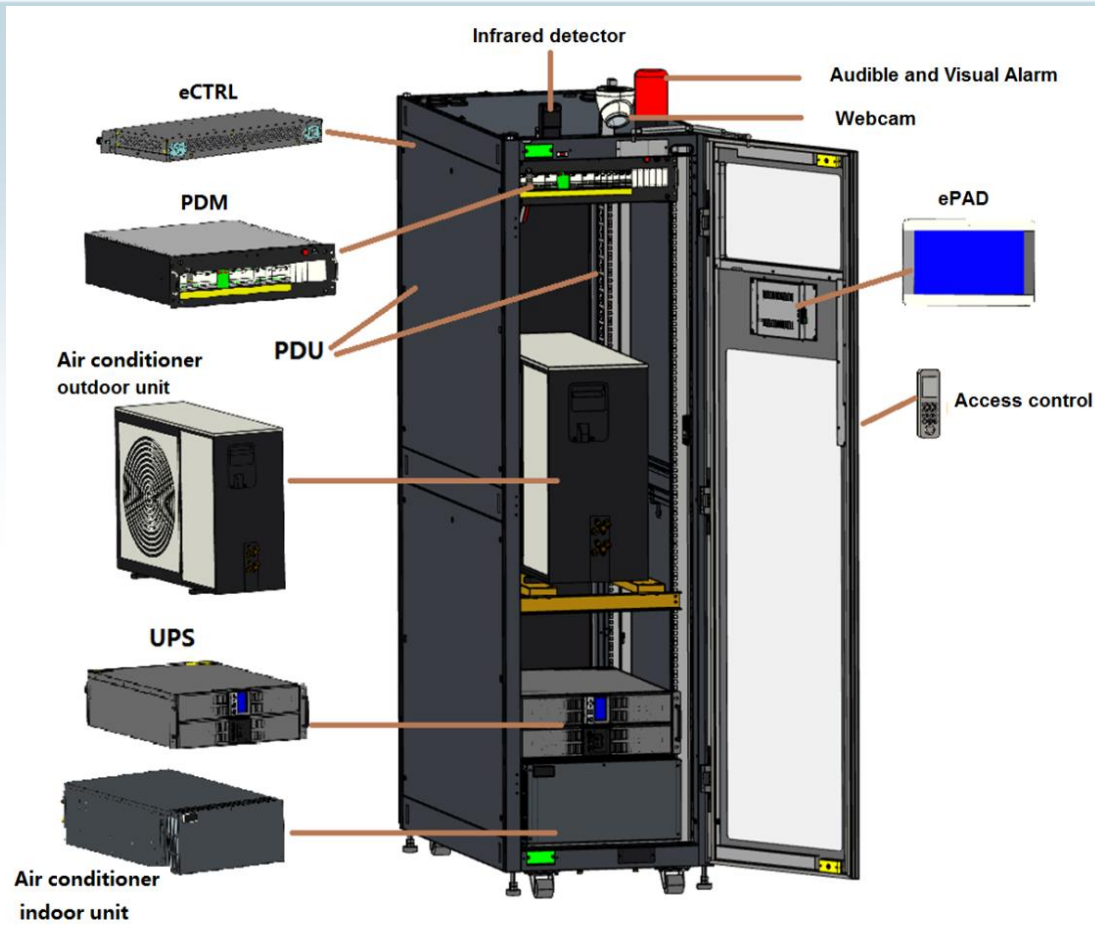


iSmart Series Integrated Cabinet Solution

Overseas Department

2021-7-12

1. Appearance



2. Features

- ◆ Closed hot and cold aisles, high efficiency, strong environmental adaptability;
- ◆ Cabinet dimension (W*D*H): 600mm*1200mm*2000mm;
- ◆ Emergency pop-up door component: front and back door automatically pop-up after the fault is triggered , buy time for customer;
- ◆ Integrated power supply and distribution: the power distribution module contains main input breaker , SPD, UPS breaker , PDU , air conditioner breaker , etc ;
- ◆ Powerful Monitoring system: the power and environment information can be viewed on the 10.1-inch touch LCD, and it can also be monitored through WEB . If you access the INVT cloud service platform, you can directly monitor the power and environment information on the cloud service platform;
- ◆ Rapid deployment: pre-installed design, the entire system can be installed and put into use in one day.

3. Power Distribution System

UPS—Uninterrupted Power Supply



3K, 6K or 10K single-phase rack UPS system can be selected according to the load, and battery box or battery cabinet products can be selected according to actual requirement.

PDM (Power Distribution Module)



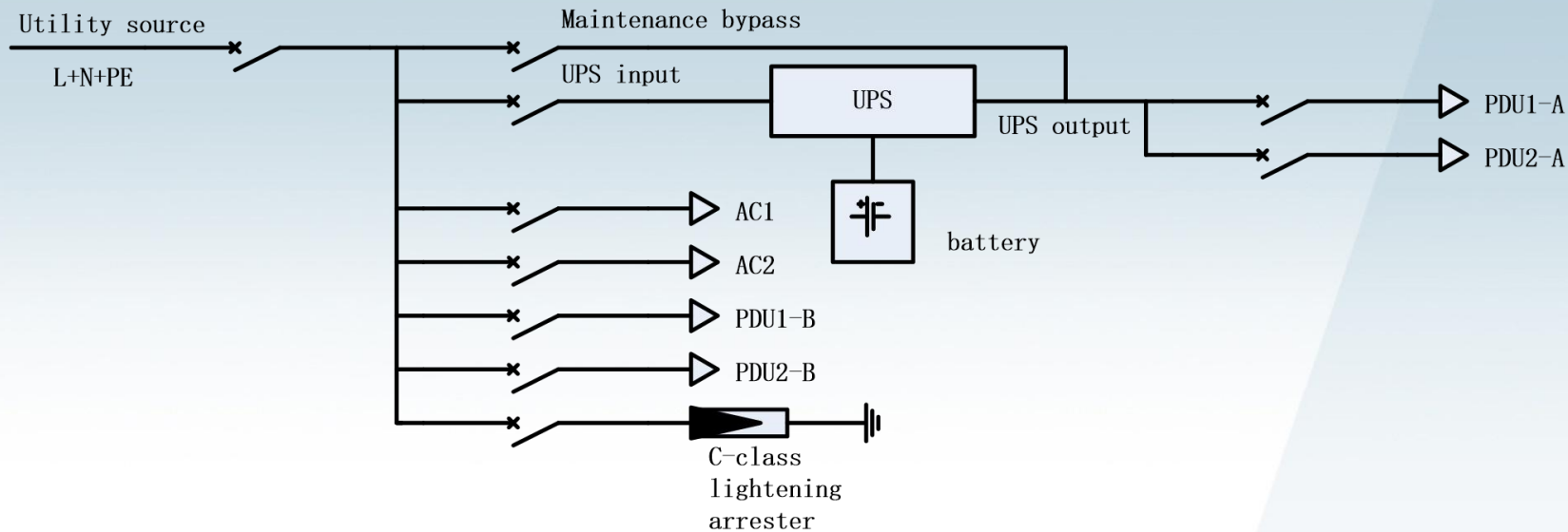
Power distribution module: comes with main input breaker, SPD and lightning protection breaker, UPS input, output and maintenance bypass breaker, mains PDU breaker, UPS PDU breaker, air conditioning breaker, spare breaker, etc;

The standard PDM is adapted to HR1106X UPS, which can also be compatible with HR1103 UPS.

HR1110X UPS(optional).

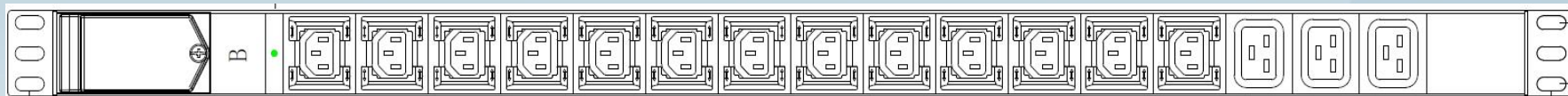
PDM (Power distribution module)	
Power type	Single phase(AC220V)
Type	PDMI0063-001
Cabinet quantity (total power consumption)	3KW
UPS Configuration (reference)	6KVA(1/1)
AC cooling capacity	1*3.7KW(rack)
AC type	Rack (single phase)
Main breaker	1*63A/2P
SPD(1 set)	C level SPD(1P+N)with 32A/2P breaker
UPS breaker (input)	1*C32A/2P
UPS breaker (output)	1*C32A/2P
UPS breaker (maintenance)	1*C32A/2P
Air conditioner breaker	2*D32A/1P
Mains IT breaker	2*C32A/1P
UPS IT breaker	2*C32A/1P
PDM height	3U

Electrical schematic diagram



A full power collection unit is being developed, which can collect input data, UPS total output data and data of each branch of the mains, so that accurate PUE values can be calculated.

PDU



Standard IEC PDU: 13pcs 10A outlets and pcs 16A outlets IEC standard.

Intelligent PDU (optional)

Optional intelligent PDU equipment: IEC standard, current ,voltage , and work status data can be checked through the monitoring system. At the same time, it can control the on and off of each output socket.

4. Cooling System

3.7kW Rack-mounted
AC indoor unit

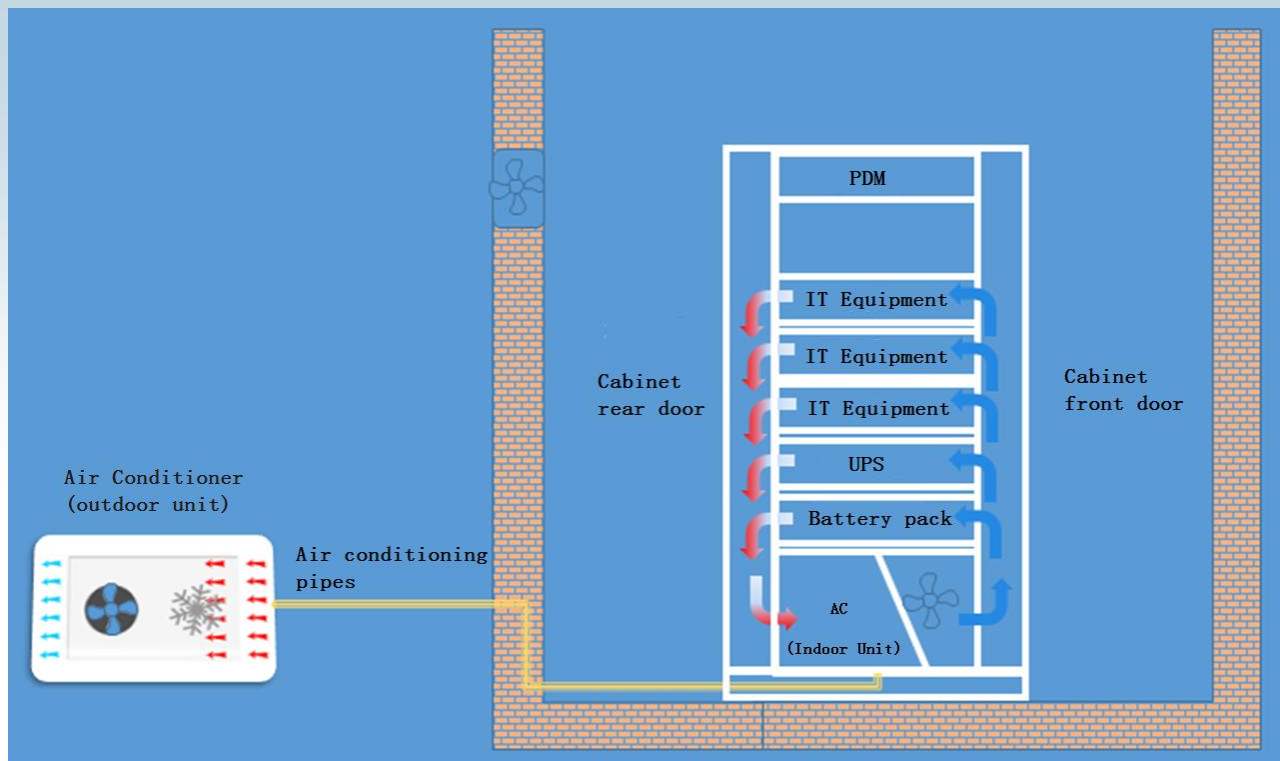


3.7kW Rack-mounted
AC outdoor unit



Rack-mounted precision air conditioner indoor unit (5U high) is a DC inverter air conditioner , which adopt DC inverter compressor, EC fan, electronic expansion valve, continuously variable outdoor fan .

Rack-mounted AC combine with closed aisles : Rack-mounted and cabinet form a closed cold (hot) aisle together to isolate hot and cold air.



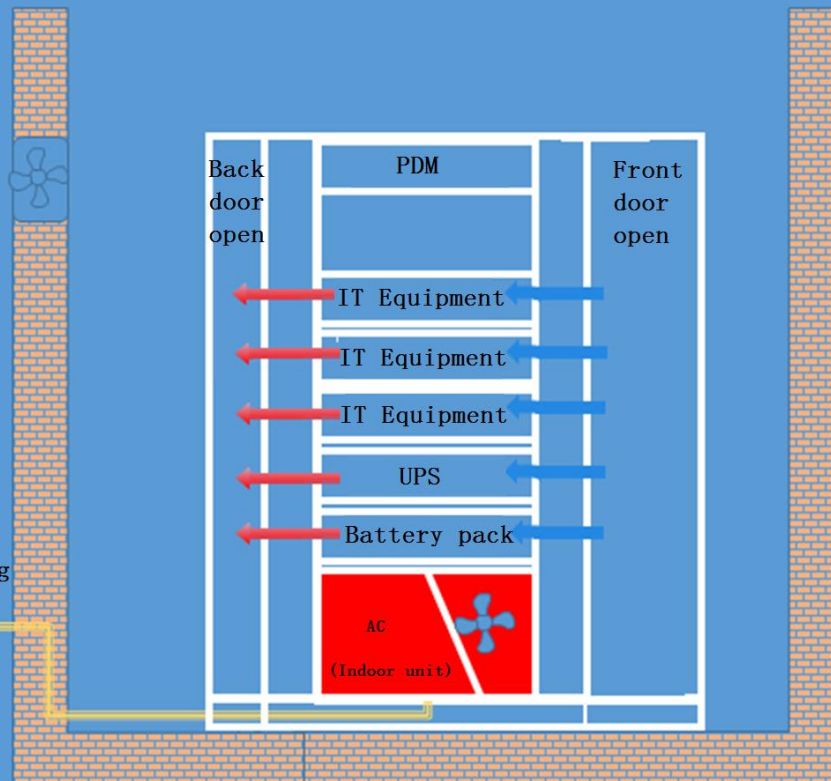
Front and back door are closed ,when AC is on normal mode of operation.

**when air conditioning failure
downtime, cabinet internal
temperature higher than the set
value, the front door and back door
of cabinet will open, and provide
management with the response time**

Air conditioning
(Outdoor unit)

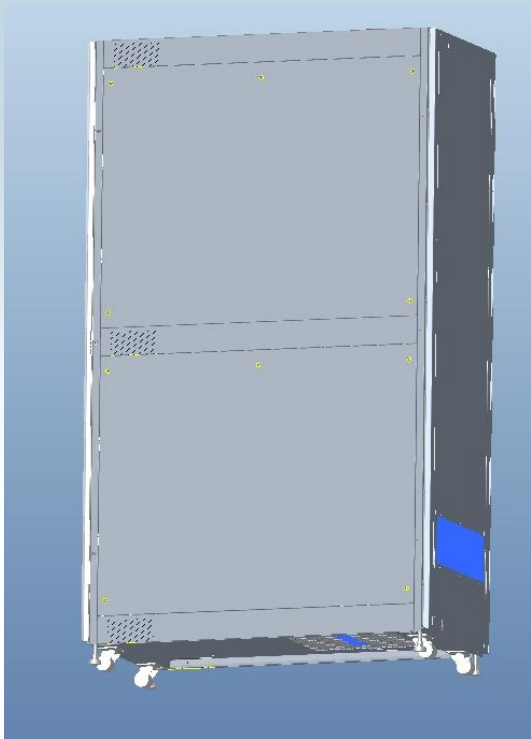


Air conditioning
pipes

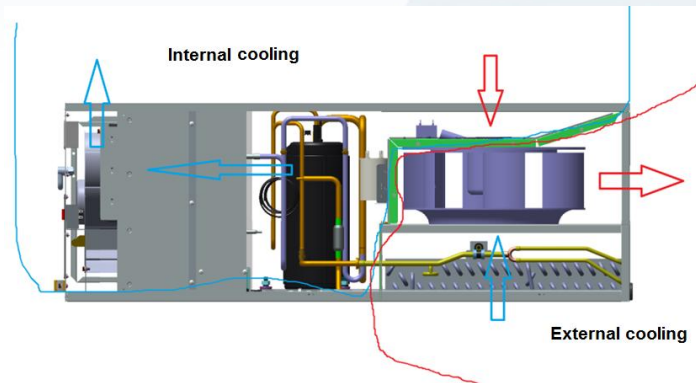
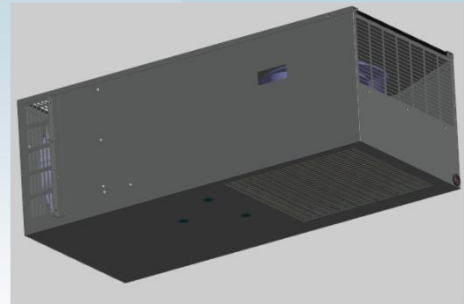


Front and back door will be popped up ,when AC has a breakdown.

iSmart Derivative Model——IS160

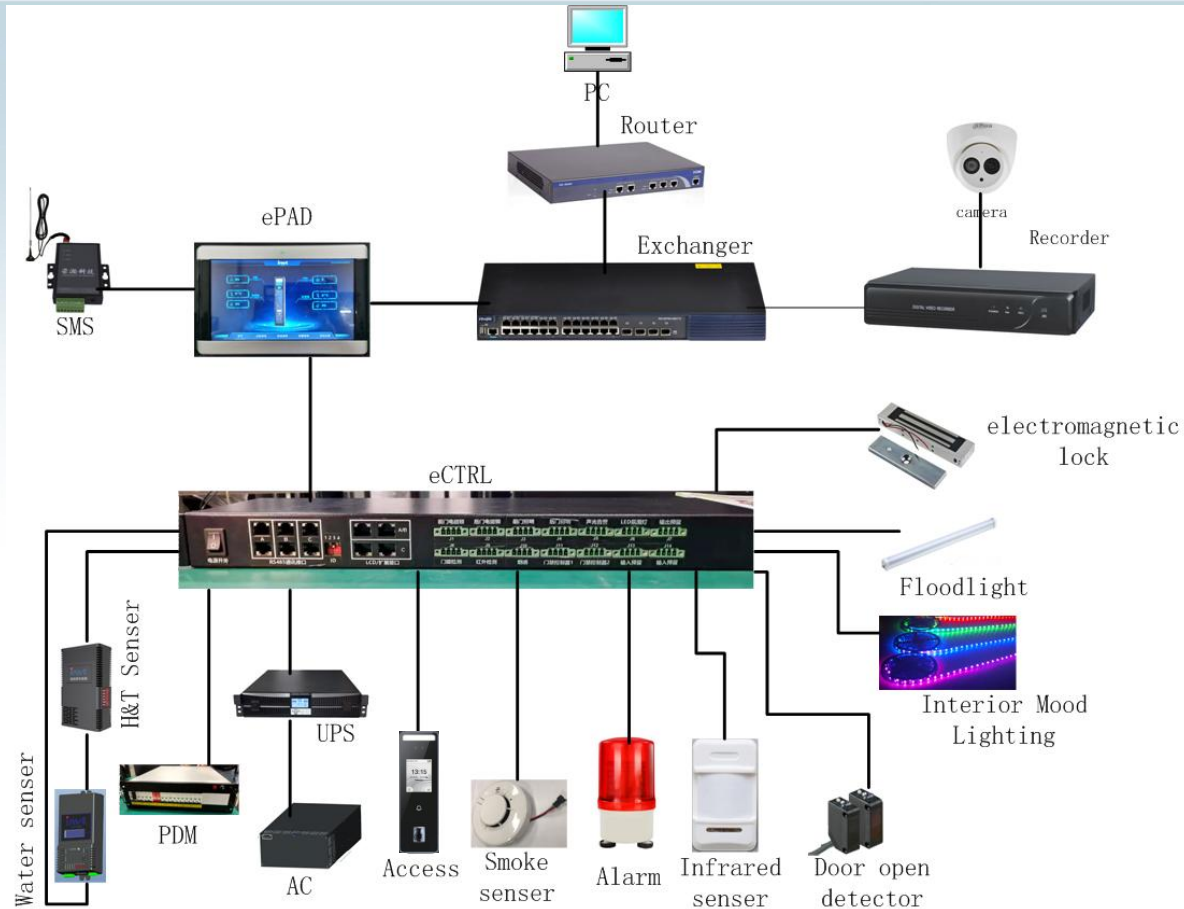


3.7kW integrated air conditioner without outdoor unit

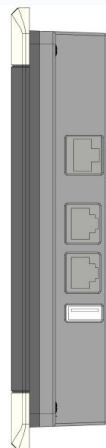


iSmart IS160 integrated cabinet solution with integrated AC, same size with IS100, the difference is that it use integrated AC without outdoor unit.

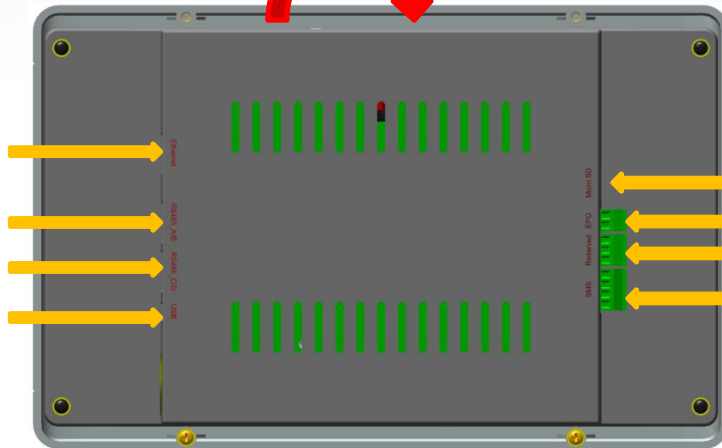
5. Monitor Management System



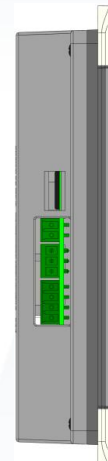
10.1 inches Intelligent Monitoring Screen



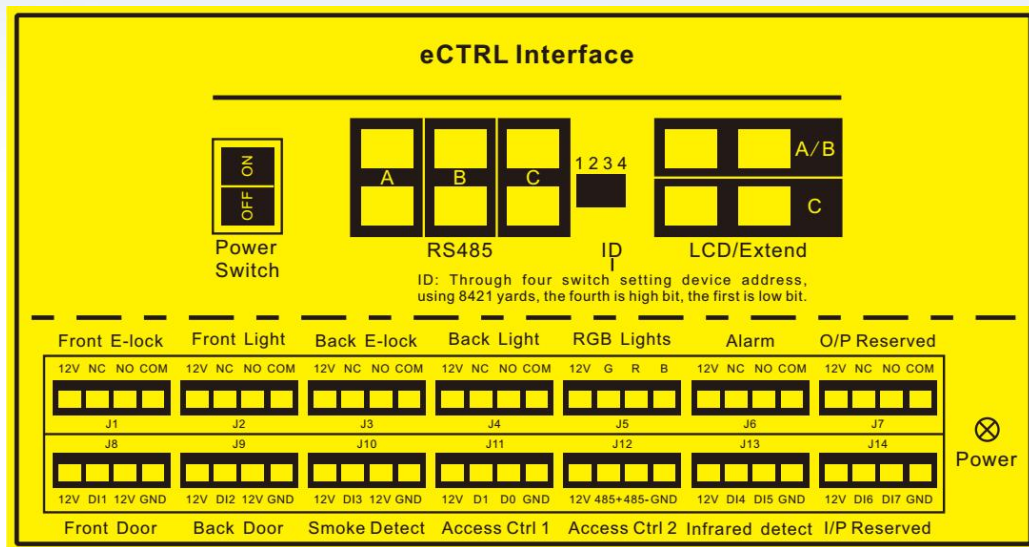
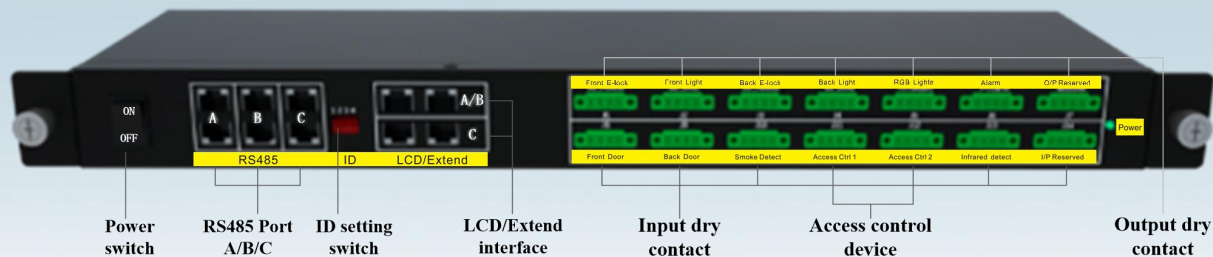
Network port
RS485-A/B
RS485-C/D
USB



SD card
EPO
Debug port
SMS



eCTRL-Expanded Control Module



The expanded control module is placed at the top back of the cabinet and does not occupy the available space of the cabinet. Its function is to provide 12V power supply for the 10.1-inch screen, communicate with the monitoring screen, control the door opening and closing of the cabinet, detect the status of the door, control the lights in the cabinet, environmental detection, and cabinet signal connection, etc.

Access Control

Access control all-in-one machine as a device for authority management, combined with an intelligent monitoring screen, can realize the functions such as opening and closing the cabinet door, identification, user management, password/fingerprint/face recognition setting and modification.



Item	Parameter
Voltage	12VDC
Recognition	Fingerprint, face recognition, ID card/IC card, password
Screen	2.4inch TFT HD color screen
Language	Chinese, English
Communication	TCP/IP
User number	Up to 3000 users; up to 10 administrators
Environment	temperature: -5°C--+45°C; Relative humidity: $\leq 95\%$ (non-condensing)
Dimension	185*58.5*19mm

Temperature and Humidity Sensor



Equipped with one in the cold aisle to monitor the temperature and humidity of the cold aisle. There are a network ports on the upper and lower of the sensor.

Item	Parameter
Temperature Detection range	-20°C-+85°C
Temperature Detection accuracy	±0.2°C
Operating temperature	-20°C-+80°C
Humidity detection range	0~100%
Humidity detection accuracy	±2%
Operating Voltage	12VDC
Dimension	125*64*37mm

Water Leakage Sensor



The system is equipped with a water leakage sensor to monitor the water accumulation at the bottom of the cabinet. There are 2 network ports on the top of the sensor.

Item	Parameter
Operating Voltage	12VDC
Operating environment	-10°C~+85°C, 10-95%RH (non-condensing)
Precision	Suitable for the sensor with positioning , 1m
Dimension	125*64*37mm

Smoke Sensor and Webcam(optional)



Smoke sensor is installed on the top of the cabinet. It will automatically reset after the smoke disappears.

Webcam is installed on the top of the cabinet or in the room .

6. HMI

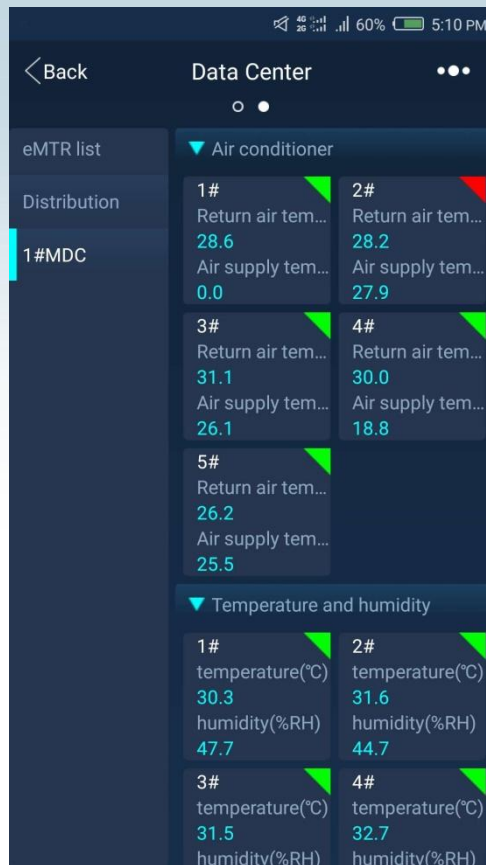
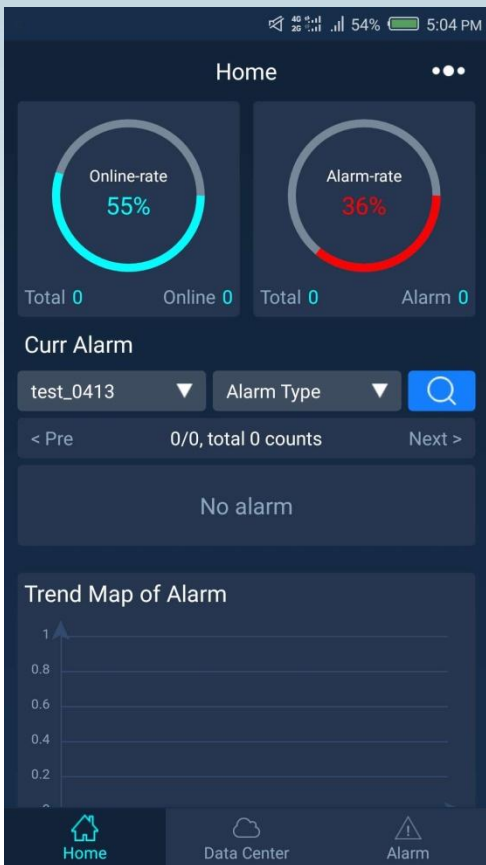
Local monitoring interface : 10.1-inch touch color LCD screen



WEB Monitoring Interface



Mobile APP interface



8. System Specifications

iSmart Series Integrated Cabinet Solution Enclosed Hot and Cold Aisle (low density)		
System	IT rated power	3kVA
	Mains	220Vac,50Hz/60Hz
	Ambient temperature	0-45°C
	Ambient humidity	10-95% (Relative humidity)
	IP Class	IP5X
	Altitude	1000m, >1000m need to be derated
Cabinet	Dimension (W*D*H)	600*1200*2000mm (Does not include casters)
	Space occupation	≤32U
	Display	10.1 inches touch screen
	Atmosphere lamp	Front RGB three-color light
	Lighting method	Front and rear LED
	Cable entry	Top and bottom
	Access control system	Fingerprint + Face recognition + IC&ID card +Password

Power Supply and Distribution System	Distribution module	Configuration	Main CB: 63A/2P, rack installation, with the indicator of operation
		Lightning protection	Class C lightning protection (Standard for 2P, optional for 1P+N)
		Height	3U
	UPS	Capacity	3kVA/6kVA
		Power distribution	Single phase in and single phase out
		Battery	Built-in battery or external battery cabinet
	PDU	Standard type	IEC socket*2pcs, 16 ports (13*10A+3*16A)
		Intelligent type	Optional for 24 ports
Monitoring System	Power and environment monitoring system		Intelligent integrated monitoring host
	Single cabinet control		Expanded control module
	Environment monitoring		Smoke sensor*1
			Temperature&humidity sensor*1
			Water leakage sensor*1
			Webcam (optional)
			Infrared detector (optional)
	Other device		SMS alarm (optional)

Emergency Ventilation	Emergency mode	Emergency pop-up door system
Cooling System	Air conditioner	Rack type (default constant temperature type)
	Rated cooling capacity	3.7kW
	Rated power consumption	1.2kW
	Rated air volume	700m ³ /h
	Drop height	-5m≤△H≤10m
Mechanical	Package dimensions	720*1338*2230mm
	Weight	188kg (without AC, UPS, battery pack)
	Cabinet color	Black (RAL9004)



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