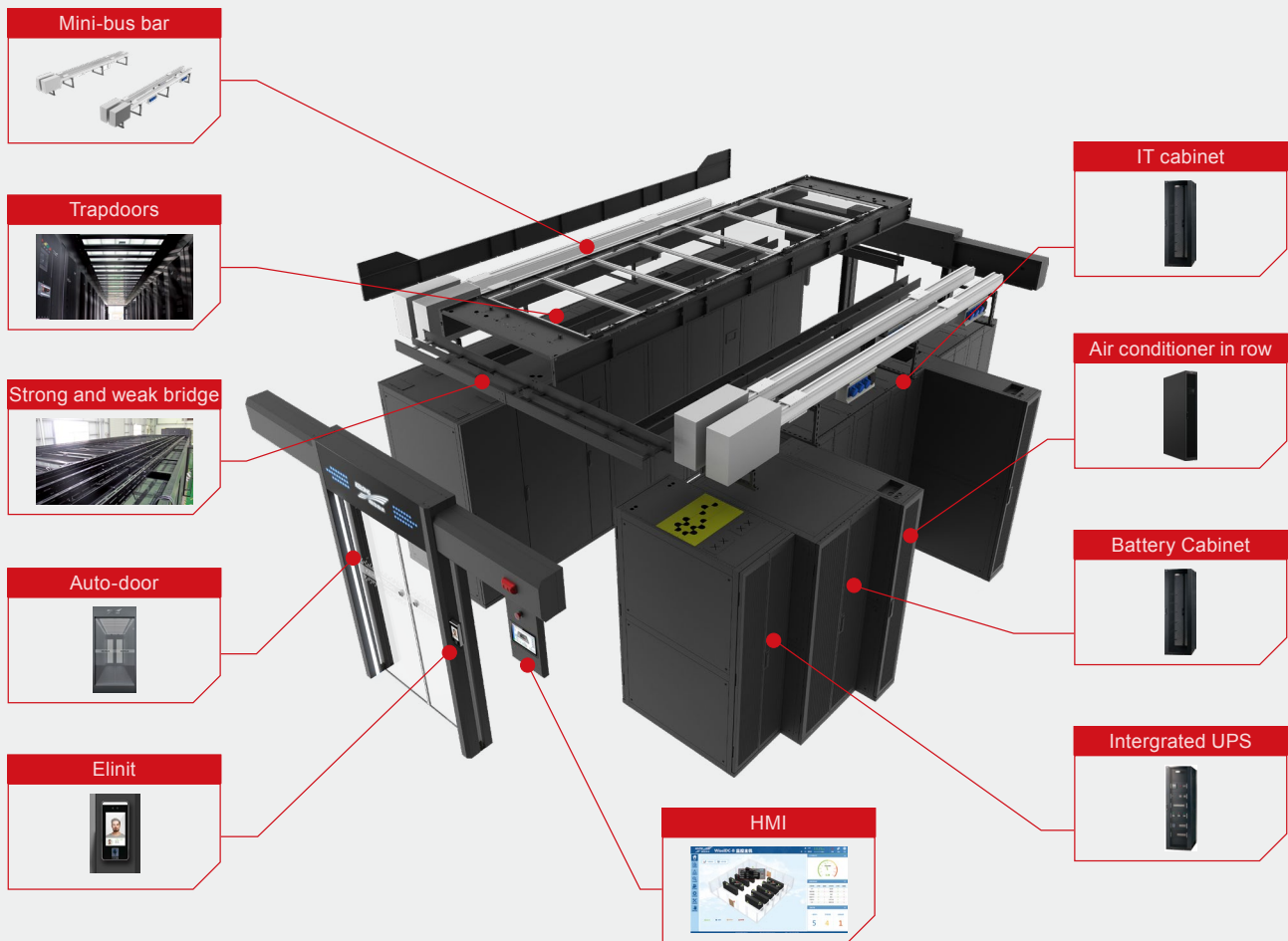
- Bus-bar products standardized design, modular structure, plug and play, fast installation, maintenance free; Flexible increase or decrease of plug boxes, convenient capacity expansion, more flexible load expansion, higher integration degree; The site deployment is convenient and fast, the construction speed is fast, the process is more flexible and beautiful; Flexible implementation of three-phase load distribution to meet the requirements for onsite and for the future.

Optional moving robot

- Mobile robot can realize automatic inspection, fixed inspection, scheduled inspection functions, and can automatically complete inspection records; Infrared scanning, mobile temperature and humidity detection, real-time scanning of each device temperature; Can realize the image recognition function equipment switch state; The device can remotely monitor the sound of devices in the cold channel, and remotely view the device status in real time through a mobile phone.



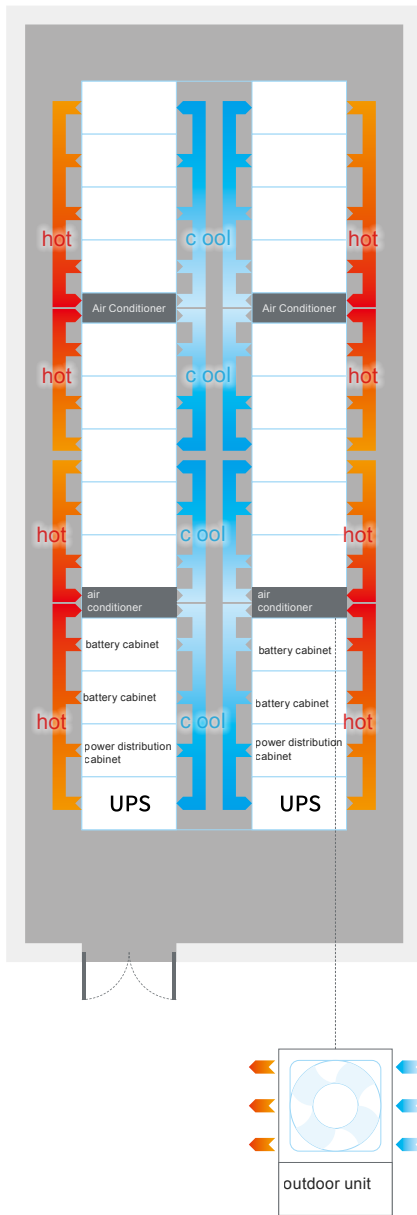
Overall architecture breakdown diagram



Customer Value

- Higher reliability, ensure the stable operation of the overall data center.
- To ensure the safety of personal and equipment.
- According to customer site conditions and construction needs, quickly provide construction plan.
- Productized project, construction cycle can be shortened by more than 20%.
- Improve operation and maintenance efficiency through modular component design.
- Real-time monitoring to improve the protection capacity of the data center.
- Intelligent management, improve the operation efficiency of data center.
- Rich management functions to improve data center availability.
- High efficiency up to 96%, reduce 30% operating cost and 20% Non-IT power consumption.
- Save 50% room space and 50% delivery time.
- Increase 30% expansion capacity.

Solution introduction



Model	WiseAisle Micro Modular data center solutions
System	
Dimension (L×W×H)	L×3600×2400mm, L≤15m
IT cabinet quantity	≤48
Cabinet power	typical value 2.2~4.4kW Single cabinet power >10kW (optional)
Installation	Support leveling or esd floor installation Cold aisle independent frame installation (optional)
Anchor frame	High 250mm, adjustable (optional)
Power distribution system	N+1, 2N
Access control	Automatic sliding glass doors, sliding/rotating sliding glass doors, partition mesh doors Face recognition or fingerprint all-in-one machine, support face/fingerprint/password/IC card and other modes
Flip skylight	Flip glass skylights and support fire control linkage
Smart light	LED lamp, PIR sensor
Smart atmosphere light	Smart atmosphere light, Alarm linkage discoloration
Cabinet	
Dimension (L×W×H)	600/800×2000×1200mm
Standards	IEC 60297-1, GB/T 19520.1
UPS	
Rated capacity	Integrated UPS: max 150kVA; independent UPS: 200kVA
Frequency range	40~70Hz
Input voltage range	80~280Vac
input voltage	380/400/415Vac, 50/60Hz, 3Ph+N+PE
Input PF	≥0.99
Output PF	1
Input THDi	≤3%
Power distribution	
Input distribution	ATS, MCCB
output distribution	Integrated IT cabinet: max 24*2, supporting air conditioner, the channels can be customized
Detection	Support the detection of voltage, current, air switch state, apparent power, active power, electrical energy; Bus temperature (optional)
Alarm	Supports overvoltage or undervoltage alarms of the main circuit, overcurrent alarms, frequency abnormal alarms, single-power failure alarms, and three-phase imbalance alarms
Battery cabinet (in line)	
Backup time	15min, 30min optional
Battery quantity	32*12V single cabinet
Intelligent temperature control	20~30°C (optional)
Battery monitor	Monitors the internal resistance, voltage, and temperature of each battery
air conditioner in row	
System cooling capacity	25kW/40kW/50kW
sensible heat factor	≥0.99
Dimension of indoor unit	300×2000×1200mm (25kW) 600×2000×1200mm (40kW) 600×2000×1200mm (50kW)
freezing medium	R410A
Monitor	
HMI	10/21 inches touch screen
Monitor system	Temperature, humidity, smoke, temperature, camera, audible and visual alarms, SMS alarms, and water leakage detection

WiseMDC AIO Series

Energy Efficient Container Data Center Solution

Solution introduction

The WiseAIO series are integrated, energy-efficient container data centers enable factory prefabrication, pre-commissioning, integrated delivery, and ultra-efficient deployment. Data center infrastructure solutions. The solution is pre-integrated in the factory with power distribution, monitoring, refrigeration, IT racks, fire protection systems and system wiring inside the same box, a unit can run independently, and has good waterproof, seismic, corrosion resistance performance, can realize customers quickly build, flexible replication and on-demand expansion of the data construction.



Customer Value

Quickly build, convenient transportation

- Power distribution, air conditioning, fire control, cabinet, monitoring and other subsystems are all prefabricated and pre-tested by the factory
- Only needs to make the basic platform, connect to the external power supply, water and optical cable on site
- Convenient transportation, support long-distance transport, post-disaster equipment transfers and other applications

High efficiency and energy saving, green and low-carbon

- Closed structure, cold and hot channel separation, effectively reduce the consumption of cold air
- Cold power linkage energy saving system, energy efficiency dynamic optimization, high efficiency energy saving, PUE industry leading
- Construction of less waste, less pollution, the whole container can be recycled, green and low-carbon
- One-stop construction and service, efficient deployment and operation

Intelligent management, unmanned operation and maintenance

- Wise IDC intelligent management system, full stack visualization
- Can be placed outdoors, not restricted by indoor space, convenient for expansion
- Optional operation and maintenance robot, machine room unattended

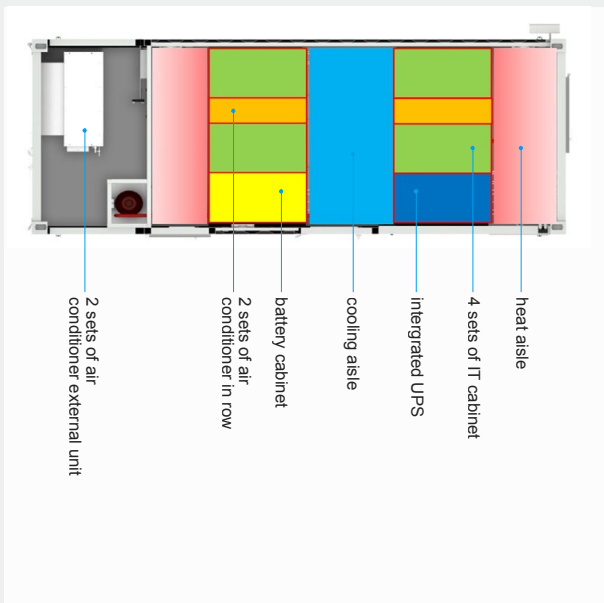
Flexible replication and on-demand capacity expansion

- Integral modular design, flexible expansion according to the scale of the application
- Can be placed outdoors, not restricted by indoor space, convenient expansion
- Realize the potential of data center cabinets, increase the number of cabinets, and add value for customers

One-stop buy, High efficiency operation

- The professional products in the cabin, from the design, manufacturing, hardware, integration of manufacturer's design, construction and operation experience, provide one-stop professional service for customers to solve multiple subcontracting, multi-party after-sales and a large number of preparation problems, to provide operation guarantee

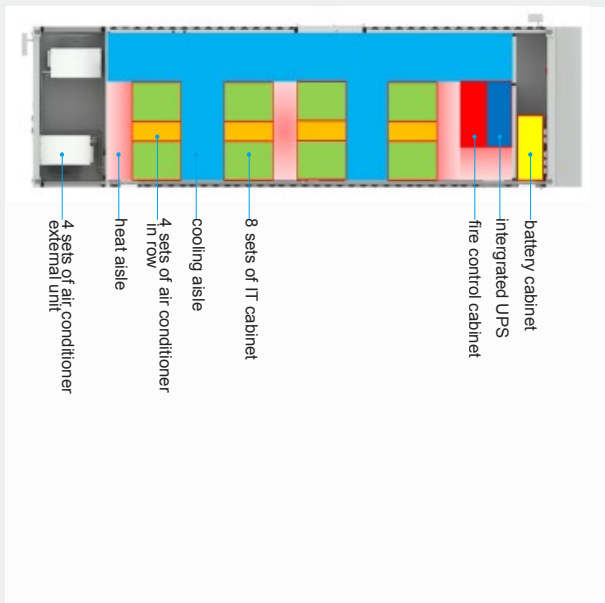
Wise MDC AIO 20 Feets Air Cold in Row Energy Saving Container Data Center Solution



Specifications

Power distribution	IT Load	≤ 72kW
Dimension (W*H*D)	6058mm*2896mm*2438mm	
IP protection	IP55	
IT cabinet quantity	4*42U	
Single cabinet power	6kVA (Standard)	8kVA (High capacity)
PDU	A/B, 32A (Standard)	A/B, 40A (High capacity)
IT total load	24kVA (Standard)	32kVA (High capacity)
UPS rated capacity	(1+1)*30kVA (Standard)	(2+1)*30kVA (High capacity)
Rated cooling capacity	(1+1)*25kW (Standard)	(1+1)*35kW (High capacity)
External battery	2 groups, ≥15mins (Standard lead-acid battery, optional lithium-ion battery)	
Power supply	3Ph+N+PE, ATS, 380V/400V/415V AC, 50Hz/60Hz	
Monitor	Power supply, environment, BMS, access control, video monitoring systems; 10 inches touch screen	
Fire protection	Hfc-227ea gas extinguishing system without pipe network	

Wise MDC AIO 40 Feet Air Cold in Row Energy Saving Container Data Center Solution



Specifications

Dimension (W*H*D)	12192*2896*2438	
IP protection	IP55	
IT cabinet quantity	8*42U	
Single cabinet power	7kVA (Standard)	9kVA (High capacity)
PDU	A/B, 32A (Standard)	A/B, 40A (High capacity)
IT total load	56kVA (Standard)	72kVA (High capacity)
UPS rated capacity	(2+1)*30kVA (Standard)	(3+1)*30kVA (High capacity)
Rated cooling capacity	(3+1)*25kW (Standard)	(3+1)*35kW (High capacity)
External battery	2 groups, ≥15mins (Standard lead-acid battery, optional lithium-ion battery)	
Power supply	3Ph+N+PE, ATS, 380V/400V/415V AC, 50Hz/60Hz	
Monitor	Power supply, environment, BMS, access control, video monitoring systems; 10 inches touch screen	
Fire protection	Hfc-227ea gas extinguishing system without pipe network	

Reliable • Flexible • Responsible

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