



# ICT PRODUCT

Lead the new technology of digital energy and create a new environment of green intelligence  
Become a first-class digital and energy solution, product and service provider in the industry





# CONTENTS

## 01/04 — Company profile

## 05/29 — Air Conditioner Product

- Cabinet Air Conditioner
- DC 48V Mobile Shelter Air Conditioner
- CyberMini-A Air-cooled Mini Air Conditioner
- CyberSmart-A Air-cooled Mini Air Conditioner
- CyberSmart-F Free-cooling Mini Air Conditioner
- Room-based ACW Series
- Room-based Air-cooled Air Conditioner
- Room-based Free-cooling Plus Air Conditioner
- Room-based Chilled Water Air Handler
- Chilled Water Fan Wall
- Near-field Fan Wall
- Chilled Water Rear Door Cooler
- Row-based Air-cooled Air Conditioner
- Row-based Free-cooling Air Conditioner
- Row-based Chilled Water Air Handler
- In-rack Air-cooled Air Conditioner
- Magnetic Bearing Multi-split Unit
- Liquid Cooling Solution
- Adiabatic Cooling Unit
- Adiabatic Cooling Unit with Refrigerant Pump

## 30/40 — Power Distribution Product

- Rack UPS (1-in 1-out)
- Rack UPS (3-in 3-out)
- Tower UPS (1-in 1-out)
- Tower UPS (3-in 3-out)
- Modular UPS
- Integrated UPS
- AC Array Cabinet
- DC Array Cabinet

## 41/46 — Data Center Solution

- Single Cabinet MDC
- Single Row MDC
- Double Row MDC
- Container MDC

## 47/48 — Base Station Solution

- C-RAN Cabinet
- Integrated Energy-saving Cabinet



# HAIWU

# TECHNOLOGY



\* The table of this brochure is only part of the parameters, and specific configuration is subject to the nameplate. For more information about parameters or non-standard customization, please contact Haiwu Company.





## COMPANY PROFILE

Established in 1995, Haiwu is dedicated to providing full cycle energy saving solutions for the digital world. Haiwu is an industry-leading international high-tech enterprise with business covering a wide range of products and service such as: IDC consulting; R&D; Manufacturing; Marketing and sales; After sales support; Mechanical and electrical general contracting; Products and installations testing and certification; Comprehensive maintenance; Optimization and upgrading of existing installations.

Haiwu is committed to provide innovative products and systems based on environmentally friendly, energy saving and sustainable technologies. The wide product range covers: Telecom and computer room air conditioners; Electrical, monitoring and clean energy products; Telecom and computer room solutions; Tailor-made full cycle and energy saving solutions for customers in telecom, government, energy, finance, education, medical care, transportation and other industrial applications.

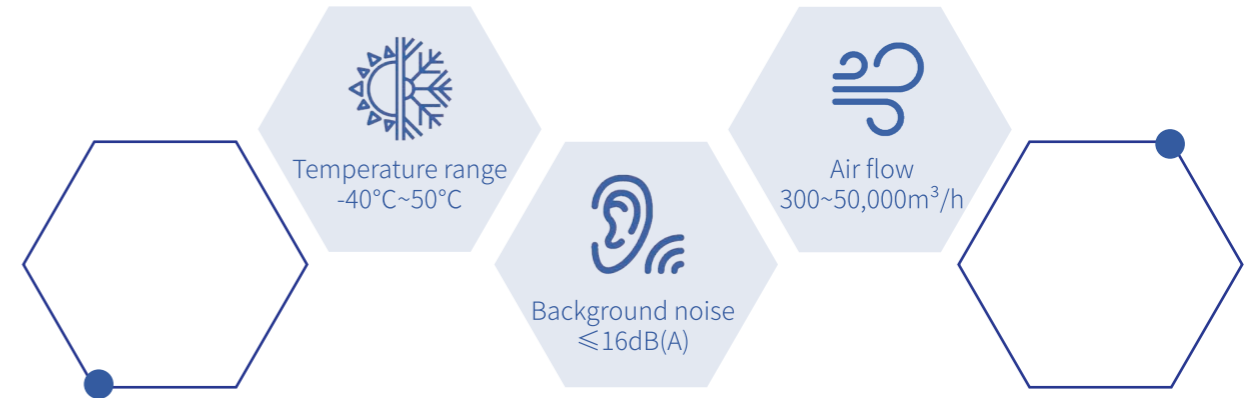
Haiwu, with head office in Beijing and R&D and manufacturing plants in the Guangdong province, has its own consulting and research institute, 8 subsidiaries and 29 branches. It employs more than 5,000 certified technical service engineers in more than 500 after-sales service outlets across the country to provide high-quality service.



# ACCREDITED LABORATORY

## Overview

Haiwu Test Center covers a total area of 215,200ft<sup>2</sup>, and it is the base of all the company R&D, testing and quality assurance activities on products, components and raw materials. The Test Center has 5 laboratories to verify the products, components and materials performances at different and extreme ambient temperatures, 1 laboratory to test noise emissions of products at working conditions and 1 laboratory to test the performances of components and accessories.



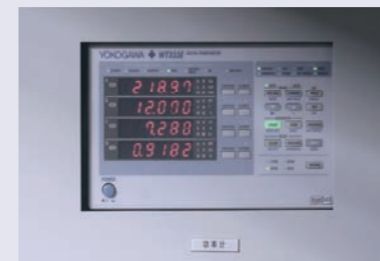
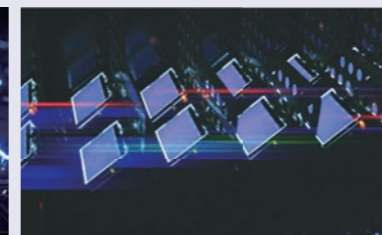
## NATIONAL ACCREDITED LABORATORY

No.:CNASL11799

Test center of Guangdong Haiwu Technology Co., Ltd

One of the best accredited laboratories in the industry,  
working in full compliance with GB and IEC  
Standard requirements for sound and performances management and testing systems.

**Testing results are recognized by local authorities  
in 65 countries and regions.**



Comprehensive Testing Laboratory



Products that can be tested: air-cooled chillers / water-cooled chillers, water-cooled chillers / chilled water units, fan coils, air source heat pumps / heat pump water heaters, etc.



# Air Conditioner Product



Cabinet Air Conditioner



Small Precision Air Conditioner



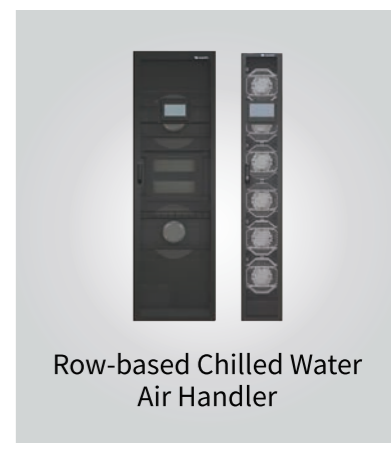
Heat Pipe Air Conditioner



CyberRow Series Computer Room Air Conditioner



Row-based Air-cooled/Free-cooling CRAC



Row-based Chilled Water Air Handler



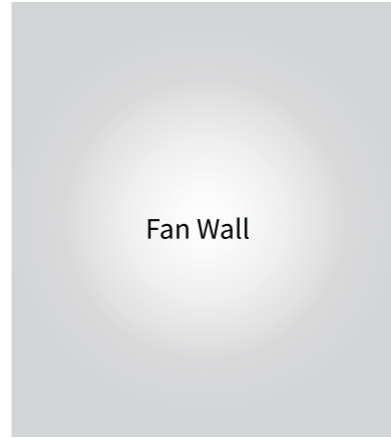
CyberSmart-Air-Cooled Mini Air Conditioner



CyberSmart-F Free-cooling Mini Air Conditioner



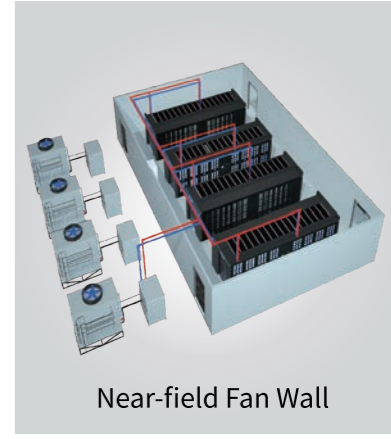
CyberMini-A Air-cooled Mini Air Conditioner



Fan Wall



Chilled Water Fan Wall



Near-field Fan Wall



CyberMaster Series Computer Room Air Conditioner



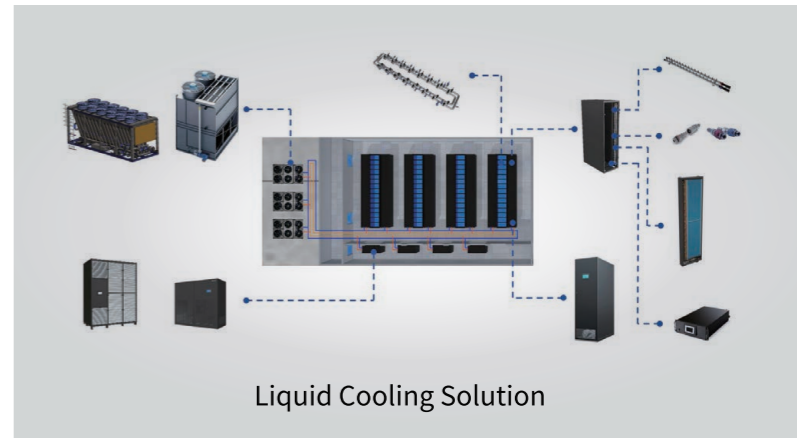
Room-based Air-cooled/Free-cooling Plus CRAC



Room-based Chilled Water Plus Air Handler



Integrated Cooling System



Liquid Cooling Solution



# Cabinet Air Conditioner

## Introduction

Cabinet Air Conditioner, as an AC integrated cabinet air conditioner, specially designed for cooling high heat cabinet . Adopting compressor cooling, independent circulation of internal and external air, completely sealed, effectively ensuring the service life and work stability of electronic components.

Application scenarios: Communication base station cabinet, highway ETC cabinet, industrial control cabinet, electrical cabinet, new energy storage cabinet, ETC.

## Picture



## Core Advantages

- ◆ Made of high molecular material, with strong impact strength & corrosion resistance
- ◆ Optional metal shell, highly fire-proof, potential safety trouble eliminated
- ◆ JGA/JGB two models cover fixed frequency/inverter requirements
- ◆ Excellent aerodynamic performance, low vibration, low noise and long working life
- ◆ Super compact, convenient for delivery, installation and maintenance
- ◆ Electric control box with full metal sealing, fire prevention function
- ◆ Multiple protection and alarm output. Self diagnosis of incoming calls for self start fault

## Specification

Cabinet Air Conditioner						
Model	JGA006	HWJGKT15	HWJGKT20	JGA030	JGB015	JGB030
Power supply	220V 50Hz	220V 50Hz	220V 50Hz	220V 50Hz	DC 48V	DC 48V
Performance						
Cooling capacity(W)	600	1500	2000	3200	1600	3000
Heater capacity(W)	600	800	900	1100	500	500
Refrigerant	R134a					
Working condition(°C)	-40~+55					
IP grade	IP55					
Physical						
Dimension(W*D*H)(mm)	545*315*170	746*446*200	746*446*200	746*446*300	746*446*200	746*446*300
Dimension with flange(W*D*H)(mm)	583*352*170	783*483*200	783*483*200	783*483*300	783*483*200	783*483*300
Installation						
Installation	Door-mounted					
Application	Outdoor					
Note:						
1. Standard working condition: Indoor temp=35°C, outdoor temp=35°C						

# DC 48V Mobile Shelter Air Conditioner

## Introduction

DC 48V Mobile Shelter Air Conditioner is a inverter air conditioner with dual cold sources. The equipment is characterized by high energy efficiency, cascade refrigeration, and two cold sources which can be backup to each other.

Application scenarios: various telecom base stations, small telecom computer rooms, railway computer rooms, photovoltaic and energy storage sites.

## Picture



## Core Advantages

- ◆ Adopt double cold source design, high refrigeration reliability
- ◆ The use of full DC 48V power supply can achieve low carbon and energy saving effect, with the EER of 5.2 and the EER of heat pipe mode >10
- ◆ Low noise design will not disturb residents' daily life
- ◆ Dual compressor, dual fan and dual controller backup design can prevent shutdown caused by single component failure

## Specification

JFC DC Heat Pipe Aircon	
Indoor unit model	JFC075
Main power supply	-48V DC (-15%~+20%)
Air supply	Lower front air supply
Performance parameters	
Cooling capacity(kw)	8
Sensible capacity(kw)	7.2
Max.operation current FLA(A)	72.0
Compressor QTY	2
Fan type	DC axial flow fan
Fan QTY	2
Circulating air volume(m3/h)	2500
Heating capacity(kw)	/
Humidification(kg/h)	/
Connecting pipe size	
Liquid pipe(mm)	9.52
Gas pipe(mm)	15.88
Drain pipe	Inner diameter 19mm, outer diameter 25mm, Metal hose clamp connection
Indoor unit Dimension and Weight	
Dimension-W(mm)	580
Dimension-D(mm)	360
Dimension-H(mm)	1800
Weight(kg)	112
Outdoor unit performance parameter	
Outdoor unit model	JW0075K1Z6A2
Dimension-W(mm)	728
Dimension-D(mm)	405
Dimension-H(mm)	1145
Weight(kg)	48

Note:

1. Standard working conditions: indoor ambient temperature 27°C, RH 50%, outdoor ambient temperature 35°C.
2. In order to ensure the normal operation of the heat pipe mode of the unit, the outdoor unit must be installed higher than the indoor unit, and the recommended height difference is more than 0.5m.



# CyberMini-A Air-cooled Mini Air Conditioner

## Introduction

CyberMini-A Air-cooled Mini Air Conditioner features full inverter design, high air volume and high performance, providing stable temperature and humidity conditions for small computer rooms, edge computer rooms, and other scenarios. It adopts innovative fan and air duct for long air supply distance, and X-shaped structure supports frontal maintenance and larger coil. Application scenarios: computer room, edge computing room, bank branch, network room, etc.

## Picture



## Advantages

- ◆ Full inverter system, energy efficiency improves
- ◆ Large air inlet/outlet, well-distributed airflow, no local hot spots
- ◆ Optional winter kit, reliable operating at -40 - +50°C
- ◆ Supports 80m connection pipe, -10 - +20m height difference

## Specification

CyberMini-A Air-cooled Mini Air Conditioner						
Model	HEX080		HEX130		HEX200	
Function	C/O+Heater	Constant temp+RH	C/O+Heater	Constant temp+RH	C/O+Heater	Constant temp+RH
Power supply	380-415V 3Ph 50Hz					
Performance						
Cooling capacity(kW)	7.5		12.5		20	
Refrigerant	R410A					
Sensible heat ratio	0.92		0.92		0.92	
Heater capacity(kW)	3		3		3	
Humidification capacity(kg/h)	/	1.5	/	1.5	/	2.0
IDU airflow(m³/h)	2200		3600		5500	
Physical						
Indoor unit						
Dimension(W*D*H)(mm)	580*355*1650		580*355*1900		580*505*1900	
Net weight(kg)	76	79	83	86	122	125
Outdoor unit						
Dimension(W*D*H)(mm)	728*405*762		728*405*1370		1020*405*1370	
Net weight(kg)	34		53		74	
Note:						
1. Standard working condition: indoor temp = 24°C(DB)/17°C(WB), outdoor temp = 35°C, ESP = 20Pa						
2. Optional: winter kit, extension kit, rope-type water leak detector, power meter, etc.						

# CyberSmart-A Air-cooled Mini Air Conditioner

## Introduction

CyberSmart-A Mini Air Conditioner adopts advanced inverter design concept and is equipped with high-efficiency EC centrifugal fan. The unit has passed rigorous testing and verification by national CNAS laboratory, and has significant characteristics of energy saving and stable operation. Application scenarios: small and medium-sized computer room, equipment room, communication base station, battery room, power room, substation, power distribution room, monitoring room, etc.

## Picture



## Core Advantages

- ◆ Full inverter design, provide more flexible and efficient temperature control scheme
- ◆ Power off memory, autostart, group control, flexible configuration
- ◆ \*Optional lightning protection component, ensuring the stability of the equipment room
- ◆ \*Optional low temperature components, which can achieve -35°C reliable operation

## Specification

Inverter CSA Precision Aircon for Computer Room				
Indoor unit model	CSA3008	CSA3013	CSA3020	CSA3030
Main power supply	380V 3Ph-50Hz			
Air supply	Up and front air supply			
Performance parameter				
Cooling capacity(kW)	7.5	12.5	20	30.0
Sensible capacity(kW)	6.75	11.25	18	27.0
Max. operation current FLA(A)	13.0	16.5	26.3	39.6
Compressor QTY	1	1	1	1
Fan type	EC Centrifugal fan			
Fan QTY	1	1	1	1
Circulating air volume(m³/h)	2200	3600	5500	7500
Heating capacity(kW)	3	3	3	6
Humidification(kg/h)	1.5	1.5	3	3
Connecting pipe size				
Liquid pipe(mm)	6.35	9.52	12.7	15.88
Gas pipe(mm)	15.88	19.05	19.05	22.00
Humidification inlet pipe(internal thread)	G 1/2"			
Drain pipe	Inner diameter 19mm, outer diameter 25mm, metal hose clamp connection			
Indoor Unit Dimension and Weight				
Dimension-W(mm)	550	650	800	900
Dimension-D(mm)	450	450	650	750
Dimension-H(mm)	1800	1800	1800	1975
Weight(kg)	118	138	174	220
Outdoor unit Dimension and Weight				
Outdoor unit model	CST008SP1A	CST013SP1A	CST020SP1A	CST030SP3A
Dimension-W(mm)	728	728	1020	1300
Dimension-D(mm)	405	405	405	740
Dimension-H(mm)	762	1370	1370	1216
Weight(kg)	34	53	74	78
Electronic element specification				
Air switch(recommended) (A)	16	20	32	50
Indoor power cable diameter(mm²)	4*2.5+1*2.5	4*4.0+1*4.0	4*6.0+1*6.0	4*10.0+1*10.0
Outdoor power cable diameter(mm²)	*1.0+1*1.0	*2*1.0+1*1.0	*2*1.0+1*1.0	*4*1.5+1*1.5
Note:				
1. Standard working conditions: indoor ambient temperature 24°C, RH 50%, outdoor ambient temperature 35°C, ESP=20Pa.				



# CyberSmart-F Free-cooling Mini Air Conditioner

## Introduction

CyberSmart-F free-cooling mini aircon is a thermal management product makes full use of natural cold source. The unit can automatically switch between compressor mode, mix mode and free cooling mode. Inverter control with refrigerant pump, AEER improves by 60%, more eco-friendly.

Application scenarios: Data center, telecom equipment and computer room, electronic instrument workshop, constant temperature and humidity laboratory, etc.

## Picture



## Advantages

- ◆ Optional single/dual/triple module, wide range of cooling capacity, suitable for various applications
- ◆ Centralized cold source for high-efficiency cooling, EER up to 11
- ◆ Optimal coil design with CFD simulation, improving the heat exchange efficiency
- ◆ EC centrifugal fan, stepless regulation, reducing fan power consumption

## Specification

CyberSmart-F Free-cooling Mini Air Conditioner		
Model	CSF3013	CSF3020
Function	Constant temp+RH	Constant temp+RH
Power supply	380-415V 3Ph 50Hz	
Performance		
Cooling capacity(kW)	12.5	20
Air supply	Frontal	Frontal
Sensible heat ratio	0.9	0.9
Refrigerant	R410A	
IDU parameter		
Dimension(W*D*H)(mm)	650*450*1800	800*650*1800
Fan	EC fan	
Airflow(m <sup>3</sup> /h)	3600	5500
Fan QTY	1	
Rated cooling power(kW)	4.17	6.67
Net weight(kg)	138	174
Heater		
Type	PTC	
Capacity(kW)	3	3
Humidifier		
Type	Wet-film	
Capacity(kg/h)	1.5	3
Connection pipe	G1/2"Internal thread	
ODU parameter		
Model	CSP013	CSP020
Power supply	220V 1Ph 50Hz	
QTY	1	1
Dimension(W*D*H)(mm)	865*545*1450	865*545*1450
Net weight(kg)	74	84

Note: Standard working condition: Indoor temp=24°C/50% RH, outdoor temp=35°C, ESP=20Pa

# Room-based ACW Series

## Introduction

Two independent cooling systems (CW and A) are combined in a single air conditioning unit for maximum reliability. If the main chilled water (CW) system fails, the air-cooled (A) system keeps the air conditioning going without interruption.

Application scenarios: data center, communication equipment and computer room, MRI and CT room, other precision equipment environment.

## Picture



## Core Advantages

- ◆ 24\*7 all-weather continuous operation.
- ◆ Two totally independent cooling circuits for 100% redundancy.
- ◆ Adopt hermetic inverter driven compressors and EC fans to minimize vibration and noise.
- ◆ Large heat exchanging area for better performances and efficiency.

## Specification

Specification			
Room-based ACW Series			
Model	CMACW4060	CMACW4080	CMACW4100
Power supply	380-415V/3Ph/50Hz		
Airfilter	G4	G4	G4
Performance (CW)			
Total capacity(kW)	61.15	80.15	100.95
Sensible capacity(kW)	61.15	80.15	100.95
Coolant	40% Ethylene Glycol		
Performance (DX)			
Total capacity(kW)	61.67	80.48	100.24
Sensible capacity(kW)	61.67	80.48	100.24
Refrigerant	R410A		
Fan			
Type	EC	EC	EC
Quantity	2	2	2
Air flow(m <sup>3</sup> /h)	16,000	24000	29000
ESP(Pa)	100	100	100
Air supply	Upflow/Downflow		
Compressor			
Brand	Mitsubishi	Mitsubishi	Mitsubishi
Type	INV Scroll	INV Scroll	INV Scroll
Quantity	2	2	2
Heater			
Capacity(kW)	9	15	15
Humidifier			
Type	Electrode	Electrode	Electrode
Capacity(kg/h)	10	10	10
Physical			
Dimension(W*D*H)(mm)	2230*996*1995	2230*996*1995	2530*996*1995
Net weight(kg)	825	825	995
ODU- Flat type			
Model	CMT066SPS3A	CMT088SPS3A	CMT099SPS3A
Dimension(W*D*H)(mm)	2225*817*1048	2225*817*1216	2225*817*1216
Net weight(kg)	168	245	270

Note: Standard working condition: Indoor temp=26°C/30% RH, outdoor temp=50°C

# Room-based Air-cooled Air conditioner

## Introduction

CMA Room-based Air-cooled Air conditioner provides precise temperature and humidity control for large and medium-size data rooms. It adopts high efficiency compressor and EC centrifugal fan to meet the requirements of 24 X 7 all-weather continuous operation. It is the ideal choice for green and energy-saving data centers and various electronic equipment rooms. Application scenarios: data center, communication equipment and computer room, MRI and CT room, other precision equipment environment, such as precision processing, electronic instrument workshop, museum, archives, high-end wine cellar, medical equipment room, constant temperature and humidity laboratory, etc.

## Picture



## Advantages

- ◆ Optimized system, high-efficiency cooling coil design
- ◆ The condenser adopts a "V-shaped" design, which can save 50% of the internal space of the unit.
- ◆ 7" touch screen, user-friendly HMI.

## Specification

Specification					
Model	CMA3030	CMA3050	CMA4060	CMA4080	CMA4100
Power supply	380V/3Ph/50Hz				
Air filter	G4	G4	G4	G4	G4
Performance					
Total capacity(kW)	21.15	43.16	65.95	88.06	109.57
Sensible capacity(kW)	20.04	40.11	60.29	80.44	100.36
Refrigerant	R410A	R410A	R410A	R410A	R410A
Fan					
Brand	ZIEHL-ABEGG	ZIEHL-ABEGG	ZIEHL-ABEGG	ZIEHL-ABEGG	ZIEHL-ABEGG
Type	EC	EC	EC	EC	EC
Quantity	1	1	2	2	2
Air flow(m <sup>3</sup> /h)	8000	14300	16000	21000	26000
ESP(Pa)	100	100	100	100	100
Air supply	Up/Down flow	Up/Down flow	Up/Down flow	Up/Down flow	Up/Down flow
Compressor					
Brand	Mitsubishi	Mitsubishi	Mitsubishi	Mitsubishi	Mitsubishi
Type	Inverter	Inverter	Inverter	Inverter	Inverter
Quantity	1	1	2	2	2
Heater					
Capacity(kW)	6	9	9	9	15
Humidifier					
Type	Electrode	Electrode	Electrode	Electrode	Electrode
Capacity(kg/h)	6	6	10	10	10
Physical					
Dimension(W*D*H)(mm)	930*996*1995	1130*996*1995	1830*996*1995	1830*996*1995	2230*996*1995
Net weight(kg)	330	425	585	625	775
ODU- Flat type					
Model(*Qty)	CMT0055P03A	CMT088SPC3A	CMT0055P03A*2	CMT0066P03A*2	CMT0088P03A*2
Dimension(W*D*H)(mm)	1200*817*1216	2225*817*1216	1200*817*1216	2225*817*1216	2225*817*1216
Net weight(kg)	170	210	170	195	210
Note					
Standard working condition: Indoor temp=26°C/50%RH, outdoor temp=50°C					

# Room-based Free-cooling Plus Air Conditioner

## Introduction

In order to reduce the investment in base station construction and accelerate telecom construction, the traditional access network architecture has evolved to C-RAN architecture. Haiwu outdoor C-RAN cabinet adopts modular and standardized reliability design to ensure that all subsystems are highly compatible, universal and integrated. Highly integrated power supply and distribution system, battery system, temperature control system, emergency ventilation system, intelligent management system, etc., with small floor space, it can realize plug and play and rapid installation and delivery.

## Picture



## Advantages

- ◆ Three operating modes, automatic switching, real-time adjustment
- ◆ Low compression ratio, energy efficiency increase by 17% in transitional season
- ◆ Inverter compressor, soft start/stop, more reliable and energy-saving
- ◆ Intelligent control, full use of natural cold source

## Specification

IDU Model	CMF3030	CMF3050	CMF4060	CMF4080	CMF4100	CMF4120
Power supply	380-415V 3Ph 50Hz					
Air filter	G4	G4	G4	G4	G4	G4
Performance						
Total capacity(kW)	30.1	50.1	60.2	80.2	100.2	120.2
Sensible capacity(kW)	27.7	46.1	55.4	73.8	92.2	110.6
EER	3.10	3.10	3.10	3.10	3.10	3.10
Refrigerant	R410A					
Fan						
Brand	ZIEHL-ABEGG					
Type	EC					
Quantity	1	1	2	2	2	2
Air flow(m <sup>3</sup> /h)	8000	13000	16000	21000	26000	30400
ESP(Pa)	100					
Air supply	Upflow/Downflow					
Compressor						
Brand	Mitsubishi Electric					
Type	Inverter	Inverter	Inverter	Inverter	Inverter	Inverter
Quantity	1	1	2	2	2	2
Heater						
Type	PTC					
Capacity(kW)	6.0	9.0	9.0	15.0	15.0	15.0
Humidifier						
Type	Wet-film	Wet-film	Wet-film	Wet-film	Wet-film	Wet-film
Capacity(kg/h)	6.0	6.0	10.0	10.0	10.0	10.0
Physical						
Dimension(W*D*H)(mm)	930*996*1995	1130*996*1995	1830*996*1995	1830*996*1995	2230*996*1995	2530*996*1995
Net weight(kg)	330	425	585	625	775	835
ODU- Flat type						
Model	CMT055SPS3A	CMT088SPS3A	CMT055SPS3A	CMT066SPS3A	CMT088SPS3A	CMT099SPS3A
Required quantity	1	1	2	2	2	2
Fan						
Brand	ZIEHL-ABEGG					
Type	EC					
Quantity	1	2	1	2	2	2
Physical						
Dimension(W*D*H)(mm)	817*1200*1216	817*2225*1216	817*1200*1216	817*2225*1048	817*2225*1216	817*2225*1216
Net weight(kg)	145	245	145	168	245	270
Note						
1. Standard working condition: Indoor 24.0°C/50%RH, outdoor 35.0°C						



# Room-based Chilled Water Air Handler

## Introduction

Room-based Chilled Water Air Handler minimizes running cost for the entire cooling system, and ensures precise and constant control of airflow, temperature, and humidity under all working conditions, adapting perfectly to each data center's room air condition and water temperature requirements.

Application scenarios: Data center, telecommunication equipment and computer room, other precision equipment environment such as precision processing, electronic equipment workshop, constant temperature and humidity laboratory, etc.

## Picture



## Core Advantages

- ◆ Key components are selected from well-known brands
- ◆ EC fan, stepless inverter adjustment, energy saving 30%
- ◆ High efficiency electrode humidification, fast humidification, less power consumption
- ◆ Full frontal maintenance, pull-out design
- ◆ 7 inch LCD touch screen, perfect man-machine interaction
- ◆ Power off memory, autostart, group control, flexible configuration
- ◆ \*Optional power metering function module

## Specification

CMC Room-Based Precision Aircon( Chilled water)							
Indoor unit model	CMC0040	CMC0060	CMC0100	CMC0120	CMC0140	CMC0160	CMC0180
Main power supply	380V 3Ph-50Hz						
Air supply	Up/Down						
Performance parameter							
Cooling capacity(kW)	42	62	102	122	142	162	182
Sensible capacity(kW)	37.8	55.8	91.8	109.8	127.8	145.8	163.8
Max. operation current FLA (A)	25.5	26.0	45.0	46.0	52.6	54.1	54.1
Fan Type	EC Centrifugal fan						
Circulating(m <sup>3</sup> /h)	10500	13500	22500	26500	33000	36000	39800
Heating capacity(kW)	6	6	9	9	9	9(optional 15kW)	9(optional 15kW)
Humidification(kg/h)	4	4	8	8	8	8(optional 15kg/h)	8(optional 15kg/h)
Connecting pipe size(30m)							
Water inlet /outlet pipe(mm)	DN32 or 1-1/4"	DN40 or 1-1/2"	DN50 or 2"	DN50 or 2"	DN50 or 2"	DN50 or 2"	DN50 or 2"
Pipeline connecting	Threaded connection						
Humidification inlet pipe(internal thread)	G1/2"						
Drain pipe	Inner diameter 19mm, outer diameter 25mm, metal hose clamp connection						
Dimension and weight							
Dimension-W(mm)	780	930	1530	1830	2280	2730	2730
Dimension-D(mm)	996						
Dimension-H(mm)	1975						
Weight(kg)	297	405	577	750	776	795	822
Electronic element specification							
Air switch recommended(A)	32	32	32	32	32	32	32
Indoor power cable diameter(mm <sup>2</sup> )	4*6.0+1*4.0		4*10.0+1*6.0		4*16.0+1*10.0		
Note:							
1. Standard working conditions: Air side Dry/Wet bulb Temp.: 24/17°C, Water side Dry/Wet Bulb Temp.: 7/12°C, ESP=100Pa;							
2. Only cooling or constant temperature and humidity type can be selected. The maximum working current and the recommended air switch are configured according to the constant temperature and humidity unit.							
3. For more information, please contact Haiwu.							

# Room-based Chilled Water Plus Air Handler

## Introduction

Introduction: Room-based Chilled Water-Plus Air Handler is developed to meet the requirements of large data centers while keeping an eye on efficiency and reliability. Compared to the standard chilled water air handler, the chilled water-plus series is higher to achieve a larger heat exchange area; It can also adopt to higher inlet and outlet water temperatures to match the local operation environment.

## Picture



## Advantages

- ◆ Three operating modes, automatic switching, real-time adjustment
- ◆ Low compression ratio, energy efficiency increase by 17% in transitional season
- ◆ Inverter compressor, soft start/stop, more reliable and energy-saving
- ◆ Intelligent control, full use of natural cold source

## Specification

Room-based Chilled Water-Plus Air Handler			
Model	CMC0045P	CMC0090P	CMC0150P
Power supply	380-415V/3Ph/50Hz		
Air filter	G4		
Cooling performance			
Total capacity(kW)	46.0	92.0	146.0
Sensible capacity(kW)	46.0	92.0	146.0
EER	10.70	10.71	11.51
Fan			
Brand	ZIEHL-ABEGG		
Type	EC		
Quantity	1	2	3
Air flow(m <sup>3</sup> /h)	14000	28000	43000
ESP	100		
Air supply	Downflow		
Heater			
Type	PTC		
Power(kW)	6.0	9.0	9.0
Humidifier			
Type	Wet-film		
Capacity(kg/h)	4.0	8.0	8.0
Physical			
Width(mm)	930	1830	2730
Depth(mm)	996		
Height(mm)	2675		
Net weight(kg)	460	745	1030
Note:			
1. Standard working condition: Indoor 35.0°C/30%RH, EWT/LWT=20°C/30°C, ESP=100Pa			

# Chilled Water Fan Wall

## Introduction

Chilled Water Fan Wall solution for Hyperscale DC designed to be installed outside the Data Hall in the technical corridor. It doesn't require the raised floor and create a cooling wall on the white space distributing the cold air in the entire room with the minimum power consumption.

The hot aisle containment ensures the separation of cold and hot air avoiding hot spot and ensuring a reliable cooling to all the IT equipment.

Range of application: medium, large-scale switch computer room; industry control room; computer room and prefabricated data center; standard test room and calibration center

## Picture



## Advantages

- ◆ Maximized coil surface and powerful fans to ensure high sensible cooling capacity per footprint
- ◆ Two cooling modules shipped separately easy to be transported and installed on site
- ◆ Water Inlet/out connection on top reduce installation space
- ◆ Even in case of control failure, the unit can guarantee cooling continuity
- ◆ System energy efficiency increased because of a better water distribution

## Specification

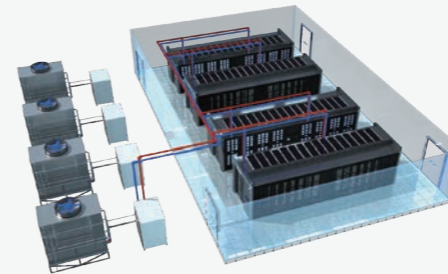
Chilled Water Fan Wall	
Cooling performance	
Total cooling capacity	331.7
Sensible cooling capacity	331.7
Air supply	Horizontal
Air flow(m <sup>3</sup> /h)	50,000 - 90,000
ESP(Pa)	0 - 300Pa
Coolant	Chilled water
EER	24.28
Heater	
Type	
Capacity(kW)	24(option)
Humidifier	
Type	Electrode
Capacity(kg/h)	28(option)
Air filter	G4
Physical	
Dimension(W*D*H)(mm)	3300*2000*1200
Note:	
1. Standard working condition: EWT/LWT=12/20°C, 0% glycol, RAT 37°C/26%RH, Capacity is based on air flow of 60,000 m <sup>3</sup> /h 100Pa ESP.	

# Near-field Fan Wall

## Introduction

Near-field Fan Wall is consist of power distribution system, thermal management system(magnetic bearing compressor/chilled water optional), rack system and monitoring system. It is specifically designed for cooling of racks with high-density power, and effectively solves the problems of long air supply distance and high PUE

## Picture



## Advantages

- ◆ Low-air resistance coil, fan power consumption reduced by 50%
- ◆ Close to heat source, closed hot aisle, well-distributed airflow
- ◆ Intelligent monitoring system, precise cooling

## Specification

Parameters-ODU			
Evaporative cooling ODU			
Model	CXF-1-0300PCA1	CXF-1-0450PCA1	CXF-1-0600PCA1
Cooling performance			
Rated cooling capacity(kW)	300	450	600
Rated power(kW)	58	75	95
Max. power(kW)	75	90	120
Refrigerant	R134a		
Physical			
Dimension(W*D*H)(mm)	2300*1250*2000	2300*1250*2000	2300*1250*2000
Compressor			
Type	1500	1800	2500
QTY	Magnetic levitation compressor		
Condenser			
Type	1	1	1
Dimension(mm)	3700*2230*3850	4300*2600*3950	5550*2600*4650
Running weight(kg)	7000	9150	13500
Note:			
1. Standard working condition: Ambient temp=30°C(WB), SA/RA temp=23/35°C			



Parameters-MDC	
Specification	
Dimension(L*W*H)(mm)	L*3400/2800(W)*3400/2800(H)mm, L≤15 m
IT rack QTY	≤25
Power supply	48V DC, 2Ph+N+PE
IP grade	IP20
Installation	Height≥2.8m, supports cement/raised floor installation
Rack	
Dimension(W*D*H)(mm)	600*1200*2800/2300
Available space	60/50U
Opening rate	Hexagonal hole door, opening rate≥76%
Cooling	
Cooling method	Refrigerant system/Chilled water
Cooling capacity	68/50
Modular UPS	
Capacity(kVA)	200~600kVA
Monitoring	
Controller	21.5" touchscreen, visual interface, web/APP access
Monitoring system	Aircon, PDU, UPS, temp&humidity, water leakage, smoke, video, battery
Alarm	Message, phone call, voice/light, fireprotection, etc.

Air-cooled ODU		
Model	CXF-1-0300ACA1	CXF-1-0450ACA1
Cooling performance		
Rated cooling capacity(kW)	300	450
Rated power(kW)	60	90
Max. power(kW)	75	110
Power supply	380V-3Ph-50Hz	
Refrigerant	R134a	
Physical		
Dimension(W*D*H)	3850*2250*3000	5100*2250*3000
Compressor		
Type	4000	5000
QTY	1	1
Condenser		
Type	Magnetic levitation compressor	
Note:		
1. Standard working condition: Ambient temp=35°C(DB), SA/RA temp=23/35°C		

IDU				
Model	Chilled water fan wall		Magnetic bearing fan wall	
Cooling performance				
Rated cooling capacity(kW)	68	50	68	50
Rated power(kW)	2.39	1.97	2.72	2.08
Power supply	DC 48V	DV 48V	DC 48V	DC 48V
Working condition	LWT/EWT=16/23°C, RA=35°C/20.5%RH		LWT/EWT=23/50°C, RA temp=35°C/20.5%RH	
EER	28.8@70% frequency	25.35	25	25
Airflow(m³/h)	18000	13500	18000	13500
Dimension(W*D*H)(mm)	1200*400*2800	1200*400*2300	1200*400*2800	1200*400*2300
ESP(Pa)	20Pa	20Pa	20Pa	20Pa
Refrigerant	Water	Water	R134a	R134a
Note	Large coil, higher water temperature, no condensation		Close to hot source, high efficiency, no water in computer room	

## Chilled Water Rear Door Cooler

### Introduction

Chilled Water Rear Door Cooler is a heat exchanger door with EC fans for in-stalling on the rear door of server racks. Combined with a chiller, the space-saving rear door units remove the heat generated by the servers right at the source. No more hot air gets into the room.

It takes up virtually no footprint and therefore ensure optimum use of available space in the data center. An ideal solution for where high density, without raised floor.

### Picture



### Advantages

- ◆ N+1 fans to guarantee continuous operation in event of fan failure
- ◆ Axial EC fan with integrated guide blades to increase efficiency and airflow
- ◆ Energy valve achieves precisely water flow control, dynamically balance load under all conditions
- ◆ Full frontal access for all key components

### Specification

Chilled Water Rear Door Cooler		
Model	CPC0050A	CPC0050B
	RDC 1	RDC 2
Power Supply	208-240V 50Hz	208-240V 50Hz
Cooling performance		
Net total cooling capacity(kW)	50.0	50.0
Net sensible cooling capacity(kW)	50.0	50.0
Airflow(m³/h)	9900	9900
ESP(Pa)	20Pa	20Pa
EER	42.02	58.69
Fan		
Type	IE4 EC Axial	
QTY	14	12
Total power input(kW)	1.19	0.85
Cooling coil		
Water flow(L/s)	1.53	1.52
Water pressure drop(kPa)	49.9	52.2
Physical		
W*D*H(mm)	600*315*2320	800*315*2320
Fits rack	52U*600	52U*800
Water connection	DN32	DN32
Sound pressure level @ 1 meter(dBA)	76.0	73.0
Communication	TCP/IP	TCP/IP
Note:		
1. Standard working condition: RA = 40.2°C/17.0%RH, LWT/EWT = 20.0/28.0°C		

# Row-based Air-cooled Air Conditioner

## Introduction

Row-based Air-cooled Air conditioner is designed for the medium and high thermal density data center. It can be installed close to the heat source, shorten the cold air supply distance to accurately process the sensible heat generated by the server. It is the ideal choice for the green energy-saving data center and various electronic equipment rooms. Application scenarios: Small and medium-sized data centers, modular data centers, cabinet cold (hot) aisle transformation, medium and high thermal density communication equipment and computer rooms, etc.

## Picture



## Core Advantages

- ◆ Key components are selected from well-known brand
- ◆ Full EC inverter design, automatic adjustment of cooling-capacity and air volume output
- ◆ High return air temperature design, significantly improved energy efficiency
- ◆ Full frontal maintenance, pull-out design
- ◆ Group control, flexible configuration
- ◆ \*Optional power metering function module

## Specification

CRA Row-Based Air-cooled Aircon					
Indoor unit model	CRA3012	CRA3025	CRA3040	CRA3050	CRA3060
Main power supply	380V 3Ph-50Hz				
Air supply	Front air supply				
Performance parameter					
Cooling capacity (kW)	12.5	25	40	50	60
Sensible capacity (kW)	12.5	25	40	50	60
Max. operation current FLA (A)	27.5	37	50.2	54	57.2
Compressor QTY	1				
Fan Type	EC Centrifuge fan				
Fan QTY	3	6	2	3	3
Circulating air volume (m <sup>3</sup> /h)	3000	5000	8000	10800	12000
Heating capacity (kW)	2	3	6	9	9
Humidification (kg/h)	1	1.5	3	4.5	4.5
Connecting pipe size(30m)					
Liquid pipe (mm)	9.52	15.88	15.88	15.88	15.88
Gas pipe (mm)	19.05	22	22	22	22
Humidification inlet pipe (Internal thread)	G3/4"				
Water pump drain pipe(mm)	ID9.53*OD17.02				
Natural drain pipe(mm)	ID16*OD24				
Unit dimension and weight					
Dimension-W (mm)	300	300	600	600	600
Dimension-D (mm)	1100/1200				
Dimension-H (mm)	2000/2200				
Weight (kg)	190	210	250	310	310
Outdoor unit performance parameter (40°C)					
Flat-plate outdoor unit model	CST013SP	CMT038SP	CMT055SP	CMT077SP	CMT088SP
Outdoor unit performance parameter (45°C)					
Flat-plate outdoor unit model	N/A	CMT044SP	CMT066SP	CMT088SP	CMT099SP

Note:  
1. Standard working conditions: indoor return air temperature 37°C, RH 24%, outdoor ambient temperature 35°C, ESP=10Pa;

# Row-based Free-cooling Air Conditioner

## Introduction

Row-based Free-cooling Air Conditioner can use atmospheric natural cold source for cooling computer room. It is installed close to the heat source, shorten the flow path of cold air, and accurately process the sensible heat generated by the server. It is an ideal choice for green and energy-saving data centers and all kinds of electronic equipment rooms. Application scenarios: Small and medium-sized data centers, modular data centers, cabinet cold (hot) aisle transformation, medium and high thermal density communication equipment and computer rooms, etc.

## Picture



## Core Advantages

- ◆ Key components are selected from well-known brand
- ◆ Full EC inverter design, automatic adjustment of cooling capacity and air volume output
- ◆ High return air temperature design, energy efficiency significantly improved
- ◆ Three operating modes, automatic switching, real-time adjustment
- ◆ Pump cabinet system series design, high integration, more energy saving unit  
The pump cabinet is integrated on the outdoor side, without requiring additional space for placement

## Specification

CRF Row-Based Air Conditioner (Refrigerant pump)			
Indoor unit model	CRF3025	CRF3040	CRF3060
Main power supply	380V 3Ph-50Hz		
Air supply	Front air supply		
Performance parameter			
Cooling capacity (kW)	25	40	60
Sensible capacity (kW)	25	40	60
Max. operation current FLA (A)	37	48.2	57.2
Compressor QTY	1		
Fan type	EC centrifugal fan		
Fan QTY	6	2	3
Circulating air volume (m <sup>3</sup> /h)	5000	8000	12000
Heating capacity (kW)	3	6	9
Humidification (kg/h)	1.5	3	4.5
Connecting pipe size (30m)			
Liquid pipe (mm)	16		
Gas pipe (mm)	22		
Humidification inlet pipe (Internal thread)	G3/4"		
Water pump drain pipe (mm)	ID12*OD16		
Natural drain pipe (mm)	ID16*OD24		
Unit dimension and weight			
Dimension-W (mm)	300	600	600
Dimension-D (mm)	1200		
Dimension-H (mm)	2000		
Weight (kg)	210	250	310
Outdoor unit performance parameter(40°C)			
Flat-plate outdoor unit model	CMT038SP	CMT055SP	CMT088SP
Outdoor unit performance parameter(45°C)			
Centralized outdoor unit model	CMT044FP	CMT066FP	CMT099FP
Electronic element specification			
Air switch recommended (A)	40	63	63
Indoor power cable diameter (mm <sup>2</sup> )	4*6.0+1*6.0	4*16+1*16	4*16+1*16
Outdoor power cable diameter (mm <sup>2</sup> )	4*1.5+1*1.5		

Note:  
1. Standard working conditions: indoor return air temperature 37°C, RH 24%, air cooled outdoor ambient temperature 35°C, ESP=10Pa;  
2. Only cooling + electric heating or constant temperature and humidity type can be selected. The maximum working current and the recommended air switch are configured according to the constant temperature and humidity unit.  
3. The above table is only part of the parameters, and the specific configuration is subject to the name plate. If you want to choose a pump cabinet or know more details, please contact Haiwu.



# Row-based Chilled Water Air Handler

## Introduction

Row-based Chilled Water Air Handler is more suitable for scenarios with limited on-site installation (no need to install outdoor units) while maintaining accurate cooling characteristics close to the heat source, helping the continuous development of green data centers.

Application scenarios: small and medium-sized data centers, modular data centers, cabinet cold (hot) aisle transformation, medium and high thermal density communication equipment and computer rooms, etc.

## Picture



## Core Advantages

- ◆ Key components are selected from well-known brand
- ◆ EC centrifugal fan, automatically adjust cooling capacity and air volume output
- ◆ High return air temperature design, energy efficiency significantly improved
- ◆ Full frontal maintenance, pull-out design
- ◆ \*Optional power metering function module

## Specification

CRC Row-Based Air Conditioner (Chilled water)			
Indoor unit model	CRC0030		CRC0060
Air supply	Front air supply		
Performance parameter			
Cooling capacity (kW)	30		60
Sensible capacity (kW)	30		60
Rated voltage/HZ	220V 1Ph-50Hz		380V 3Ph-50Hz
Max. operation current FLA (A)	17.5		13.0
Fan type	EC centrifugal fan		
Fan QTY	6		2
Circulating air volume (m³/h)	5000		11500
Heating capacity (kW)	3		6
Humidification (kg/h)	1.5		3
Connecting pipe size(30m)			
Water inlet pipe size (mm)	DN25		DN32
Water outlet pipe size (mm)	DN25		DN32
Humidification inlet pipe (Internal thread)		G3/4"	
Water pump drain pipe (mm)		ID12	
Natural drain pipe (mm)		ID16*OD24	
Unit dimension and weight			
Dimension-W (mm)	300		600
Dimension-D (mm)		1200	
Dimension-H (mm)		2000	
Weight (kg)	165		205

Note:  
 1. Standard working conditions are indoor return air temperature 37°C, RH 24%, inlet/outlet water temperature 10/15°C.  
 2. The above table is only part of the parameters, and specific configuration is subject to the nameplate. For more parameters, please contact Haiwu.

# In-rack Air-cooled Air Conditioner

## Introduction

In-rack Air cooled Air Conditioner is a thermal management product specially designed for high thermal density data centers. Placed close to the heat source on the cabinet rack, it can accurately process the high sensible heat generated by the servers in the cabinet, effectively prevent local hot spots, and help green data centers to develop continuously.

Application scenarios: all kinds of small and micro / distributed computer rooms, data centers, modular data centers, IT cabinets for blade servers, medium and high thermal density communication equipment and computer rooms, etc.

## Picture



## Core Advantages

- ◆ The height of the 5kW model is only 5U, saving the available space in the cabinet
- ◆ Multiple drainage and anti-flooding design to prevent cabinet flooding
- ◆ Intelligent self-detection of refrigerant capacity and intelligent warning
- ◆ High efficiency inverter compressor, super precise PID control technology
- ◆ Electronic expansion valve enables smooth adjustment of throttle
- ◆ Opening EC centrifugal fan, adjust air volume output ratio in real time as required

## Specification

In-rack Air-Cooled Air Conditioner				
Model	CDA0004	CDA0005	CDA0008	CDA0013
Power supply	220V 1Ph 50Hz			
Performance				
Rated cooling capacity(kW)	3.5	5	7.5	12.5
Airflow(m³/h)	800	1100	1650	2200
Heater capacity(kW)	1	1	1	2
Humidification capacity(kg/h)	1	1	1.5	3
Physical				
Model-A function	Cooling+Heater, humidifier optional			
Model-A IDU dimension(W*D*H)(mm)	443*715*218	443*715*218	443*715*351	443*715*440
Model-A weight(kg)	27	28	36	42
Model-B function	Cooling+Heater			
Model-B IDU dimension(W*D*H)(mm)	444*395*352	444*395*352	444*395*529	/
Model-B weight(kg)	25	26	36	/
ODU dimension(W*D*H)(mm)	794*310*537	794*310*537	1045*431*760	1045*431*1375
ODU weight(kg)	30	34	60	85

Note:

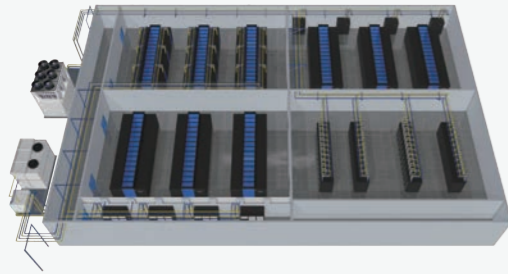
1. Standard working condition: Indoor temp=35°C, ambient temp=35°C

# Magnetic Bearing Multi-split System

## Introduction

The magnetic Bearing Multi-split System is specifically designed for big data center, modular data center and high-density computer room. It consists of magnetic bearing compressor, refrigerant pump and multiple heat pipe aircons for air supply. By automatically switching between compressor mode, mix mode and free cooling mode, it can make full use of natural cold source and significantly improves the energy efficiency.

## Picture



## Advantages

- ◆ Magnetic bearing compressor, oil-free and zero friction loss, low compression ratio
- ◆ Heat pipes replace compressors to enable refrigerant circulation when ambient temp is low
- ◆ Decrease condensation temperature and increase the operation time of free-cooling mode
- ◆ User-friendly HMI, convenient for monitoring of whole system
- ◆ Intelligent control, self-diagnosis

## Specification

Outdoor Unit			
Evaporative cooling			
Model	CXFP10300CB3	CXFP10450CB3	CXFP10600CB3
Whole unit			
Rated cooling capacity(kW)	300	450	600
Rated power(kW)	58	70	96
Max. power(kW)	70	90	120
Power supply	380V 50Hz 3ph		
Refrigerant	R134a		
Dimension(W*D*H)(mm)	1850×1350×2000	1850×1350×2000	2200×1600×2300
Operating weight(kg)	1500	1800	2500
Compressor			
Type	Magnetic levitation compressor		
QTY	1	1	1
Condenser			
Type	Evaporative condenser		
Dimension(W*D*H)(mm)	4100*2250*4200	4700*2600*4350	6000*2600*4650
Operating weight(kg)	6500	9200	13400
Note:			
1. Standard working condition: ambient temp=31°C(WB), indoor SA/RA temp=25/38°C			

Air-cooled		
Model	CXFA10300CB3	CXFA10450CB3
Whole unit		
Rated cooling capacity(kW)	300	450
Rated power(kW)	65	80
Max. power(kW)	73	93
Power supply	380-415V/3Ph/50Hz	
Refrigerant	R134a	
Dimension(W*D*H)(mm)	3850*2250*2950	5100*2250*2950
Operating weight(kg)	4000	5000
Compressor		
Type	Magnetic bearing	
QTY	1	1
Condenser		
Type	Air-cooled	
Note:		
1. Standard working condition: ambient temp=35°C(DB), indoor SA/RA temp=25/38°C		

Indoor unit		
Room based(DX)		
Model	CMA0060	CMA0120
Total cooling capacity(kW)	60	120
Sensible heat ratio	1	1
Rated power(kW)	2.2	4.3
Sensible cooling capacity(kW)	57.8	115.7
ESP(Pa)	100Pa	100Pa
Airflow(m³/h)	14,000	28,000
Dimension(W*D*H)(mm)	930*996*1975	1830*996*1975
Row-based(DX)		
Model	CRA0025	CRA0040
Total cooling capacity(kW)	25	40
Sensible heat ratio	1	1
Rated power(kW)	0.6	1.1
Sensible cooling capacity(kW)	24.4	38.9
Airflow(m³/h)	5100	9000
Dimension(W*D*H)(mm)	300*1200*2000	600*1200*2000

Fan Wall (DX)			
Model	CFA0075	CFA0100	CFA0150
Total cooling capacity(kW)	75	100	150
Sensible heat ratio	1	1	1
Rated power(kW)	3	4	6
Sensible cooling capacity(kW)	72	100	144
ESP(Pa)	150Pa	150Pa	150Pa
Airflow(m³/h)	20,000	32,000	40,000
Dimension(W*D*H)(mm)	1000*1200*2600	2000*1200*2600	2000*12000*2600

Rear Door Cooler (DX)		
Model	CPA0005	CPA0010
Total cooling capacity(kW)	5	10
Sensible heat ratio	1	1
Rated power(kW)	0.06	0.1
Sensible cooling capacity(kW)	4.9	9.9
Airflow(m³/h)	1520	2400
Dimension(W*D*H)(mm)	600*200*2200	600*200*2200

# Liquid Cooling Solution

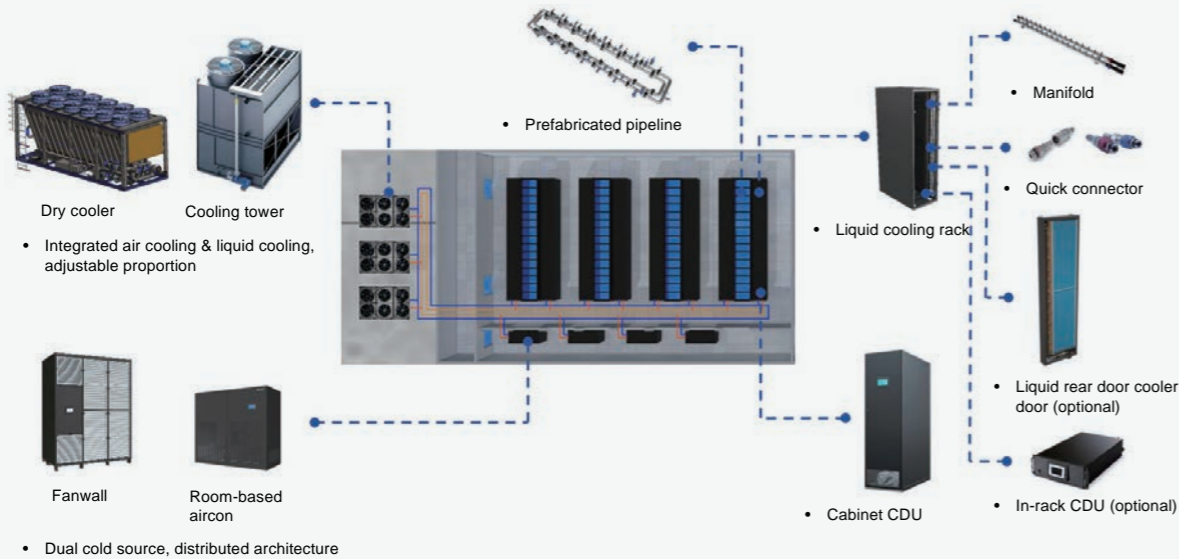
## Introduction

The liquid cooling solution is an innovative thermal management to achieve increasing demand for computer room cooling. It integrates air cooling and liquid cooling, and is equipped with dual cold source aircon. It features high adaptability, quick deployment, low failure rate and energy-saving.

## Advantages

- ◆ Distributed cold source with low failure rate
- ◆ Deep productization with high quality and quick deployment
- ◆ Integrated air cooling and liquid cooling, with adjustable running proportion
- ◆ Support various air cooling terminals and computer room layout, applicable in all scenarios.

## Cold Plate Liquid Cooling Architecture



Note: customizable according to customer's demand.

# Adiabatic Cooling Unit

## Introduction

Adiabatic Cooling Unit cooling unit is an energy-saving air conditioner that makes full use of natural cold sources to cool the data room. The indoor and outdoor air can realize heat transfer without exchanging. This air conditioner is usually deployed on the roof or one side of the data center, which is an ideal choice for large and medium-sized data centers. Application scenarios: data centers, modular data centers, high heat density telecom equipment and computer rooms, etc.

## Picture



## Advantages

- ◆ Minimal system: the equipment is directly connected to the air supply and return ducts of the data center
- ◆ Energy saving: industry first two air inlet channel layout with low wind resistance and high energy efficiency, CLF is as low as 0.084
- ◆ Space saving: the system is easy to manage, and the unit can save 30% of space
- ◆ Short construction period: only main modules need to be assembled on site
- ◆ Module design: multiple units can be installed in parallel to achieve expansion
- ◆ Customization of cooling supplement: DX/CW is optional, and the unit can be equipped with cooling supplement module using electromagnetic levitation

## Specification

Adiabatic Cooling Unit			
Model	HIEC260	HIEC320	HIEC400
Power supply	380V/3L+1N+PE		
Filter	Standard four-way/dual ATS power supply (dual power supply for compressors, dual		
Heat exchanger core	Inside: G4; Outside: G2		
Air return & supply (indoor)	Polymer core (optional metal core)		
Air intake & discharge (outdoor)	Air supply and return from same/different side (optional)		
Performance	Air intake from two sides and discharge from top		
Cooling capacity(kW)	260	320	400
Internal circulating airflow(m <sup>3</sup> /h)	62000	80000	96000
External circulating airflow(m <sup>3</sup> /h)	65000	85000	100000
Cooling supplement	DX/CW		
Internal circulating ESP(Pa)	50~200		
External circulating ESP(Pa)	50~150		
Physical			
Dimension (L * W * H)(mm)	4400 * 2900 * 3600	5300 * 3100 * 4150	6058 * 3100 * 4150
Air outlet dimension(mm)	2700 * 900	2900 * 1000	2900 * 1000
Air inlet dimension(mm)	2700 * 1450	2900 * 1700	2900 * 1700
Weight(kg)	5500	7500	8500
Operating weight(kg)	6500	8500	9500

Note:

1. Standard working condition: Indoor air return temp.=38°C, indoor air supply temp.=25°C; outdoor temp.=35°C(DB)/≤26°C (WB). It is recommended to refer to extreme climate in ASHRAE 2020 standard for model selection;
2. If the altitude ≥ 1000m, the rated air volume and cooling capacity need to be corrected according to the altitude.



# Adiabatic Cooling Unit with Refrigerant Pump

## Introduction

Adiabatic Cooling Unit with Refrigerant Pump is an integrated equipment that makes full use of natural cold source and low-power refrigerant pump to achieve the cooling of data room. The unit can automatically switch between compressor refrigeration, mixed refrigeration and refrigerant pump refrigeration. The unit can provide long-term, stable and efficient cooling, and is usually deployed on the roof or one side of the data center.

Application scenarios: large and medium-sized data centers, modular data centers, high heat density telecom equipment, computer rooms, etc

## Picture



## Advantages

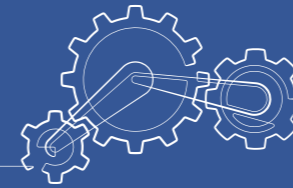
- ◆ Energy and water saving: the unit adopts energy-saving control mode and is equipped with wet film spraying module
- ◆ Water free configuration can be adopted, WUE=0
- ◆ Space saving: integrated high-density integration, which will not occupy the indoor cabinet position, and increase the usable zone of equipment in the computer room by 30%
- ◆ Safe and reliable: after factory commissioning, the unit will be transported as a whole to reduce the risk of on-site commissioning
- ◆ Convenient operation and maintenance: complete outdoor maintenance can be achieved to avoid water ingress, fire and other risks in the computer room

## Specification

Adiabatic Free-cooling Unit			
Parameter	HPEC260	HPEC320	HPEC400
Power supply	380V/3L+1N+PE Standard four-way/dual ATS power supply (dual power supply for compressors, dual power supply for fans and refrigerant pumps, etc.), optional dual power supply (standard ATS)		
Precooling	For outdoor side, optional wet-film evaporation precooling		
Air return & supply (indoor)	Air supply and retrun from same/different side (optional)		Air supply and retrun from same side
Air intake & discharge (outdoor)	Air intake from four sides and discharge from top		
Performance			
Cooling capacity(kW)	260	320	400
Internal circulating airflow(m³/h)	62000	80000	96000
External circulating airflow(m³/h)	80000	100000	130000
Internal circulating ESP(Pa)	50~200		
External circulating ESP(Pa)	50~150		
Physical			
Dimension (L*W*H)(mm)	6058*3000*3600	6058*3000*3600	5500*3000*4150
Air outlet dimension(mm)	2800*1200	2800*1200	2800*1050
Air inlet dimension(mm)	2800*1600	2800*1600	2800*1400
Weight(kg)	5500	6000	7500
Operating weight(kg)	6500	7000	8500

Note:1. Standard working condition: Indoor air return temp.=38℃, indoor air supply temp.=25℃. It is recommended to refer to extreme climate in ASHRAE 2020 standard for model selection  
2. If the altitude ≥1000m, the rated air volume and cooling capacity need to be corrected according to the altitude;

# Power Distribution Product



Rack UPS (1-in 1-out)



Rack UPS (3-in 3-out)



Tower UPS (1-in 1-out)



Tower UPS (3-in 3-out)

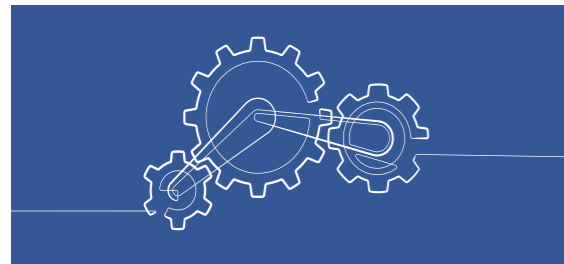
# Rack UPS (1-in 1-out)



Modular UPS U



Low-voltage Distribution Cabinet



Integrated UPS



AC Array Cabinet

DC Array Cabinet

## Introduction

Haiwu HHU single in single out tower UPSs, a power supply equipment that can be directly installed on the ground, and it can provide stable and reliable power supply and backup power outage guarantee for itself and other electronic equipment. With a capacity of 1-10kVA and unparalleled reliable performance, it is an ideal choice for all kinds of green energy-saving data centers.

Application scenarios: data centers, communication equipment and computer rooms, data rooms of government, industrial and commercial tax, finance, transportation and other units, IT rooms in medical and health, radio and television, meteorology, education and other fields, petrochemical, industrial and mining and other enterprise rooms, etc.

## Picture



## Core Advantages

- ◆ The efficiency of the whole machine can be as high as 93%
- ◆ Input power factor > 0.99, output power factor 0.8
- ◆ Ultra wide voltage input range, suitable for all kinds of harsh power grids
- ◆ Small size, high power, only 2-3U in size
- ◆ Compatible with tower and rack installation
- ◆ Ecological network management system, easy to realize remote management

## Specification

HHU Rack UPS Uninterruptible Power Supply					
Product model	Single phase electric input, single phase electric output				
	HHU00111RL	HHU00211RL	HHU00311RL	HHU00611RL	HHU01011RL
Capacity	1kVA/800W	2kVA/1600W	3kVA/2400W	6kVA/4800W	10kVA/8000W
Performance parameter					
Input performance parameters					
Input voltage range	200/208/220/230/240VAC				
Input power factor	≥0.99 (100% load)				
Output performance parameters					
Output voltage	200/208/220/230/240VAC			208/220/230/240VAC	
Output power factor	0.8				
Output frequency	47~53 Hz or 57~63 Hz (Synchronous mode)			46Hz~54 Hz or 56Hz~64 Hz (Synchronous mode)	
System					
System efficiency	93.00%				
Mains battery switching time	0ms				
Parallel capacity	4pieces				
Number of batteries(long-term model)	3	6	8	16~20	16~20
Dimensions ( W*D*H ) (mm)					
RL size of long-acting machine	438*310*88(2U)	438*410*88(2U)	438*530*88(2U)	438*580*133(3U)	
Weight(kg)	9	8.5	14.2	13	17

Note:  
 1. When the UPS is set to the constant tooth constant frequency mode, the output power will be derated by 40%. When the output voltage of the UPS is set to 208vac, the output power will be derated by 10%;  
 2. When the number of internal batteries is changed to 16-19, the machine will derate the output power according to the following formula: P=Prating x (N/20 x 100%);  
 3. If the machine is installed at an altitude of more than 1000 meters, the output power will be reduced by 1% for every 100 meters.

# Rack UPS (3-in 3-out)

## Introduction

Based on the continuous development of power supply and distribution in the field of data center, Haiwu has launched the latest "three-phase power input, three-phase power output" rack UPS, with a power range of 10-60kVA, a high occupancy of only 3-4U, and can support up to 4 parallel machines. It is an ideal choice for all kinds of high consumption motor rooms.

Application scenarios: data centers, communication equipment and computer rooms, data rooms of government, industrial and commercial tax, finance, transportation and other units, IT rooms in medical and health, radio and television, meteorology, education and other fields, petrochemical, industrial and mining and other enterprise rooms, etc.

## Picture



## Core Advantages

- ◆ Advanced DSP digital control technology, efficiency > 95.5%.
- ◆ Output power factor is 1.0.
- ◆ Online double conversion, accepting double power input
- ◆ Under eco energy-saving mode, the efficiency can reach 98.5%
- ◆ Online display of energy saving shared batteries can be operated in parallel, and the number of batteries can be adjusted

## Specification

HHU Rack UPS Uninterruptible Power Supply					
Product model	Three phase electric input, three phase electric output				
	HHU01033RL	HHU02033RL	HHU03033RL	HHU04033RL	HHU06033RL
Capacity	10kVA/10KW	20kVA/20KW	30kVA/30KW	40kVA/40KW	60kVA/60KW
Performance parameter					
Input performance parameters					
Input voltage range	190-520 VAC (three-phase) @50% load, 305-478 VAC (three-phase) @100% load				
Input power factor	≥0.99 (100% load)				
Output performance parameters					
Output voltage	3 x 360/380/400/415 VAC(3PH+N)				
Output power factor	1				
Output frequency	46 ~ 54Hz or 56 ~ 64Hz (Synchronous mode)				
System					
System efficiency	95.50%				
Mains battery switching time	0ms				
Parallel capacity	4 units				
Number of batteries (long-term model)	20	32~40 (Adjustable)			
Dimensions(W*D*H)(mm)					
RL size of long-acting machine	438*680*133 (3U)	438*680*133 (3U)	438*680*133 (3U)	438*797*176 (4U)	438*797*176 (4U)
Weight(kg)	26	28	29	42	45
Note: 1. When the output voltage is set to 3 x 360VAC, 90%; 2. The above table is only part of the parameters, and the specific configuration is subject to the actual name plate purchase. For more parameter information, please contact Haiwu.					

# Tower UPS (1-in 1-out)

## Introduction

Tower UPS (1-in 1-out), a power supply equipment that can be directly installed on the ground, and it can provide stable and reliable power supply and backup power outage guarantee for itself and other electronic equipment. With a capacity of 1-10kva and unparalleled reliable performance, it is an ideal choice for all kinds of green energy-saving data centers.

Application scenarios: small and medium-sized enterprise data room, small outlets of financial system, industrial automation control system, local area network server, communication base station server, Internet cafe, mall cashier, etc.

## Picture



## Core Advantages

- ◆ Truly realize online double conversion
- ◆ Micro processor control ensures high reliability
- ◆ Input power factor correction function
- ◆ Output power factor is 0.8
- ◆ Ultra wide main power input range (110v-300v)

## Specification

HHU Tower UPS (Single in and single out)					
Product model	Single phase electrical input, single phase electrical output				
	HHU00111TL	HHU00211TL	HHU00311TL	HHU00611TL	HHU01011TL
Capacity	1000VA/800W	2000VA/1600W	3000VA/2400W	6000VA/4800W	10KVA/8000W
Performance parameter					
Input performance parameters					
Input voltage range (full load)	200/208/220/230/240VAC				
Input voltage range (50%load)	110~300VAC±3%				
Input frequency range	40Hz~70Hz		46Hz~54Hz or 56Hz~64Hz		
Input power factor	≥0.99 (100%load)				
Output performance parameters					
Output voltage	208/220/230/240Vac				
Output voltage accuracy	±1%				
Output frequency range (synchronous mode)	47Hz~53Hz or 57Hz~63Hz(synchronous mode)			46Hz~54Hz or 56Hz~64Hz(synchronous mode)	
Output power factor	0.8				
System					
System efficiency	93%				
Mains battery switching time	0ms				
Parallel capacity	4 units				
Number of batteries (long-term model)	3	6	8	16-20 (Adjustable)	
Dimensions(W*D*H)(mm)					
RL size of long-acting machine	145*282*220	145*397*220	145*397*220	190*369*318	190*442*318
Weight (kg)	4.1	6.8	7.4	12	15
Note: 1. When 1-3KVA UPS is set to constant voltage and constant frequency mode, the output power will be derated by 80%; When the output voltage of UPS is set to 100/200/208vac, the output power will be derated by 80%; When 6-10kvaups is set to constant vottage and constant frequency mode, the output power will be derated by 60%; When the output voltage of UPS is set to 208vac, the output power will be derated by 90%; 2. 200/208/220/230/240VAC is only applicable to long-term machine (VAC is only applicable to 1-3kva).					



# Tower UPS (3-in 3-out)

## Introduction

Haiwu HHU Three In Three Out Tower UPS, a power supply equipment that can be directly installed on the ground, and it can provide stable and reliable power supply and backup power outage guarantee for itself and other electronic equipment. With a capacity of 1-10kva and unparalleled reliable performance, it is an ideal choice for all kinds of green energy-saving data centers. Application scenarios: data centers, communication equipment and computer rooms, data rooms of government, industrial and commercial tax, finance, transportation, IT rooms in medical and health, radio and television, meteorology, education and other fields, petrochemical, industrial enterprise rooms, etc.

## Picture



## Core Advantages

- ◆ The efficiency of the whole machine can be as high as 96%
- ◆ Ultra wide voltage input, suitable for all kinds of harsh power grids
- ◆ DSP full digital control to realize full digital control
- ◆ The unique micro computer processor control reduces the frequent start and stop of the battery
- ◆ The cooling air duct is independently designed to solve the hidden danger of dust and powder deposition
- ◆ Large LCD control screen, friendly man-computer interface
- ◆ Digital circulation control technology, highly reliable parallel operation
- ◆ NetEco network management system, easy to realize remote management

## Specification

HHU Tower UPS										
Model	HHU01033TL	HHU02033TL	HHU03033TL	HHU04033TL	HHU06033TL	HHU08033TL	HHU10033TL	HHU12033TL	HHU18033TL	HHU20033TL
Phase position	Three in and three out									
Capacity	10KVA/10KW	20KVA/20KW	30KVA/30KW	40KVA/40KW	60KVA/60KW	80KVA/80KW	100KVA/100KW	120KVA/120KW	180KVA/180KW	200KVA/200KW
Number of parallel connections	4									
Input										
Rated voltage	3x380/400/415/VAC (3PH+N)									
Voltage range	190-520VAC (3-phase), load 50%; 305-478VAC (3-phase), 100% load									
Frequency range	40-70Hz									
Power factor	0.99 @ 100 %Load									
Output										
Rated voltage	3x360/380/400/415/VAC(3 phases+N)									
Voltage stabilization accuracy (battery mode)	±1%									
Frequency range (synchronous correction range)	46-54HZ/56-64HZ									
Efficiency										
AC mode	95.50%									
Battery										
Number of battery	16-20 (adjustable)	32-40 pieces(adjustable)								
Maximum charging current	1A-12A, adjustable			1A-20A, adjustable			2A-40A, adjustable		3A-60A, adjustable	
Physical property										
Dimensions(W*D*H)(mm)	630*250*826			780*300*1000			780*300*1000		1000*600*1200	
Net weight (kg)	28	43	55	58	87	200	168	168	265	265

# Modular UPS

## Introduction

Haiwu Modular UPS integrates modern digital technology and power electronics technology. Modules can be combined arbitrarily. The height of 25KVA power module is only 2U. Its excellent availability, efficiency and intelligence perfectly match the needs of fast, flexible and efficient operation of a modern cloud computing data center. Application scenarios: data centers, communication equipment and computer rooms, data rooms of government, industrial and commercial tax, finance, transportation and other units, IT rooms in medical and health, radio and television, meteorology, education and other fields, petrochemical, industrial and mining and other enterprise rooms, etc.

## Picture



## Core Advantages

- ◆ The efficiency of the whole machine can be as high as 96.8%
- ◆ Input power factor  $\geq 0.999$ , output power factor=1. Input voltage range 138~486Vac, 40~70Hz
- ◆ The unique micro computer processor control reduces the frequent start and stop of the battery
- ◆ Intelligent alternate sleep technology, with redundancy improving efficiency by 3%~5%
- ◆ Module hot plug redundancy design, zero fear of any single point of failure
- ◆ Ability of self-protection and fault diagnosis, replacing the failure of key components
- ◆ Extremely wide network adaption, meeting  $\pm 20\%$  voltage range

## Specification

HMU Modular UPS						
Model	HMU180	HMU200	HMU300	HMU400	HMU500	HMU600
Cabinet capacity	180kVA/180kW	200kVA/200kW	300kVA/300kW	400kVA/400kW	500kVA/500kW	600kVA/600kW
Power module capacity	30KVA/30KW	50KVA/50KW				
Number of installable power modules	3	4	6	8	10	12
Input						
Voltage range	138-485Vac; No derating at 305-485VAC, derating to 40% at 138-305VAC					
Input power factor	$\geq 0.99$					
Output						
Rated voltage	3x380Vac/400Vac/415Vac $\pm 1\%$ 3 phases+N					
Output power factor	1					
Frequency	Utility mode	$\pm 1\%$ / $\pm 2\%$ / $\pm 5\%$ / $\pm 10\%$ settable				
	Battery mode	(50/60 $\pm 0.1\%$ ) Hz				
Efficiency	$\geq 96.8$					
Battery/charging						
Battery voltage	(30-46 sections are optional, 40 sections by default, 36 and 46 sections of output power are not derated; 32 and 34 sections of output power are derated to 0.9; output power is derated to 0.8 at 30 sections)					
Physical property						
Dimensions(W*D*H)(mm)	600x850x1200	600x850x2000		1200x850x2000		1400x850x2000
Net weight (kg)	280	233	272	415	465	617

# Integrated UPS

## Introduction

Integrated UPS, a new generation of intelligent power distribution system specially designed and manufactured for small and medium-sized micro modular data center solutions. The products integrate UPS power supply, UPS input power distribution, UPS output power distribution, air conditioning power distribution, IT power distribution, lighting power distribution and ATS all in one cabinet. With the characteristics of small floor area, cost saving and high integration, it is widely used in the power supply and distribution system of small and medium-sized micro modular data centers.

## Picture



## Core Advantages

- ◆ Highly Integrated design, combines UPS power supply, distribution cabinet and two cabinets, which reduces the installation time by 50%
- ◆ Space saving, additional 1-2 IT cabinets can be allowed
- ◆ Single and dual power input optional
- ◆ It has a perfect distribution monitoring system, which can control the voltage, current power, harmonic, electric energy, alarm, etc. of the system to ensure the normal and reliable operation of the system
- ◆ Support front and rear door maintenance, convenient and fast

## Specification

Product model						
Capacity	25kVA	50kVA	75kVA	100kVA	125kVA	150kVA
Redundant backup	Module design, modules can be added according to requirements to meet n+1					
UPS input index						
Module power	30kVA/30kVA					
Input rated power supply	380Vac/400Vac/415Vac 50Hz/60Hz 3phase+N+PE					
Variable range of input voltage	138 ~ 485Vac; 305 ~ 485Vac No derating, 138 ~ 305Vac Derate to 40%					
Input power factor	≥0.99					
Number of batteries	30 ~ 50sets optional, default 40 sets					
UPS output index						
Output power factor	1					
Overload capacity	110% load, last for 60min reverse bypass; 125% load, last for 10min bypass; 150% load, last for 1min bypass					
UPS System						
Switching time	0ms					
Efficiency	≥0.97					
Communication interface	CAN, RS232, RS485, network interface, Dry contact, Parallel interface, LSB interface, smart slot, temperature sensor interface					
Protection function	Short circuit, overload, over temperature, battery undervoltage, output overvoltage and undervoltage, fan fault alarm, lightning protection, bypass backflow					
Power distribution system						
System input distribution type	MCCB/ATS, Support single and dual input					
Input specifications	250A	320A	400A			
IT power distribution	32A / 1P X 24 X 2	32A / 1P X 24 X 2	32A / 1P X 24 X 2			
Air conditioning power distribution	63A / 3P X 5	63A / 3P X 5	63A / 3P X 5			
Lighting and other power distribution	16A / 1P X 9	16A / 1P X 9	16A / 1P X 9			
AC lightning protection	20kA, 8 / 20 us					
Mechanical parameters						
Dimensions(W*D*H)(mm)	600 x 1200 x 2000					

# Low - Voltage Distribution Cabinet

## Introduction

Haiwu SJP low-voltage complete power distribution cabinet is suitable for power distribution scenarios below 6300A. It adopts standardized and modularized design to provide customized power distribution solutions for customers, and can be used in key power supply and distribution fields in various industries, such as power receiving, power feeding, bus coupling, lighting, and power load control.

Application scenarios: data center, communication equipment and computer room, municipal engineering, power system, petro-chemical industry, industrial and mining enterprises, high-end buildings, etc.

## Picture



## Core Advantages

- ◆ According to the actual application scenario, three layout schemes can be selected flexibly, such as fixed, drawer and space division type
- ◆ C-shaped self-supporting frame, solid cabinet frame structure and maintenance free
- ◆ Highly coated electroplated coating shell, good durability and strong weather resistance
- ◆ Current level of main bus system: 1000-6300A
- ◆ The purity of copper bar in the cabinet is up to 99.97%
- ◆ Two way intelligent monitoring, full data network management
- ◆ It has passed IEC international standards and eight strict third-party tests: cable connection, mechanical operation, dielectric performance, gap and creepage, short-circuit resistance, circuit protection, temperature rise limit and protection grade.

## Specification

SJP Low Voltage Complete Distribution Cabinet			
Product model	HWSJP-2500	HWSJP-4000	HWSJP-6300
Model selection structural parameters			
Width series (mm)	400 600 800 1000 1200		
Depth series (mm)	600 800 1000		
Height series (mm)	2000 2200		
*Selection mode	Flexible selection of fixed, drawer and fixed split schemes, *The overall dimensions of the product can be combined according to the use site		
Performance parameter			
Working voltage			
Rated working voltage	380/400/415Vac		
Rated operating frequency	50/60Hz		
Rated insulation voltage	690Vac		1000Vac
Rated impulse withstand voltage	8/12Vac		
Overvoltage level	IV		
Withstanding water pollution level	3		
Working current			
Rated working current of horizontal bus	2500A	4000A	6300A
Short time withstand current of horizontal bus	50A	80A	120A
Peak withstand current of horizontal bus	105A	176A	264A
Rated working current of vertical bus	1600A	1600A	2500A
Short time withstand current of vertical bus	30A	30A	50A

Note 1: the above table is only part of the parameters, and the specific configuration is subject to the actual nameplate purchase. For more parameter information, please contact Haiwu company.

# AC Array Cabinet

## Introduction

Haiwu's SPMC AC Array Cabinet, an intelligent power distribution management system applied to the IT cabinet of the data center. It can comprehensively collect all power supply data and upload to the background monitoring system for real-time monitoring and operation management of the entire power distribution system, which is an ideal option for future all-round data centers.

Application scenarios: Communication systems, financial systems, small and medium-sized enterprises, branches of large enterprises, distribution system networks of small data centers, distribution systems of automatic control systems, etc.

## Picture



## Core Advantages

- ◆ Dual power input, up to 630A dual power input
- ◆ Maximum support 144P output
- ◆ 7-inch LCD touch screen, beautiful and elegant, real-time display of parameters
- ◆ Intelligent monitoring, comprehensive monitoring, real-time alarm, remote management
- ◆ Support front and rear door maintenance, can be applied to various scenarios

## Specification

SPMC AC Array Cabinet	
Product model	HWSPMC
Model selection capacity parameters	Optional capacity: 125A 160A 250A 400A 630A
Performance parameter	
Input performance parameters	
Rated input voltage	380/400/415Vac
Input voltage frequency	50 60Hz
Overvoltage level	IV
Affordable pollution level	3
Output performance parameters	
Output modes	Maximum configuration: 144-way IP MCB or 48-way 3P MCB
Monitoring parameters	Total circuit/branch: voltage, current, current load ratio, energy, switch status, etc.
Other performance parameters	
In and out way	up in and out, down in and out
Communication type	RS485/SNMP
Lightning protection level	Optional: Class C, 20kA(8/20μs)
Maintenance method	Maintenance before and after
Structural parameters	
DimensionsW*D*H (mm)	600*1200*2000(customizable)
Weight (kg)	≤350kg
Note 1: the above table is only part of the parameters, and the specific configuration is subject to the actual nameplate purchase. For more parameter information, please contact Haiwu company.	

# DC Array Cabinet

## Introduction

Haiwu's SDPMC Column Array Cabinet, an intelligent power distribution management system specially developed for the design of DC power distribution in the computer room. It features real-time power distribution monitoring, network communication, and intelligent data transmission. It is an ideal choice for an all-round green data center.

Application scenarios: Communication systems, financial systems, small and medium-sized enterprises, branches of large enterprises, distribution system networks of small data centers, distribution systems of automatic control systems, etc.

## Picture



## Core Advantages

- ◆ Dual power input, up to 1250A dual power input
- ◆ Maximum support 144P output
- ◆ Support -48V, 240V, 336V DC power supply
- ◆ 7-inch LED touch screen, smart and elegant, real-time display of parameters
- ◆ Intelligent monitoring, comprehensive maintenance, real-time alarm, remote management
- ◆ Support front and rear door maintenance, and can be applied to various scenarios

## Specification

SDPMC DC Column Array Cabinet	
Product module	HWSDPMC
Module selection capacity parameters	Capacity optional: 160~1250A
Performance parameters	
Input performance parameters	
Rated input voltage	-48V/240V/336V
Input switch	Fuses, miniature circuit breakers
Overvoltage level	IV
Withstanding pollution level	3
Output performance parameters	
Output modes	Maximum configuration: 144 way 1p MCB or fuse
Monitoring parameters	Main circuit / branch: voltage, current, current load ratio, electric energy, switching state, etc
Other performance parameters	
Incoming and outgoing mode	Top in, top out, bottom in, bottom out
Communication type	RS485/SNMP
Lightning protection grade	Optional: Class C, 20kA(8/20μs)
Maintenance mode	Front and rear maintenance
Structural parameters	
Dimension(Width*Depth*Height (mm) )	600*1200*2000 (Customizable)
Weight (kg)	≤350kg
Note 1: the above table is only part of the parameters, and the specific configuration is subject to the actual nameplate purchase. For more parameter information, please contact Haiwu	



# Data Center Solution

## HyperBlock 2000 Double Row Micro Modular Data Center



Haiwu Hyper series data center product is a highly integrated intelligent micro modular products that integrate multiple subsystems such as cabinet system, power supply and distribution system, refrigeration system, generic cabling system and fire protection system. It can meet various application scenarios and data center construction of different scales. Hyper series data center products adopt cold and hot aisles isolation design, high-efficiency refrigeration equipment (refrigerant pump technology), professional design and other technologies to ensure efficient energy conservation of products. Modular design and highly integrated subsystem ensure the rapid construction and minimal installation of the data center.



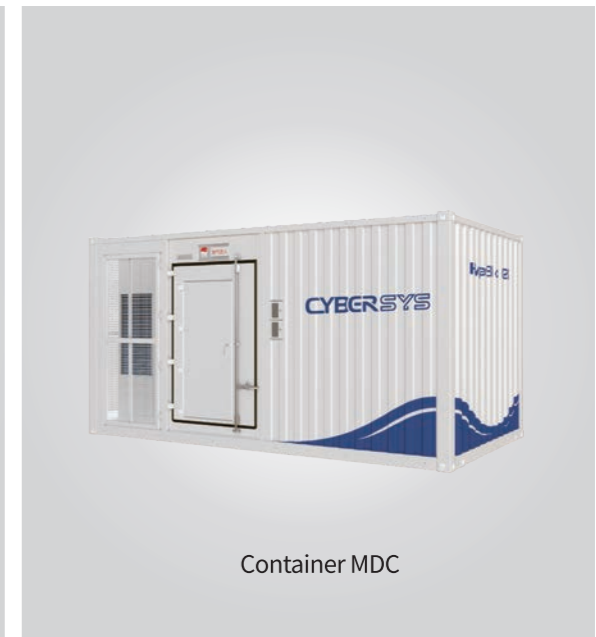
Single Cabinet MDC



Single Row MDC



Double Row MDC



Container MDC

# Single Cabinet Micro MDC

## Introduction

Hyper-block "Ring" Single-cabinet Micro Modular Data Center, a comprehensive product with "more advanced refrigeration, more reliable power supply and distribution, more reasonable air flow layout, safe and intelligent, zero noise". With small space and large capacity, the usable space is up to 38U. It can better meet the requirements of various harsh, complex and changeable environments, especially applicable to scenarios with strict noise control requirements. Application scenarios: communication room, computer rooms, smart parks, offices, other kinds of edge computing scenarios, smart factories, process workshops, smart transportation, etc.

## Picture



## Core Advantages

- ◆ Integrated overall design, built-in micro environment system
- ◆ The process noise of the complete unit can be greatly reduced to below 53dB (A)
- ◆ Equipped with efficient UPS system, the efficiency is as high as 95%
- ◆ Full isolation of cold and hot aisles +CFD optimal air distribution layout, PUE as low as 1.2
- ◆ 800mm wide cabinet structure, the available space for customers is up to 38u
- ◆ Equipped with intelligent large screen management system, real-time display of dynamic data application scenarios

## Specification

Hyper-Block "Ring" Single-cabinet Micro Modular Data Center	
Item	Hyper-Block "Ring"
Core parameter	
ICT space	High-capacity,38U
Noise dB(A)	≤53
PUE	< 1.2
Input power system/switch capacity	220Vac,50HZ
Dimension (W*D*H mm)	800*1200*2000, sealed cabinet, cold & hot aisle
Cabinet	Single IT cabinet
UPS	Rack aircon with air side-out,6kVA,taking up "0" U space
Input power system	input master switch 63A+dual PDU output
Aircon system	Cooling capacity:5kW, Installation on the right side of the cabinet, taking up "0" U space
Emergency ventilation	Emergency fan assembly,UPS supported
Battery pack	12V 9AH backup, duration about 15min
Monitor system	Aircons, power distribution, UPS, temperature and humidity, water immersion, smoke sensor, fire, protection access
Fire protection	Hfc-227ea gas fire protection (optional)
Installation requirement	height ≥2.2 meters, can be installed directly on cement floor / raised floor
Note: Haiwu provides customized services. The above configuration can be customized and further designed according to the existing layout, facilities and requirements of the computer room	

# Single Row MDC

## Introduction

Haiwu HyperRow600 Row Base Micro Module solution, can be flexibly composed of one+(1-8) single cabinet micro modules. The cabinets, bodies are directly coupled and assembled to form a double-aisle closure on both hot and cold sides, bringing users a safe, reliable, compact and convenient computer room deployment experience. Application scenarios: smart finance, smart education, smart medical care, smart government, smart communication, smart security, it can also be applied to dust and wet environment, site without special computer room (warehouse, office field can be deployed), etc.

## Picture



## Core Advantages

- ◆ The 2M standard cabinet has a larger 43U capacity
- ◆ Support one+drag (1-8) cabinet combination
- ◆ Without additional components, cabinets are directly coupled and assembled, forming a "double-aisle closure on the hot and cold sides" system
- ◆ The cabinets can be installed on the concrete floor and is suitable for the computer room with an elevated floor
- ◆ Ultra wide voltage range: 138~485V
- ◆ Ultra wide temperature range: - 40~55°C

## Specification

HyperRow600 Row Base Micro Modular Data Center	
Product model	HyperRow600
The performance parameters	
Total number of counters	1-9 (not including in-train battery cabinets with air-conditioner in the compartment)
Reliability&channel isolation	IP20, Cold and hot aisle dual isolation
PUE	≤1.2
Installation requirements	≥2.3m, Support direct installation of cement floor/raised floor (civil buildings can be deployed without independent room)
Cabinet	
Dimension(W*D*Hmm)	Xmm(W)*1350mm(D)*2000mm(H), X=600N(N=1,2...8) (43U)
Total IT load capacity	≤36kW
Temperature control	
Refrigerating capacity	Rack air conditioning:3.5~12.5kW
Emergency cooling	Emergency fan
Power supply and distribution	
Input power system	220Vac, 50Hz or 380V, 50Hz; Supports dual input
UPS Capacity Rack UPS	Rack mount UPS:6~40kVA
Monitoring	
Monitoring interface	15.6 inch touch screen, 3D visualization interface, Web access, client end, mobile APP
Equipment & environment monitoring	Air conditioning, power distribution, UPS, temperature and humidity, water leakage detection, smoke detection, fire linkage
Intelligent monitoring	Battery monitoring, video monitoring, SMS alarm, phone voice alarm, audible and visual alarm, and red atmosphere indicators alarm
Fire	
Frame fire	Equipped with fire detection and fire extinguishing functions, HFM-227EA gas fire fighting (optional)
Note: Haiwu provides customization services. The above configurations can be customized and further designed according to the existing layout, facilities and requirements of the equipment room.	

# Double Row MDC

## Introduction

Haiwu HyperBlock 2000 Double Row Micro Modular Data Center integrates subsystems such as cabinets, temperature control, UPS and dynamic environment monitoring. It can be flexibly deployed and expanded based on the Tier level of a data center, further reducing the PUE value of a data center and improving reliability and availability. Application scenarios: smart finance, smart education, smart healthcare, smart government, smart transportation, smart security, etc.

## Picture



## Core Advantages

- ◆ Integrated PUE value within the module as low as 1.25 (Beijing area)
- ◆ The 2M standard cabinet with a larger 43U capacity
- ◆ The self-made row-based air conditioner provides near-end refrigeration, reducing air static pressure loss by 60%, and supports optional free cooling
- ◆ Self-made UPS, the overall efficiency is 96.8%
- ◆ From the module components to the whole, all have passed the 9-level seismic test and meet the A-level / Tier3+ standard
- ◆ Haiwu provides customized design services

## Specification

HyperBlock2000 Double Row Micro Modular Data Center	
Dimension	Double row sealed cold / hot aisle (L*W*H): L*3600*2600mm, L ≤ 15 m
Number of IT cabinets supported	≤ 48 cabinets
The power supply system	380/400/415Vac, 50/60Hz, 3Ph+N+PE
IT load of a single module	380kW (Precision power distribution cabinet)
Work environment	Ultra-low temperature working condition (low temperature components need to be selected):-35°C ~45°C; Conventional operating conditions (without low-temperature components):-15°C ~45°C
Installation	It can be installed directly on cement floor or on elevated floor
<b>Cabinet</b>	
Dimension (W*D*Hmm)	600*1200*2000(50kW)
<b>Refrigeration</b>	
Indoor unit size (W*D*H-mm)	300*1200*2000 (12.5kW);300*1200*2000(25kW);600*1200*2000 (40kW) ;600*1200*2000 (60kW)
Refrigerant Type	R410A
Rated input voltage	380/400/415Vac, 50/60Hz, 3Ph+N+PE
<b>Precision power distribution cabinet</b>	
Rated input voltage	380/400/415Vac, 50/60Hz, 3Ph+N+PE
Input switch specifications(A)	160/250/400/630
<b>Modular UPS (out)</b>	
Subrack capacity (kVA)	125/200/300/400/500/600
Module capacity (kVA)	25/50
Rated input voltage	380/400/415Vac, 50/60Hz, 3Ph+N+PE
<b>Integrated UPS (In-line)</b>	
The input voltage	380/400/415Vac, 50/60Hz, 3Ph+N+PE
Rated capacity (kVA)	25~150
<b>Monitoring system</b>	
Function	Manages the real-time status, three-color indicator control, intelligent lighting, alarm information, and configuration information of devices related to the micro module, such as power distribution, air conditioner, power supply, UPS, battery, temperature and humidity, water leakage detection, smoke, and video. Supports linkage policies and provides a visual interface to facilitate the operation and maintenance of devices inside the micro module. Support Web terminal and mobile APP access, easy remote management, improve operation and maintenance efficiency
Note: Haiwu provides customization services. The above configurations can be customized and further designed according to the existing layout, facilities and requirements of the computer room	

# Container MDC

## Introduction

Haiwu HyperBlockC Container Data Center, an IDC infrastructure container solution that is based on outdoor station, rapid deployment, and professional customization mode. A series of professional data center tests are completed before the product leaves the factory, and the time for on-site assembly and debugging can be compressed to 48 hours. Application scenarios: smart finance, smart education, smart healthcare, smart government, smart transportation, smart security, etc.

## Picture



## Core Advantages

- ◆ The BIM is prefabricated to meet users' functional and performance requirements
- ◆ Flexible choice of body box, can choose integrated box, LCL and other different solutions
- ◆ The factory supports production of 20 boxes offline at the same time to meet the requirements of cluster projects
- ◆ Products are strictly tested by CNAS test platform before leaving the factory
- ◆ The product passes full load (fake load) test before leaving the factory
- ◆ Haiwu has the qualification of mechanical and electrical installation and communication engineering construction

## Specification

HyperBlockC Container data center				
Product model	HyperBlockC20		HyperBlockC40	
Container Specifications	20ftcontainer(single container)	20ftcontainer(double container)	40ftcontainer(single container)	40ftcontainer(double container)
<b>The performance parameters</b>				
Inside container dimensions( L* W* Hmm)	6058*3100*3100	6058*6200*3100	12192*3100*3100	12192*6200*3100
Number of available IT cabinets	4	9	10	20
PUE	PUETHroughout the year<1.2			
Supports IT cabinet power	Single cabinet 5-12 KW Optional			
Production and arrangement	Pre-integrated in the factory, only need to fix containers and connect water and electricity on site to use, support single box, double box stitching, multi-layer stacking			
<b>Cabinet</b>				
Dimension(W* D* Hmm)	600*1200*2200			
IT space available to users	Single cabinet 47U available space			
<b>Temperature control</b>				
Size of air conditioning( W*D* Hmm)	2500*1400*2620			
Air conditioning form	Integral refrigerant pump double cycle room air conditioning (Total cooling capacity 20+20, 32.5+32.5, 45+45kW optional)			
<b>Power supply and distribution</b>				
Input power system	380Vac, 50Hz, Supports dual input			
UPS package	Modular UPS+ backup battery + integrated power distribution			
System backup time	15 minutes (Note: If the battery is not powered on, the storage time is not more than 90 days. Otherwise, charge it in time.)			
<b>Monitoring</b>				
Monitoring interface	Proximal 15.6-inch monitoring touch screen, web page, client, and APP			
Equipment & environment monitoring	Air conditioner, power distribution, UPS, temperature and humidity, water leakage detection, smoke detection, door status detection, fire linkage			
Intelligent monitoring	Battery inspection, video surveillance, electronic access control, asset management, capacity management, intelligent			
Fire fighting	linkage of external environment cooling, multi-site centralized management, GPS positioning management, 3D view visualization			
Fire fighting method	Hfm-227ea automatic fire extinguishing system			
Trigger the fire fighting	Smoke and temperature sensing (standard), fire alarm system, emergency manual button trigger, fresh air smoke exhaust system after disaster, early-stage smoke warning system (optional)			
Note: Haiwu provides customization services. The above configurations can be customized and further designed according to the existing layout, facilities and requirements of the computer room.				



# C-RAN Cabinet

## Introduction

In order to reduce the investment in base station construction and accelerate telecom construction, the traditional access network architecture has evolved to C-RAN architecture. Haiwu outdoor C-RAN cabinet adopts modular and standardized reliability design to ensure that all subsystems are highly compatible, universal and integrated. Highly integrated power supply and distribution system, battery system, temperature control system, emergency ventilation system, intelligent management system, etc., with small floor space, it can realize plug and play and rapid installation and delivery.

## Picture



## Advantages

- ◆ Fast delivery: The supporting equipment is highly integrated and can be deployed as soon as the day it enters the site, with plug and play function
- ◆ Reliable performance: the protection grade of the computer room is IP55; the structure is stable, safe and reliable
- ◆ Energy saving and high efficiency: the rack air conditioner is adopted, and the air flow organization before and after the air conditioner is used to accurately dissipate heat
- ◆ Intelligent monitoring: It integrates temperature and humidity, access control, smoke detection, water immersion and other intelligent monitoring screen management systems to provide all-round environmental management

## Specification

Outdoor C-RAN Cabinet				
Model		Three sets of outdoor unit	Five sets of outdoor unit	Single set of indoor unit
Dimension of outdoor unit (L*W*H)	mm	1200*2200*2200	1200*3200*2200	600*800*2200
Dimension of indoor unit (L*W*H)	mm	2100*1100*1800	3100*1100*1800	/
Internal mounting height	U	≥40	≥56	≥36
Circulating air volume of air-cooled rack aircon	CFM (m³/h)	8kW with 1 set: ≥ 1500	8kW with 2 sets: ≥ 1500	4kW with 1 set: ≥ 800
Cooling air volume of heat dissipation module	CFM (m³/h)	48VDC fan: ≥ 2400	48VDC fan: ≥ 3600	48VDC fan: ≥ 900
Air circulation	/	Double aisles and double closed system shared by cold and hot aisles, and equipped with a special air guide components		
Material of cabinet	/	Non metal outer plate+reinforced steel plate+PU+metal inner plate		
Maintenance mode	/	Front and rear maintenance+side maintenance	Front and rear maintenance+side maintenance	Front and rear maintenance
Installation mode	/	Module assembly/Overall assembly	Module assembly/Overall assembly	Module assembly/Overall assembly
Ingress protection	/	IP55	IP55	IP55
Working temperature	°C	-40-55	-40-55	-40-55
Full weight	kg	≤1600	≤2400	≤500
Optical fiber distribution system	/	288 core fusion, 72 core direct fusion	288 core fusion, 72 core direct fusion	/
Monitoring system	/	48VDC input, including monitoring host (8 serial ports), software, temperature and humidity, smoke sensor	48VDC input, including monitoring host (10 serial ports), software, temperature and humidity, smoke sensor	48VDC input, including 10.1 inch color touch screen monitoring host (8 serial ports), software, temperature and humidity, smoke sensor
Power supply system	Volts-A	48-400	48-600	48-200
AC power distribution module	/		Optional	
AC power distribution module	/		Optional	
DCDU	/		Optional	
Lithium iron battery	/		Optional	
Electronic lock	/		Optional	

Note:  
Standard working condition of air conditioner: 35 °C at indoor side, 20 °C (DB), and 35 °C at outdoor side.

# Integrated Energy-saving Cabinet

## Introduction

In the new era, and the power consumption of base stations is rising. The market is in urgent need of a telecom station building scheme with high efficiency and energy conservation. The customized solution of integrated energy-saving cabinet proposed by Haiwu can be flexibly assembled according to the construction environment and business. It is an ideal choice for base station construction.

Application scenarios: urban traffic, power distribution, transmission exchange station, wireless telecom base station and other application scenarios.

## Picture



## Advantages

- ◆ Cabinet modular splicing, simplified installation and dynamic expansion
- ◆ Two types of columns to achieve 19/21 inches equipment compatible installation
- ◆ The indoor and outdoor units of the air conditioner are integrated, no additional installation required, and the replacement of parts is simple
- ◆ Large cooling capacity design of single cabinet air conditioner to solve the high-density deployment of equipment
- ◆ Double cooling source system design, with annual PUE ≤ 1.25
- ◆ The cabinet is equipped with cold and hot air flow isolation structure, plus four operation modes of air conditioner to achieve energy conservation

## Specification

Integrated Energy-saving Cabinet with Heat Pipe Aircon			
Cabinet unit			
Dimension(W*D*H)	Outside	mm	750*800*2150
	Inside	mm	650*700*1800
Internal mounting height		U	40
Cabinet material		/	Non metal outer plate+reinforced steel plate + PU + metal inner plate
Installation type		/	Assembled/Packaged
Working temperature		°C	-40-55
Ingress protection		/	IP55
Seismic grade		/	Level 9
Weight of cabinet		kg	170
Heat pipe aircon unit			
Dimension(W*D*H)		mm(inch)	495*800*2150(20*32*85)
Rated cooling capacity		kW	Compressor refrigeration:10
		kW	Heat pipe refrigeration:6
EER		/	Compressor refrigeration ≥ 3
		/	Heat pipe refrigeration ≥ 6
Power supply system		Volts	Fan: DC48V
		Volts	Compressor: AC208-230V
Installation type		/	Integrated indoor and outdoor unit
Seismic grade		/	Level 9
Weight of whole unit		kg	150

Notes:  
1. Standard working condition of compressor mode: 40 °C (DB), 25 °C (WB) at indoor side.  
2. Standard working condition of heat pipe mode: dry bulb temperature at indoor side is 40 °C (DB) at indoor side, 20 °C at outdoor side.