User Manual

AR-50 Series

Modular Data Center

Contents

1 Overview

This document mainly introduces the product features, appearance and parameters of equipment of integrated cabinet solution, which is convenient for users to understand product information.

1.1 Product Application

AR-50 is an integrated cabinet datacenter solution, and the applicable computer room area is about 10-40m2 (with separated cooling system). It is mainly used in township outlets of government subordinate industries, banking outlets, precision equipment controllers in industrial application and network access of small and medium-sized enterprises.

1.2 Product Features

Highly integrated:

The whole solution includes cabinet system, power supply, power distribution system, cooling system and monitoring system, providing customers with a comprehensive solution.

Complete power and environment monitoring system:

The intelligent monitoring module is matched with T/H/W(temp and humidity and water leakage) sensors, smoke sensors. At the same time, it can carry out video monitoring and equipment status monitoring, and transmit data to the Internet for remote monitoring. In case of emergency, it can send a signal to the fire linkage equipment to ensure that the whole system is safe, reliable. The system is highly intelligent and can be flexibly expanded.

Excellent Human machine interface:

The system is matched with a 10inches of color touch screen, which can obtain system information and control the operation status of equipment on the screen. At the same time, the system can be monitored in real time through the network.

2 Typical On-site Solution

Micro datacenter solution

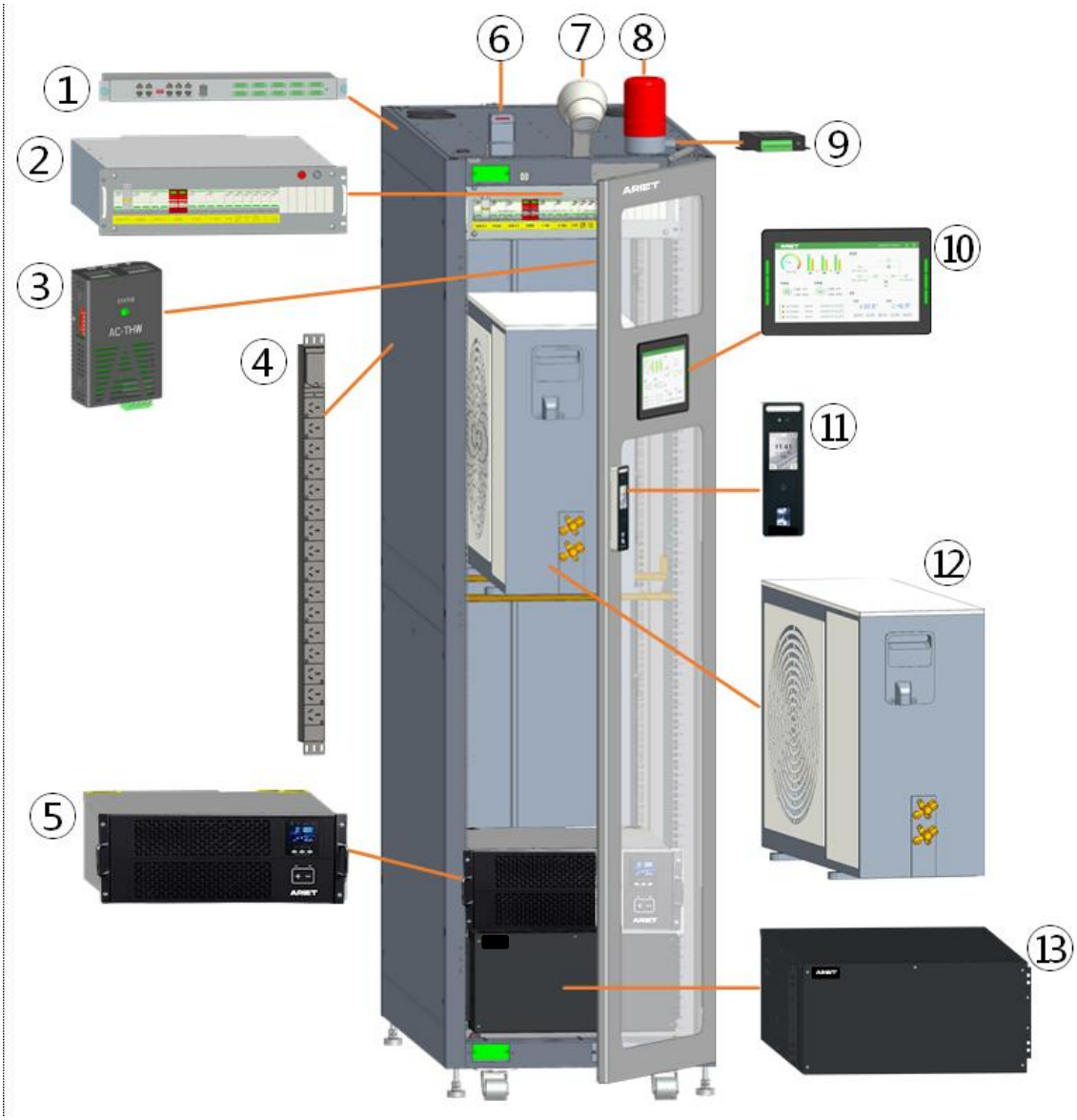


Figure 2- 1: Single Cabinet with Built-in Rack Air Conditioner

①Function Module ;②Power Distribution Module（PDM） ; ③Temperature & Humidity & water leakage Sensor ; ④PDU ; ⑤UPS ; ⑥Infrared sensor ; ⑦Network Camera ; ⑧Acoustic-optic alarm ; ⑨SMS Alarm;⑩10.1 inches LCD ; ⑪Access Controller ; ⑫3.5KW rack AC outdoor unit；⑬3.5KW rack AC

Table 2- 1: Typical Configuration of Integrated Cabinet Solution with Air Conditioner

	Configuration
Cabinet size	600mm*1400mm*2000mm (Default); closed cool and hot channel
Backup time	according to battery capacity
Power distribution	SPD, circuit breakers of UPS, PDU, air conditioner, light and so on
UPS	3kVA, 6kVA and 10kVA can be selected according to application requirements
Refrigeration	3.5KW rack air conditioners can be selected according to the application requirements
Monitoring	power&environment monitoring module, T/H sensor, magnetic lock, smoke sensor, water leakage sensor, network camera (optional) and access controller (fingerprint, face ID, ID card, password)
Other	Acoustic-optic alarm, emergency cooling system, SMS and infrared sensor

Small and medium datacenter solution

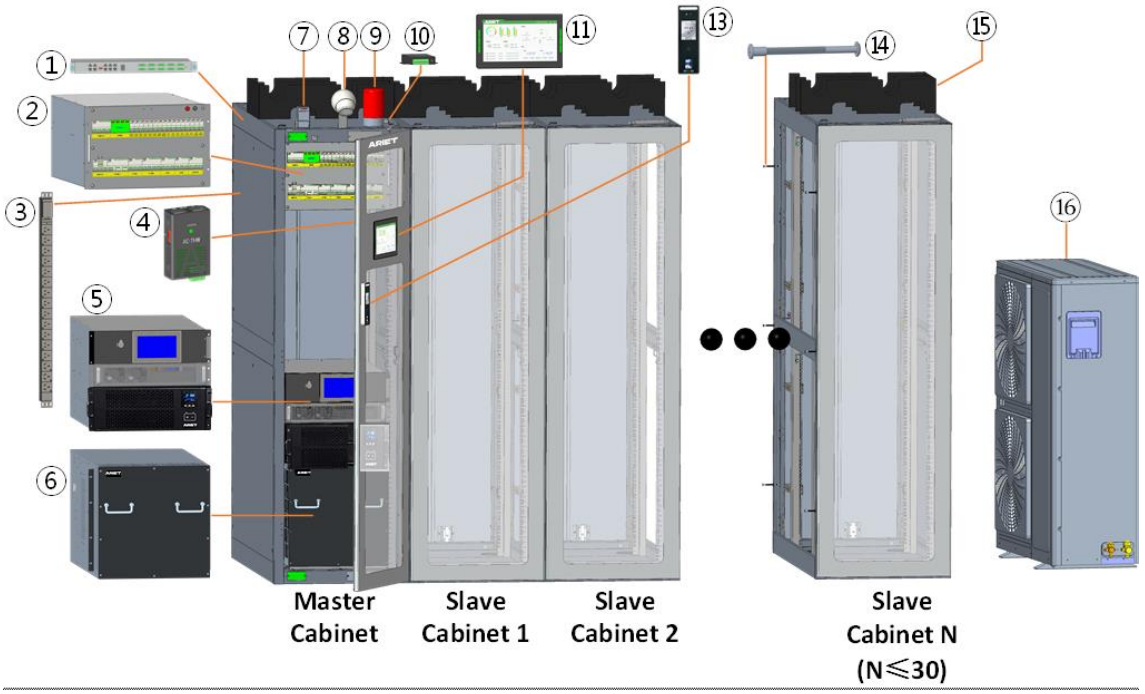


Figure 2- 2: Single row multi cabinet system (Rack air conditioning)

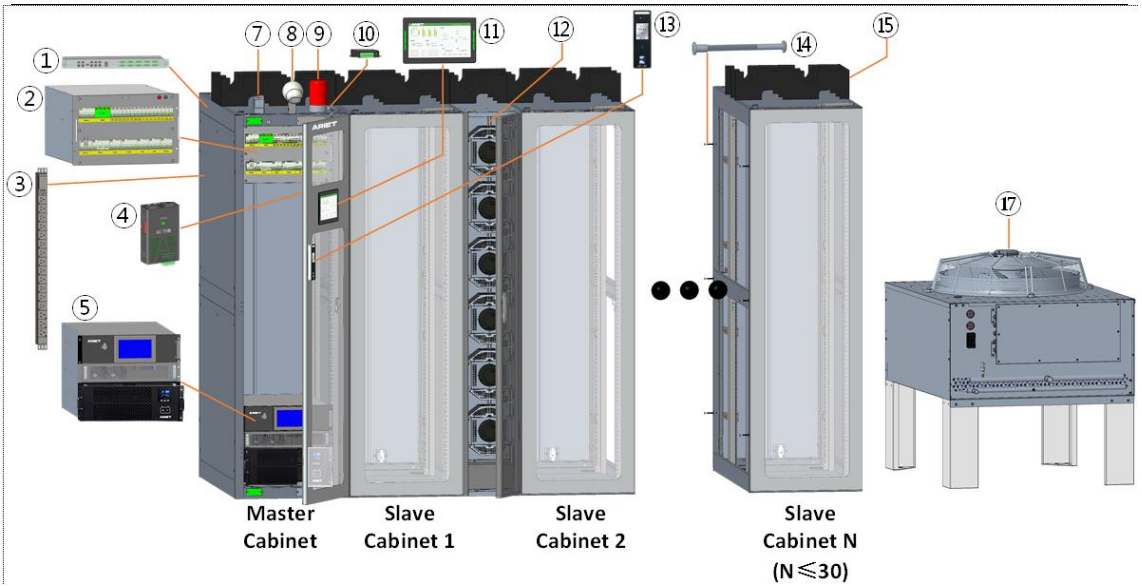


Figure 2- 3: Single row multi cabinet system (In-row air conditioning)

①Function Module ;②Power Distribution Module（PDM） ; ③PDU；④Temperature & Humidity & water leakage Sensor ; ⑤UPS ; ⑥rack AC indoor unit ; ⑦Infrared sensor; ⑧Network Camera ; ⑨Acoustic-optic alarm ; ⑩SMS Alarm; ⑪10.1 inches LCD ; ⑫In -row AC indoor unit；⑬Access Controller ; ⑭Fixing screws between cabinets; ⑮Cable trough；⑯rack AC outdoor unit；⑰In -row AC outdoor unit

Item	Configuration solution
Cabinet Dimension	600mm*1400mm*2000mm（Default）、Closed cool & hot channel
Back Time	according to battery capacity
Power Distribution	SPD, circuit breakers of UPS, PDU, air conditioner, light and so on
UPS	3kVA、6kVA、10kVA、15kVA、20kVA、30kVA、40kVA、60kVA、80kVA、90kVA、100kVA、120kVA
Refrigeration	3.5kW rack AC、7.5kW rack AC、12.5kW rack AC、12.5kW In-row AC、25kW In-row AC
Monitoring	power&environment monitoring module, T/H sensor, magnetic lock, smoke sensor, water leakage sensor, network camera (optional) and access controller (fingerprint, face ID, ID card, password)
Other	Acoustic-optic alarm, emergency cooling system, SMS and infrared sensor

3 System

3.1 Structure

Cabinet:

Standard available space is 42U and the available depth of equipment is 730mm

Standard 19-inch installation interface

Two PDUs are installed on the rear side inside the cabinet

Front and rear doors of the cabinet are equipped with pop-up open kits

Static load of cabinets is more than 1500kg

Protection level is IP20

3.2 Power System

The power system includes PDM, battery, UPS and PDU.

PDM includes main input breaker, UPS input breaker, UPS output breaker, UPS maintenance breaker, air conditioner breaker and utility input breaker, etc. When the input source is cut off, UPS feeds power to the load through the backup battery pack.

There are two PDUs as standard configuration in each cabinet,

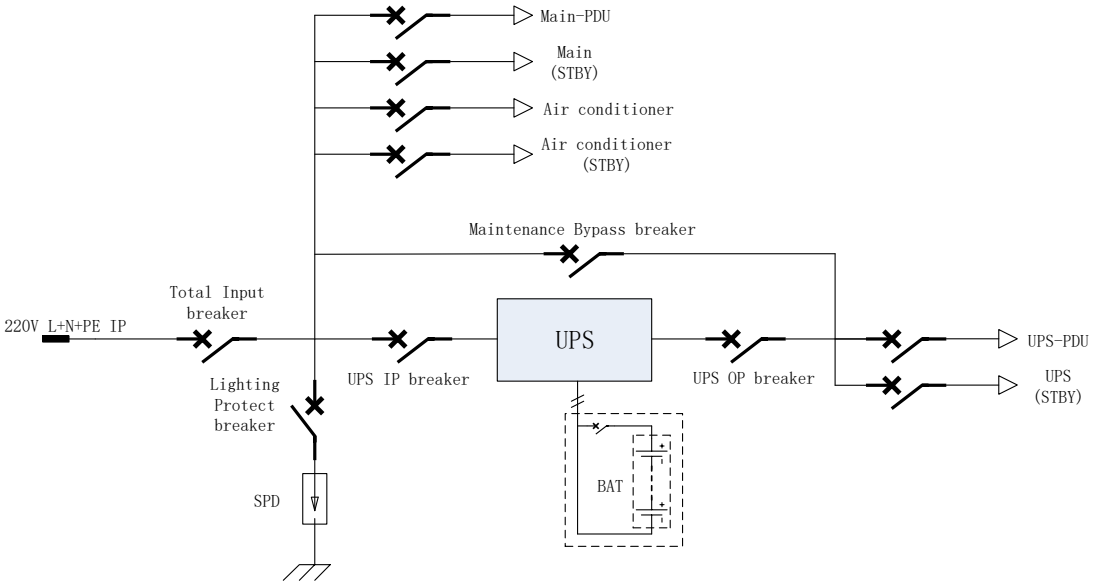


Figure 3- 1: On-site Power Distribution Diagram

Table 3- 1: Specifications of Power Distribution System

Item	Configuration 1	Configuration 2	Configuration 3
Total Input breaker	63A		80A
UPS	3kVA/3kW	6kVA/6kW	10kVA/10kW
Rated Voltage	220/230/240VAC		
Rated Frequency	50/60Hz		
UPS power distribution breaker	32A		63A
UPS output breaker	32A		63A
Battery Back up	Maximum of 4 Battery Pack(7AH /9AH 96VDC) or Maximum of 100AH 96VDC Battery Cabinet	Maximum of 4 Battery Pack7AH或9AH 192VDC) or Maximum of 100AH 192VDC Battery Cabinet	
AC power distribution breaker	2 poles，16A		2 poles，32A
Main(STBY)breaker	2 poles，32A		2 poles，32A
UPS(STBY)breaker	2 poles，32A		2 poles，32A
SPD	Level C		

3.2.1 UPS Specification

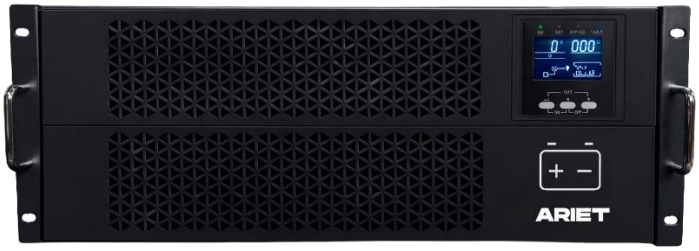


Figure 3-2: Appearance of 3-10KVA UPS

Table 3-2: Technical Parameters of 3kVA UPS

Item	Parameter		
Rated Capacity	3kVA/3kW	6kVA/6kW	10kVA/10kW
Phases	Single Phase		
Input Power Factor	≥0.99		
Input Frequency	50/60Hz Rated，40-70Hz		
Input THDI		<4%	
Input Voltage	220/230/240Vac,50/60Hz		
Efficiency	95.5%@100% load	94.6%@100% load	
Dimensions	483mm(W)*455mm(D)*86mm(H)	440mm(W)*550mm(D)*86mm(H)	

3.2.2 PDM (standard configuration)

PDM of single cabinet datacenter is configured as below. PDMs of single row datacenter are configured as application requirement.

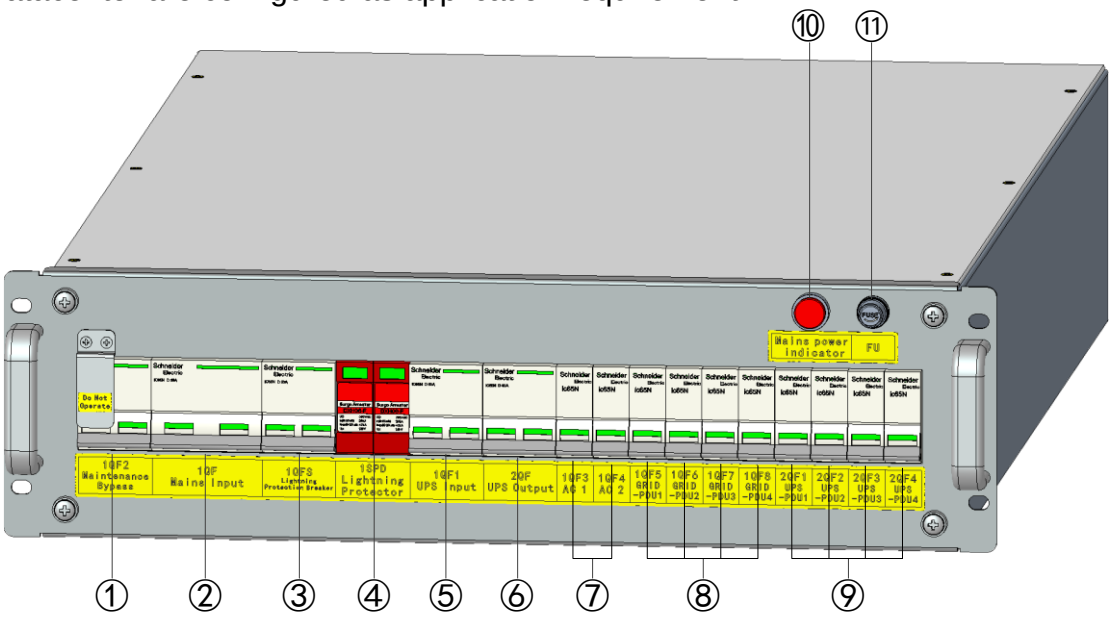


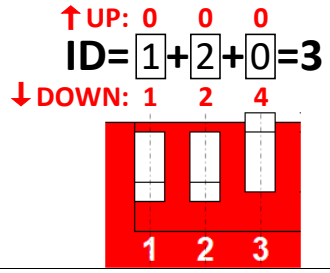
Figure 3-4: Power Distribution Module for single cabinet

①UPS Maintenance Bypass breaker ;②Mains Input breaker；③Lightning Protection Breaker；④Lightning Protector ；⑤UPS Input breaker；⑥UPS Output breaker；⑦AC input breaker；⑧GRID-PDU breaker；⑨UPS-PDU breaker；⑩Mains power indicator; ⑪FU；

Table 3-3: Parameters of Power Distribution Module

Item	Parameter
Input current	80A
Phases	Single Phase
UPS Input	63A
Breaker Configurations	total input breaker 80A/2P、UPS input breaker 63A/2P、UPS MBCB 63A/2P、UPS output breaker 63A/2P、Level C SPD、lighting breaker 32A/2P 、AC input breaker 32A/1P、Main PDU breaker 32A/1P、UPS PDU breaker 32A/1P。
Port Configurations	Total input port、UPS I/P port、Air conditioner power distribution port、Main PDU port、UPS PDU port
RS485 interface	● Support 2 way RS485 interfaces, the interface form is RJ45, and the default communication speed is 9600bps ● RJ45 interface includes 12VDC power input for the power acquisition system RJ45 foot introduction： ● RS485 Interface：
ID setting switch	ID setting switch in dialing form, 3-bit binary form XXX, setting range 1-7, 111 is ID7, 100 is ID1. For settings, refer to the following simple legend: Dial up or down switch, the corresponding value in the box is 0 or the corresponding number, and the final sum result is ID. As shown in the following illustration: only the 1 and 2 digits switch down, and the ID is 3.

P1	P2	P3	P4	P5	P6	P7	P8
RS485+	RS485-	/	GND		/	+12V	

	
Maximum Altitude	4500M
Operating TEMP.	-5～45℃
Relative Humidity	0-95%

3.2.3 PDU（Optional: Intelligent PDU）

Figure 3- 4：Single Phase PDU(Default)

The system is optional with intelligent PDU or ordinary PDU. The default configuration is a single-phase 16-bit ordinary PDU (10A * 13 + 16A * 3 IEC socket). PDU is installed vertically installed on the side of the rear of the cabinet. A single PDU can take power from UPS output, or two PDU can be configured to take power from UPS and mains respectively, forming a redundant power supply loop.

Table 3- 4：PDU Specification

Item	Parameter
Input Current	32A
Phases	Single
Output Configuration	13*10A+3*16A IEC sockets
Operating TEMP.	-5～45℃
Relative Humidity	0-95%
Dimensions	864×44.5×44.5mm

3.2.4 Battery Package

Item	8-battery pack	16-battery pack
Capacity	7AH/9AH	7AH/9AH
voltage	96VDC	192VDC
Used with	3kVA	6kVA/10kVA

3.3 Cooling System

There are two types of refrigeration systems:

1. Rack air conditioner, installed in the cabinet, has split type and integrated type (no external unit);

2. The air conditioner in row shall be installed together with the cabinet.

3.3.1 Cabinet With integrated Rack Air Conditioner

Figure 3-5:3.5kW rack air conditioner indoor and outdoor unit

Table 3-5：3.5 KW Air Conditioner Parameters

Item	3.5kW	7.5KW	12.5KW
cooling capacity	3.5kW	7.5kW	12.5kW
Sensible cooling capacity	3.5kW	7.5kW	12.5kW
Rated current(Single Phase)	13.6A	27.3A	30.6A
Air volume	705m³/h	1345m³/h	2305m³/h
Indoor unit dimension	5U（219×440×800）	7U（310×440×800）	10U（440×440×800）
Outdoor unit dimension	880×340×605	880×380×720	995×440×1256

3.3.2 In Row Air conditioner

Figure 3- 6：25kW In-row air conditioner indoor and outdoor unit

Table 3- 6：In-row air conditioner specification

Item	12.5KW	25KW
cooling capacity	12.6kW	25.6kW
Sensible cooling capacity	12.6kW	25.6kW
Rated current	22.9A(Single Phase)	27.9A（Three Phase）
Air volume	2850m³/h	5080m³/h
Indoor unit dimension(mm)	300×1400×2000	
Outdoor unit dimension(mm)	830×330×1245	1376×980×738

3.4 Intelligent Power Environment Monitoring & Management System

3.4.1 Overview

The intelligent power&environment monitoring system consists of monitoring module, power supply system, sensors, etc.

The monitoring module is integrated into the local LCD, i.e., intelligent monitoring screen, and is equipped with interface-expandable control module for equipment expanding and control. It supports local and remote system management, system status monitoring, system alarm management and system configuration and operation. In addition, the monitoring system can also provide a visual HMI, facilitating users to maintain the internal equipment of the system.

3.4.2 Monitoring Module

3.4.2.1 AC Function Screen

Figure 3- 7：10.1 inches LCD display

①TF card；②USB；③SMS alarm port；④Indication LED；⑤Ethernet；⑥COMM-P1(RS485、Power);⑦COMM-P2(RS485、Power)；⑧EPO

Table 3-7: Specifications of LCD

<table>
<tr><th>Item</th><th>Specification</th></tr>
<tr><td>Power input</td><td>● Supports two DC power supplies
● Input Voltage：12VDC
● Input rated current：1A</td></tr>
<tr><td>System MEMORY</td><td>512MB</td></tr>
<tr><td>Micro SD card</td><td>Up to 32GB of storage space is available for storing historical records and other data.</td></tr>
<tr><td>FE expansion</td><td>Support 1 LAN interface, 10/100M communication rate</td></tr>
<tr><td>COMM port</td><td>● Support 4-way two-port RS485 interface, the interface form is RJ45, and the default communication speed is 9600bps
● RJ45 interface includes 12VDC power input
Description of RJ45 foot position:
● COMM-P1 Interface:
<table>
<tr><th>P1</th><th>P2</th><th>P3</th><th>P4</th><th>P5</th><th>P6</th><th>P7</th><th>P8</th></tr>
<tr><td>1-RS485+</td><td>1-RS485-</td><td>2-RS485+</td><td colspan="2">GND</td><td>2-RS485-</td><td colspan="2">+12V</td></tr>
</table>
● COMM-P2 Interface:
<table>
<tr><th>P1</th><th>P2</th><th>P3</th><th>P4</th><th>P5</th><th>P6</th><th>P7</th><th>P8</th></tr>
<tr><td>3-RS485+</td><td>3-RS485-</td><td>4-RS485+</td><td colspan="2">GND</td><td>4-RS485-</td><td colspan="2">+12V</td></tr>
</table></td></tr>
<tr><td>USB</td><td>Supports one-way USB 2.0 device access</td></tr>
<tr><td>SMS</td><td>Support SMS device access</td></tr>
<tr><td>Work indication LED</td><td>Normal status: green
Alarm status: yellow when alarm, red when fault</td></tr>
</table>

3.4.2.2 Control Module

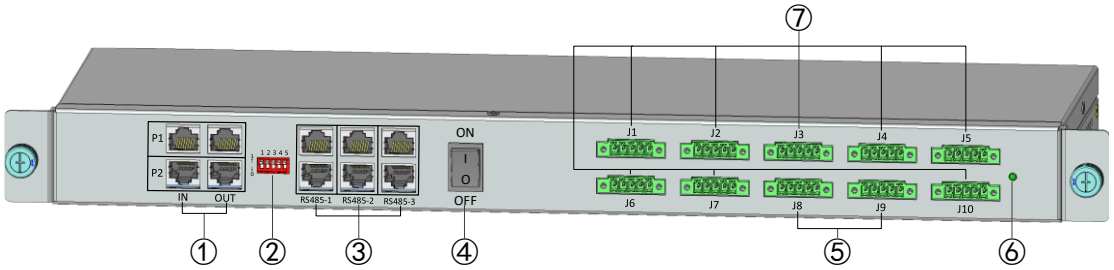
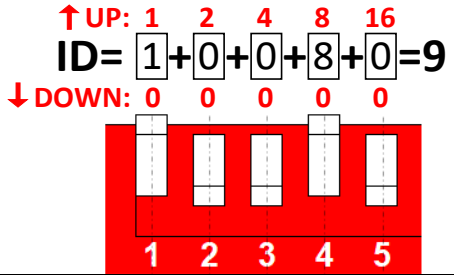


Figure 3-8: Single-cabinet Control Module

①IN/OUT interface；②ID setting switch；③RS485 Interface；④Power switch；
⑤Access device；⑥Power indication LED；⑦Input dry contact、Output dry contact

Table 3-6: Specifications of Single-cabinet Control Module

Item	Parameter
Power Input	● Support two AC input power supplies ● Input Voltage：85~264Vac ● Input Frequency： 50/60Hz ● Input Maximum current：1.2A
IN/OUT interface	● Four RJ45 ports are provided for connecting the RS485 communication port and the next expansion module on the AC function screen, and powering the AC function screen through these ports. ● RJ45 ports provided 12VDC power output RJ45 foot Introduction：

<table>
<tr><td></td><td>
● P1 interface:
<table>
<tr><td>P1</td><td>P2</td><td>P3</td><td>P4</td><td>P5</td><td>P6</td><td>P7</td><td>P8</td></tr>
<tr><td>1-RS485+</td><td>1-RS485-</td><td>2-RS485+</td><td colspan="2">GND</td><td>2-RS485-</td><td colspan="2">+12V</td></tr>
</table>
● P2 interface:
<table>
<tr><td>P1</td><td>P2</td><td>P3</td><td>P4</td><td>P5</td><td>P6</td><td>P7</td><td>P8</td></tr>
<tr><td>3-RS485+</td><td>3-RS485-</td><td>4-RS485+</td><td colspan="2">GND</td><td>4-RS485-</td><td colspan="2">+12V</td></tr>
</table>
</td></tr>
<tr><td>RS485 interface</td><td>
● Support 3 way RS485 interfaces, each channel provides two upper and lower interfaces for easy wiring, the interface form is RJ45, and the default communication speed is 9600bps
● RJ45 interface can provided 12VDC power output with rate current of 400mA
RJ45 foot introduction：
● RS485-1、RS485-2、RS485-3 Interface：
<table>
<tr><td>P1</td><td>P2</td><td>P3</td><td>P4</td><td>P5</td><td>P6</td><td>P7</td><td>P8</td></tr>
<tr><td>RS485+</td><td>RS485-</td><td>/</td><td colspan="2">GND</td><td>/</td><td colspan="2">+12V</td></tr>
</table>
</td></tr>
<tr><td>ID setting switch</td><td>
ID setting switch in dialing form, 5-bit binary form XXXX, setting range 1-31, 11111 is ID31, 10000 is ID1. For settings, refer to the following simple legend:
Dial down or pull up switch, the corresponding value in the box is 0 or the corresponding number, and the final sum result is ID.
As shown in the following illustration: only the 1 and 4 digit switches are dialed up, and the ID is 9.


</td></tr>
<tr><td>Output dry contact</td><td>Support 13 output dry contact interface, NO signal</td></tr>
<tr><td>Input dry contact</td><td>Supports 8-way input dry contact interface</td></tr>
<tr><td>Work indication LED</td><td>Power normal , the LED green.</td></tr>
</table>

3.4.3 Power Environment Monitoring Components

3.4.3.1 Access Control

The access control is used to manage the access operation authority, and statistics of access operation records, and supports face ID, ID card, fingerprint, password.

Figure 3-9 Access controller

Table 3-9 Specification of the access controller

Item	Parameter
Voltage	12VDC
Identification	Face ID, Fingerprint, IC card, Password
Screen	2.4 inch TFT HD color screen
Language	English
Communication	TCP/IP、RS485、Wiegand (one group respectively for input and output)
Operating Environment	TEMP.：-5℃-+45℃ Relative humidity：≦90%(no condensation)
Dimensions	185*58.5*19mm

3.4.3.2 Smoke sensor

The smoke sensor is used to detect the smoke and send alarm signals promptly in case of fire.

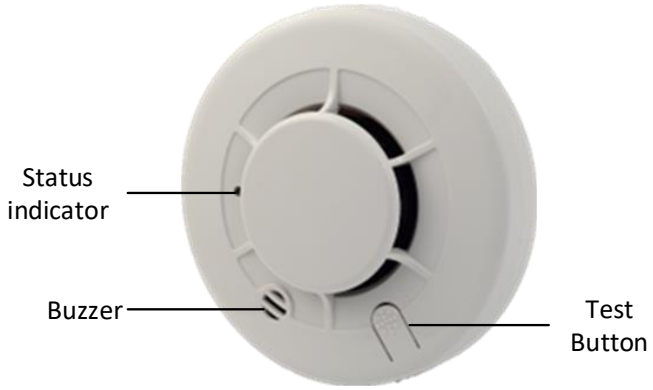
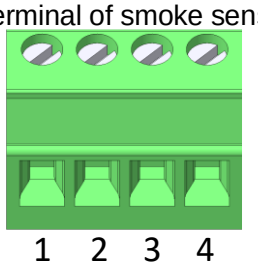


Figure 3-10 Smoke Sensor

The terminal of smoke sensor is defined as follows:



Pin1&2: 12V or 24V DC power supply, pin1--- power+, pin2---GND

Pin 3&4: normal NC output signal, set to NO with jumper if needed

Table 3-7：Technical parameters:

Item	Parameter
Working voltage	12/24VDC, voltage ranging 8-28VDC
Working current	<2mA@12VDC in monitoring status <30mA@12VDC in case of fire alarm
Contact output	1A/30VDC，0.3A/60VDC
Operation indication	Monitoring status: Indicator (green) blinks once every 60 seconds Alarm status: RED is steady on, the buzzer "beeps" every 1.5 seconds Fault status: The buzzer beeps every two seconds
Operating Environment	Temperature:-10℃- +50℃ Relative humidity:≦95%(no condensation)
Dimensions	120*39mm (OD * HEIGHT)

3.4.3.3 Temp/Humidity/Water leakage sensor

The T/H/W sensor is used to detect the operating temperature and humidit inside cabinet, as well as to detect whether there is water accumulation on the floor of the machine room in conjunction with a leak detection rope.

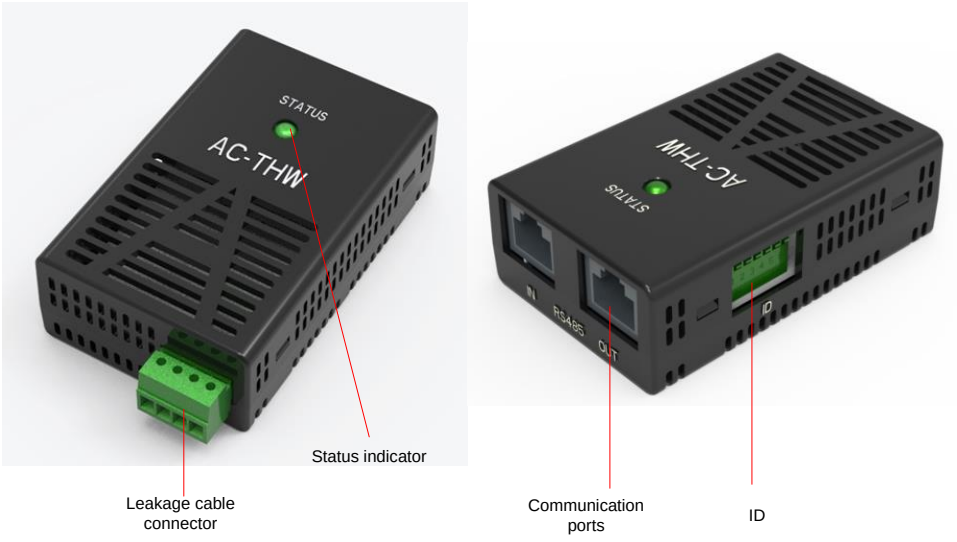
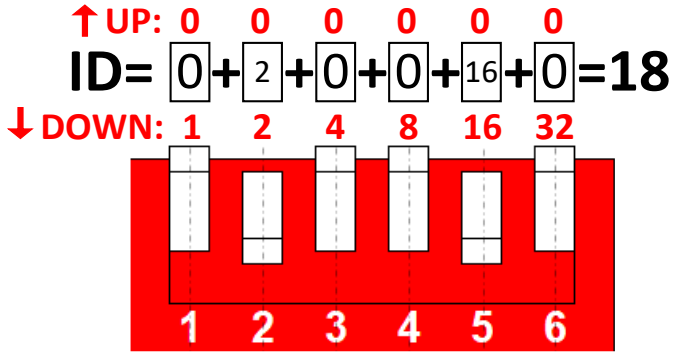


Figure 3-11 T/H/W Sensor

On the left side of the T/H/W sensor, the ID setting switch is in DIP pattern, with its value in 6-bit binary XXXXXX format, ranging 1-63.111111 is ID63, and 000000 is ID1. For related settings, refer to the following example:

Dial up or down switch, the corresponding box value is 0 or the corresponding number, and the final sum result is ID.

As shown in the following illustration: only 2 and 5 digits switch down, and the ID is 18.



The T/H/W sensor has an RS485 interface in the form of RJ45 above and below, and the device can be connected in series to the single-cabinet control module, or it can be separately connected to the single-cabinet control module, and the interface is defined as follows:

P1	P2	P3	P4	P5	P6	P7	P8
RS485+	RS485-	/	GND		/	+12V	

A function module one 485 interface, can connect up to 15 T/H/W sensors in series.

The system is equipped with one hot aisle T/H/W sensor as standard. Multiple T/H/W sensors can be expanded according to the actual application requirements.

Under the T/H/W sensor, there is a 4PIN wiring port that can be used to connect to either a positioning or non positioning leak detection rope according to the application situation.

Table 3- 11：Specification of T/H sensor

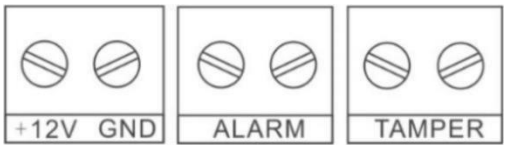
Item	Parameter
Operating temp.	-40℃-+70℃
Temperature detection range	-20℃-+70℃
Temperature detection accuracy	≤±0.3℃
Humidity detection range	0~100% RH
Humidity detection accuracy	≤±3% RH
Water leakage detect response time	≤1s
Water leakage detect range	500m
Working voltage	12/24VDC
Dimensions	88*51*26mm

3.4.3.4 Infrared Detector

Infrared sensor is used to detect human activities in target area. When an intruder passes through the area, alarm signals will be given promptly.

Figure 3- 13：Infrared Detector

The infrared sensor terminal is defined as follows:



+12V is DC positive pole, and GND indicates the DC negative pole.

ALARM is a NC output interface for detecting ALARM signals. When an ALARM occurs, the interface turns to be opened.

TAMPER is the output interface of anti-removal alarm signal, NC, and turns to be opened in case of alarm.

Table 3-13: Specification of Infrared Detector

Item	Parameter
Working voltage	12VDC，Voltage range 9-16VDC
Working current	≤50mA@12VDC
Contact output	100mA/ 60VDC for detection alarm and 100mA/28VDC for anti-removal alarm
Operation indication	Power on: Self-test, the red indicator light turns on for 60s during power on self test process. Monitoring status: indicator light is off. Detection alarm status: Red indicator light is on.
Operating Environment	TEMP.：-10℃-+50℃ Relative humidity：≦95%(no condensation)
dimension	95*57*38mm

3.4.3.6 Audible and visual alarm

It is applied to the monitoring host of the computer room to realize the linkage sound and light alarm of the computer room.

Figure 3- 14：Acoustic-optic alarm

Acoustic-optic alarm interfaces are defined as follows:

The red and black cables at the bottom DC 12V power, and red is DC+ while black is DC-.

Table 3- 14：Specification of audible and visual alarm

Item	Parameter
Working Voltage	12VDC
Working current	≤45mA
Maximum alarm dB	90dB
Working mode	Simulate rotating LED light
Working Environment	TEMP.：-30℃-+70℃ Relative humidity：≦95%(No condensation)
Dimension	95*165mm（OD*H）

3.4.3.7 SMS & Voice Alarm

It is used for monitoring the host in the computer room to realize timely notification of alarm information to maintenance personnel through SMS and voice.

Figure 3- 15: SMS &voice alarm

Table 3- 15：Specification of SMS & voice alarm

Item	Parameter
Band	LTE-FDD: B1 / B3 / B5 / B8 LTE-TDD: B34 / B38 / B39 / B40 / B41
SIM card slot	Mini-SIM card

Power supply	DC7～48V
COMM. port	Channel 1: RS485、channel 2: RS232
Working Environment	-30℃～+75℃，0%～95%RH
Dimension	75x72x16mm

3.4.3.8 Network Camera

Figure 3- 16 Network Camera

The webcam can be directly connected to the network. If a video recorder is equipped, the camera must be connected to the network port of the video recorder. If the number of cameras exceeds the number of ports on the VCR, it is necessary to configure another gateway.

Table 3- 9：Webcam parameters

Item	Parameter
Image Sensor	1/2.8" CMOS
Max. Resolution	1920 (H) × 1080 (V)
Scanning System	Progressive
Power Supply	12 V DC/PoE
Video Frame Rate	Main stream: 1920 × 1080@1–25/30 fps Sub stream: 704 × 576@1–25 fps 704 × 480@1–30 fps
Smart Codec	Smart H.265+; Smart H.264+
Protection	IP67
Operating Temperature	–40 °C to +60 °C (–40 °F to +140 °F)
Operating Humidity	≤ 95%
Product Dimensions	81 mm × Φ109.9 mm (3.19" × Φ4.33")

3.4.3.9 Video Cassette Recorder

Figure 3- 17：Video cassette recorder

Table 3- 17：Specification of VCR

Item	Parameter
Decode	Video decode：Smart H.265/H.265/Smart H.264/H.264/MJPEG Voice decode：PCM/G711A/G711U/G726
Connect Channel	8/16/32(Optional)
Hard drives slot	8 hard disk bays (SATA3.0 interface), the maximum capacity of a single disk is 10T, and the hard disk needs to be equipped separately
Network port	Two Gigabit Ethernet ports, support the access of two IPC devices with different IP addresses, and support setting the same IP address for dual network ports to achieve data link redundancy
HDMI port	1 pcs, maximum support 4K resolution output
VGA port	1 pcs
USB port	3 pcs, 2 front USB2.0 ports, 1 rear USB3.0 interface
RS-232 port	1 pcs, It is used for debugging and transparent transmission of serial port data
RS-485 port	1 pcs, It is used to control external gimbals, etc., and supports a variety of protocols
Audio input	1 channel, RCA input port, voice intercom input
Audio output	1 channel, RCA OP port, multiplexed voice intercom output
Alarm Input	16 channel
Alarm output	4 channel
Power Supply	AC100V～AC240V，50-60Hz，1.9A
Working Environment	-10℃～+55℃，10%～93%RH
Dimension W*D*H	440 × 458.4 x 94.9mm

3.5 Cabling Management

The cables inside the cabinet mainly include up and down cables, horizontal cables and front and rear cables. The cable in the upper and lower directions, the structure of the cabinet itself can be fixed directly. Cable management frames are used to manage cables running horizontally or backward and backward.

The cable management rack is used to manage lateral cables or front-to-rear cables in the cabinet

Figure 3- 18：Cable management rack

Distribution rack used for network wiring management in computer rooms

Figure 3- 19：Distribution rack

ODF optical fiber distribution module is used for optical fiber wiring management in computer room network

4 Introduction to User's Interface

4.1 LCD Interface

4.1.1 Home page

The home page is the system overview, includes the system operating temperature, humidity, the current alarm, and operation status of power distribution, UPS, Air Conditioner.

Figure 4-1:System overview

4.1.2 Power distribution system

Click "Devices Management" →"Power Distribution" to enter the distribution system page, which can view the operation status, detailed parameters and related operations and Settings.

Figure 4-2: Power distribution system monitoring

4.1.3 UPS

Click "Devices Management"→"Power Distribution System"→"UPS" to enter in the UPS page, operating status, detailed parameter data and related operations and settings of each UPS in the system are displayed in this page.

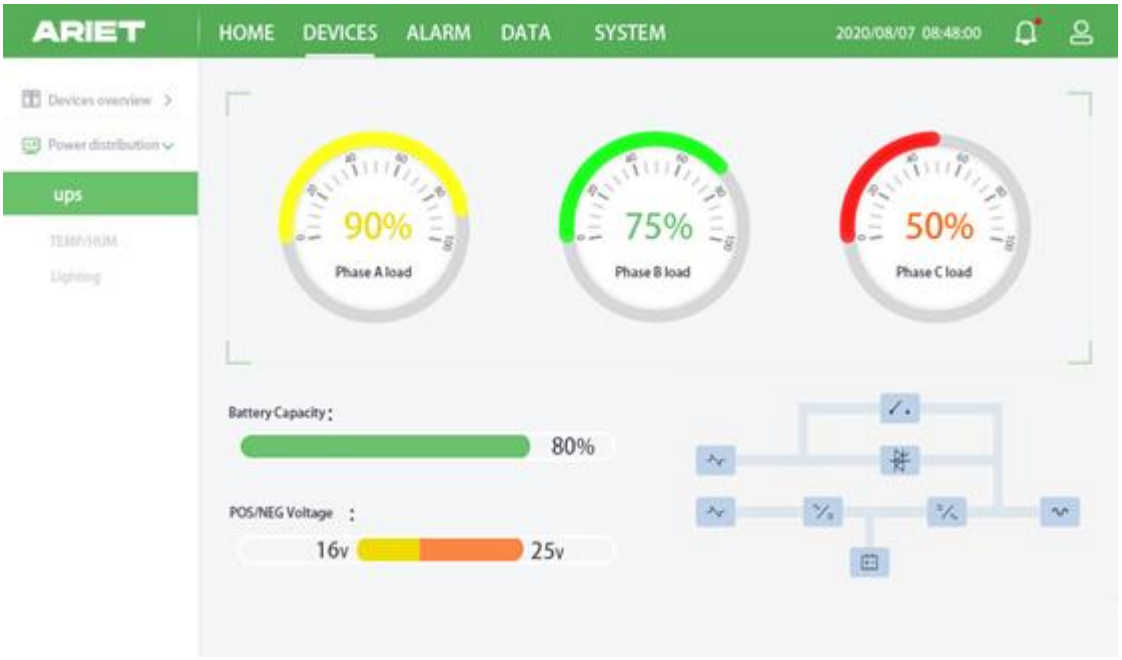


Figure 4-3 UPS Monitoring

4.1.4 Air conditioner page

Click "Equipment Management"→"Equipment Overview"→ "Air Conditioning" to enter in the “air conditioner” page. The operating status, detailed parameter data, and related operations and settings of each air conditioner in the system are displayed in this page.

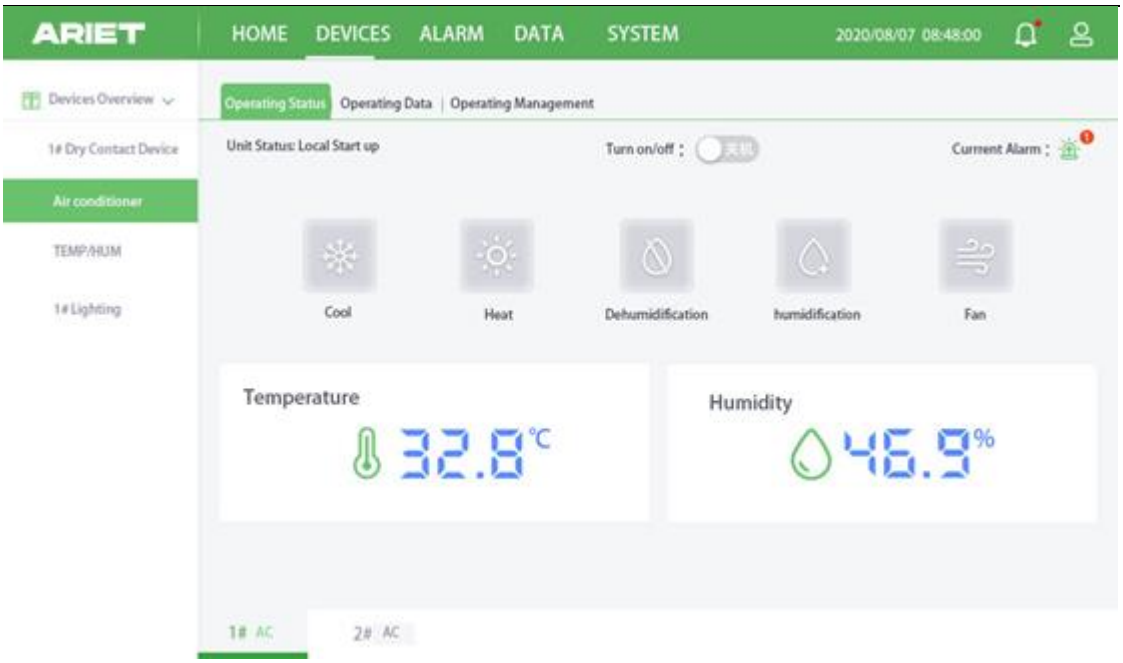


Figure 4-4: Air Conditioning Equipment Details Page

4.2 WEB Page

WEB login

Enter the corresponding IP address on the browser to enter the login interface, the administrator account is “admin”, the default login password is “123”, please modify the administrator password as soon as possible after logging in. The IP address is shown on the LCD.

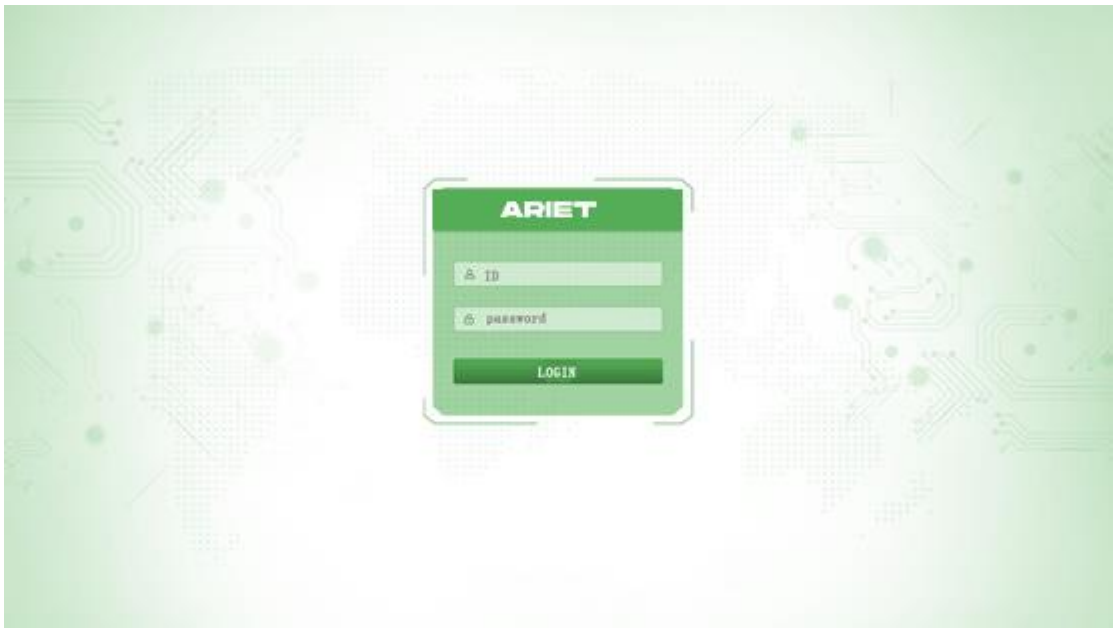


Figure 4- 5：WEB Login Page

Home Page

After logging in, enter the main page, which is the system overview page, as shown in Figure 4-6, click the account name at the upper right corner to enter in the password modification page, click “Home” to enter in the device overview page.

The system overview page displays PUE data, equipment statistics, alarm statistics, current alarms, UPS load status, working temperature, and working humidity in the system.

Figure 4- 6: Home Page

Equipment overview

In the equipment overview page, click the device icon to enter in the corresponding device page.

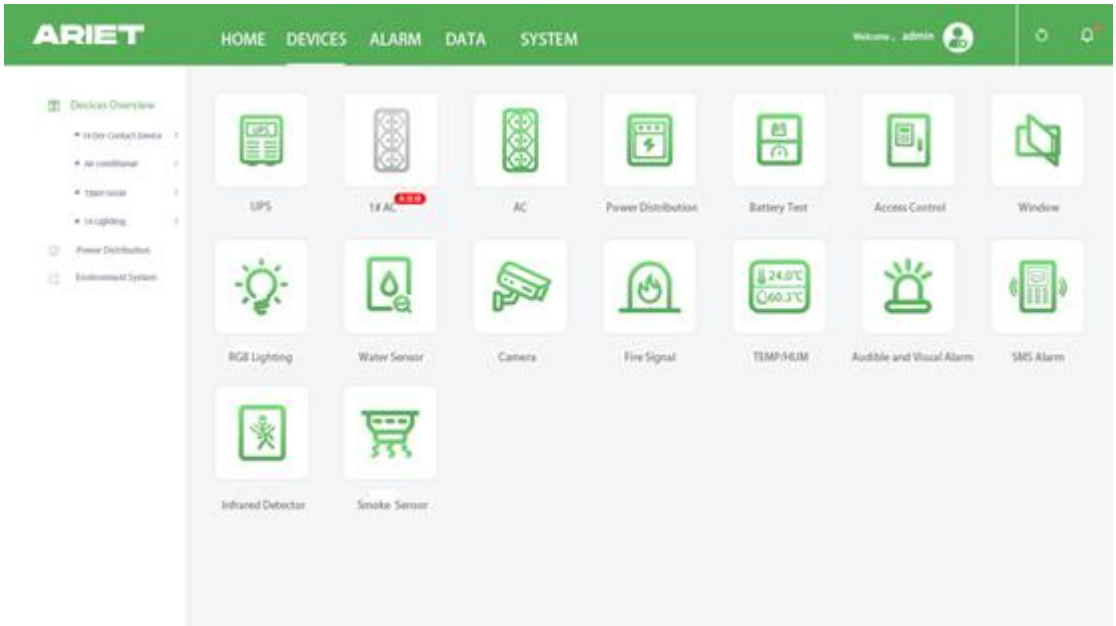


Figure 4- 7：Equipment overview

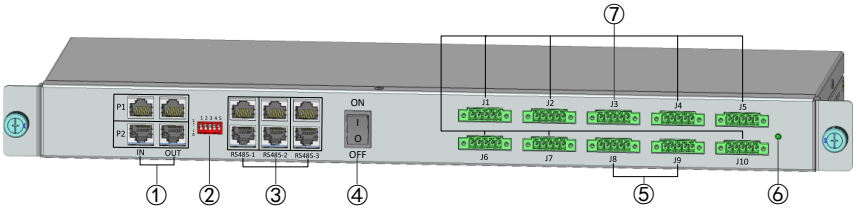
5 Start System

This manual is mainly for micro to medium datacenter systems, where all operations have been finished before leaving the factory, and users need only connect it to utility to start it.

If want to start a single row system, please refer to “fast installation user manual” to connect communication cables between cabinets.

Checking that all equipment installation, wiring and ID setting are correct, to make sure all equipment are already to start.

1. Turn on input power source, the indicator light of PDM will be on.
2. Close the breakers of PDM in turn, UPS, air conditioner will start in minutes.
3. Turn on the switches of all single cabinet control modules in each cabinet. All the sensors and LCD will be on.



4. Check the operation status of all equipment on LCD
5. Turn on the breakers of all PDU

If need more details, please refer to the “quick installation user manual”.

Appendix A System Specifications

System	**IT rated power**	3KW/Each cabinet
	Power grid system	220Vac,1Φ+N+PE,50/60Hz 380Vac,3Φ+N+PE,50/60Hz 208Vac,3Φ+N+PE,50/60Hz
	Ambient temperature	0-40℃
	Ambient humidity	10-80%
	Altitude	1000m; it shall be reduced according to the standard for over 1000m
Cabinet	**Dimensions (W*D*H)mm**	600*1400*2000(Default), 600*1200*2000
	Equipment space	Maximum 42U
	Display	10.1-inch color touch screen
	Lighting mode	88lux/M
Power distribution system	**Lightning protection**	Class-C
	UPS	3kVA,6kVA,10kVA,15kVA,20kVA,30kVA,40kVA,60kVA,80kVA
	PDU	32A (13*10A IEC+3*16A IEC)
	Battery	Built-in battery pack or external battery cabinet
Monitoring system	**Monitoring module**	10.1 inches function screen + single cabinet control module
	Monitoring devices	Smoke, T/H sensor, water sensor, access control and video, etc.
Heat dissipation system	**Air conditioner**	Air-cooled rack air conditioner, Integrated rack air conditioner,In-row air conditioner
	Rated refrigerating capacity (KW)	3.5kW (split/integrated rack), 7.5kW (split rack), 12.5kW (split rack), 12.5kW (in-row), 25kW (in-row)
	Standard air volume (m3/h)	705m³/h、1345m³/h、2305m³/h、2850m³/h、5080m³/h

Note: This specification is a typical configuration, and the real configuration specification is configured according to the actual customer demand.