iLegend Container Data Center Product Solution

Overseas Department

2022-8-06

Product Description

iLegend series container data center adopts integrated design (All-in-one), factory prefabricated installation, integrating power supply and distribution system, cooling system, IT cabinet, closed aisle system, monitoring system and fire extinguishing system in a container, forming a unit that can be operated independently, and the whole system is monitored and managed by eSite monitoring system, meeting the demand of outdoor small and medium-sized data center construction with fast deployment, fast delivery and flexible movement.

Product Features

Safe & reliable

IP55 protection

Redundant design

Automatic fire extinguishing system

Factory preinstalled

High efficiency

All-in-one design

Rockwool insulation

Precision refrigeration

Enclosed hot aisle

Simple installation

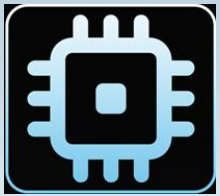
Plug and Play

Standardized shipping

Intelligent management

Comprehensive monitoring

Intelligent O&M



Safe and controllable

Self-developed core system

Application Scenario

Army camp deployment

Sports stadium construction

Oil exploration

Marine Science Research

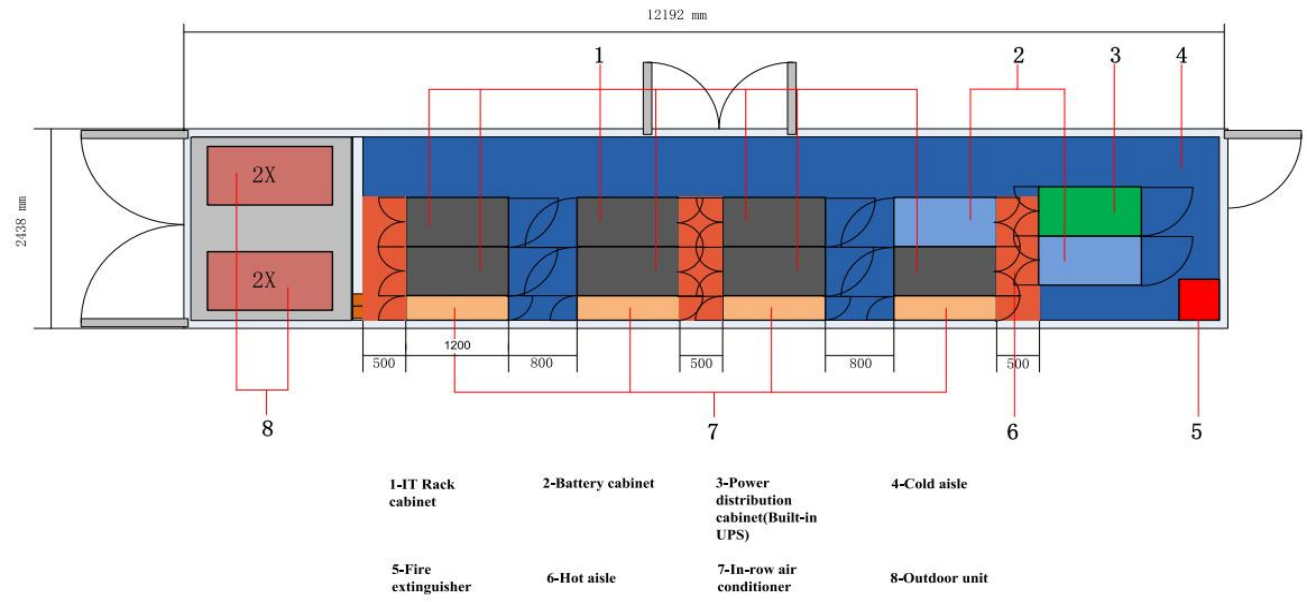
Disaster Recovery Center

Emergency Communications

Product Appearance （40ft & 20ft）

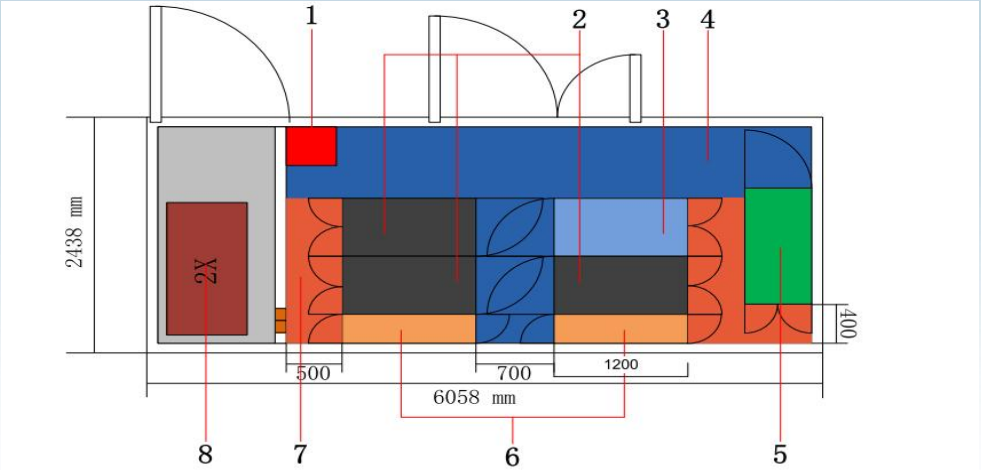
40ft and 20ft All-In-One structure, proprietary air conditioner outdoor unit cabinet, which meet the maximize heat dissipation requirements. Before leaving the factory, all the infrastructure devices are installed and commissioning, power on and ready to use.

Internal layout （40ft)



40ft container has the standard dimension of 2896mm × 2438mm × 12192mm (H*W*L), the internal all surfaces are installed with 50mm thick fire-retardant insulation color steel rock wool board, the container support up to 8 pcs 600mm server racks, container integrated PDC, cooling system, fire extinguishing system, escape instructions, access control system, monitoring system, lighting system, outdoor unit cabinet, comprehensive wiring system, internal CCTV monitoring system, etc., container reserved inlet and outlet pipeline, the site only need to lift fixed, the introduction of power cable and network cables.

Internal layout （20ft）

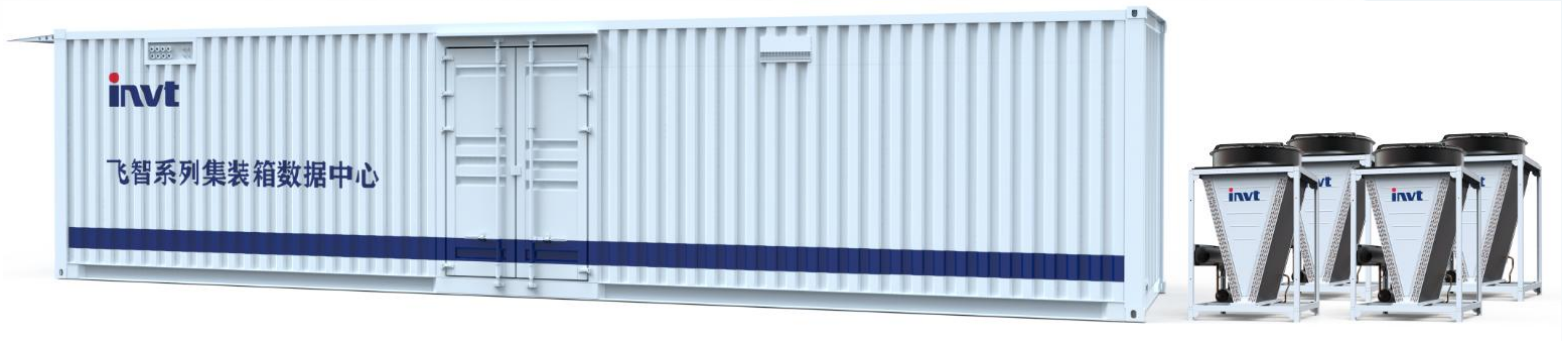


1-Fire extinguisher	2-IT rack cabinet	3-Battery cabinet	4-Cold aisle
5-Power Distribution Cabinet(Built-in UPS)	6-In-row air conditioner	7-Hot aisle	8-Outdoor unit

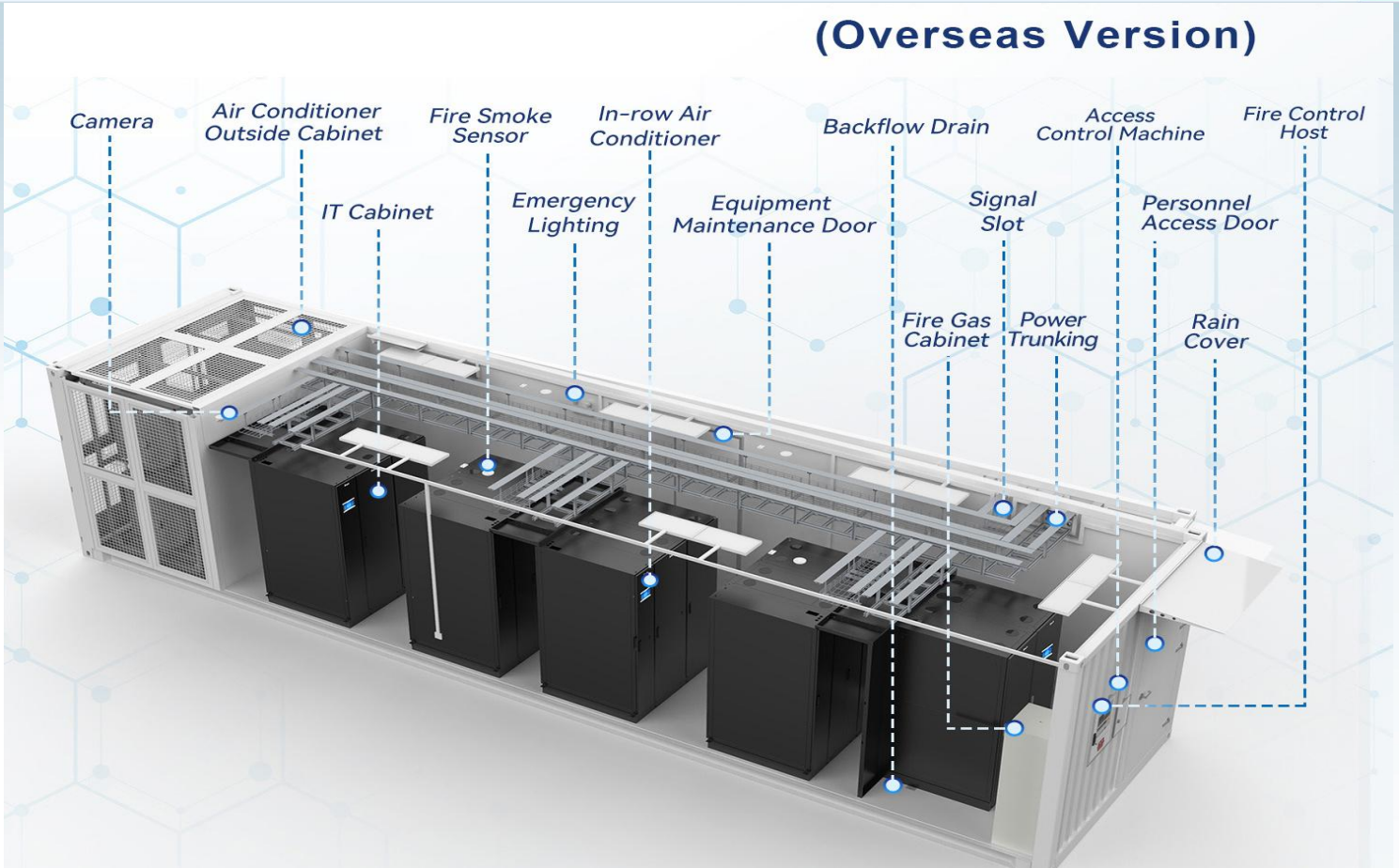
20ft container size 2896mm×2438mm×6058mm (H*W*L), the internal structure is the same as 40ft (except the cabinet quantity)

Outdoor unit installation (Customized)

The air conditioner outdoor unit can be put above the container or on the ground. (Special project)
Advantage: Container free up more space for IT rack.
Disadvantage: need for on-site installation of air conditioner copper pipe, R410A charging, commissioning and other work.

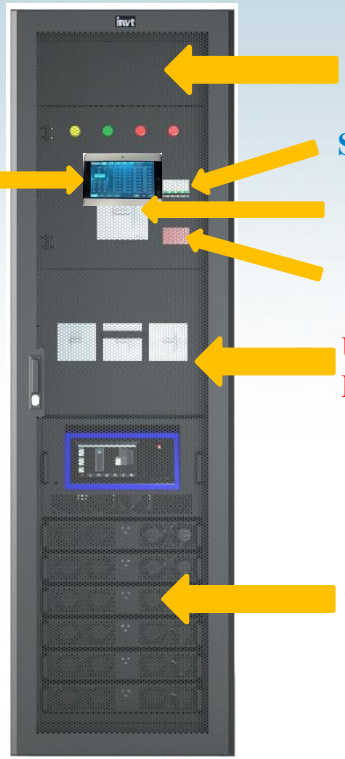


Internal components



Power supply and distribution system

iLegend all series with integrated power distribution system



Power Collection Module

7-inch screen

SPD breaker

Main input switch

SPD

Front View

UPS input, output Maintenance bypass switch

UPS (Within 150kVA modular

Top cable entrance

Output terminals

N & PE terminals

Output breakers

Rear View

Bottom cable entrance

Cooling System

In-row 12.5kW

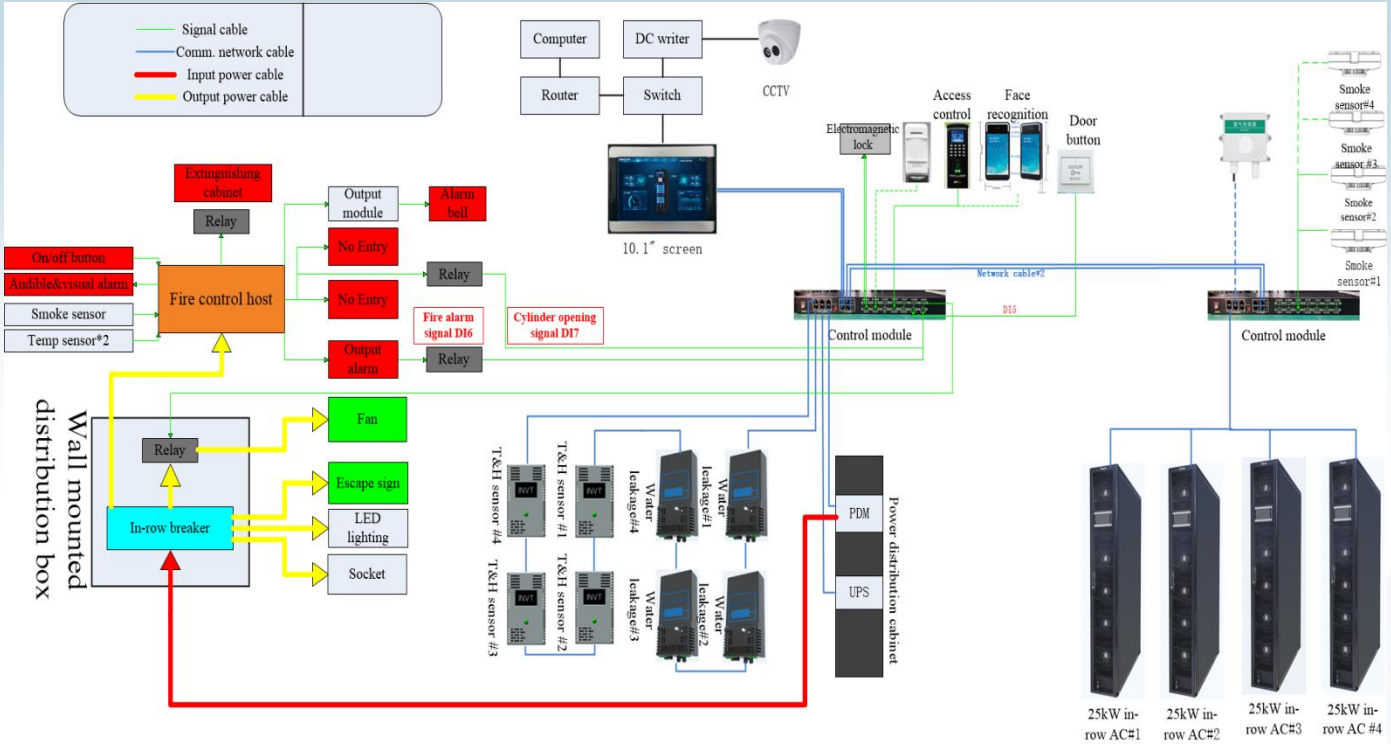
Condenser

In-row 25kW

Conventional condenser

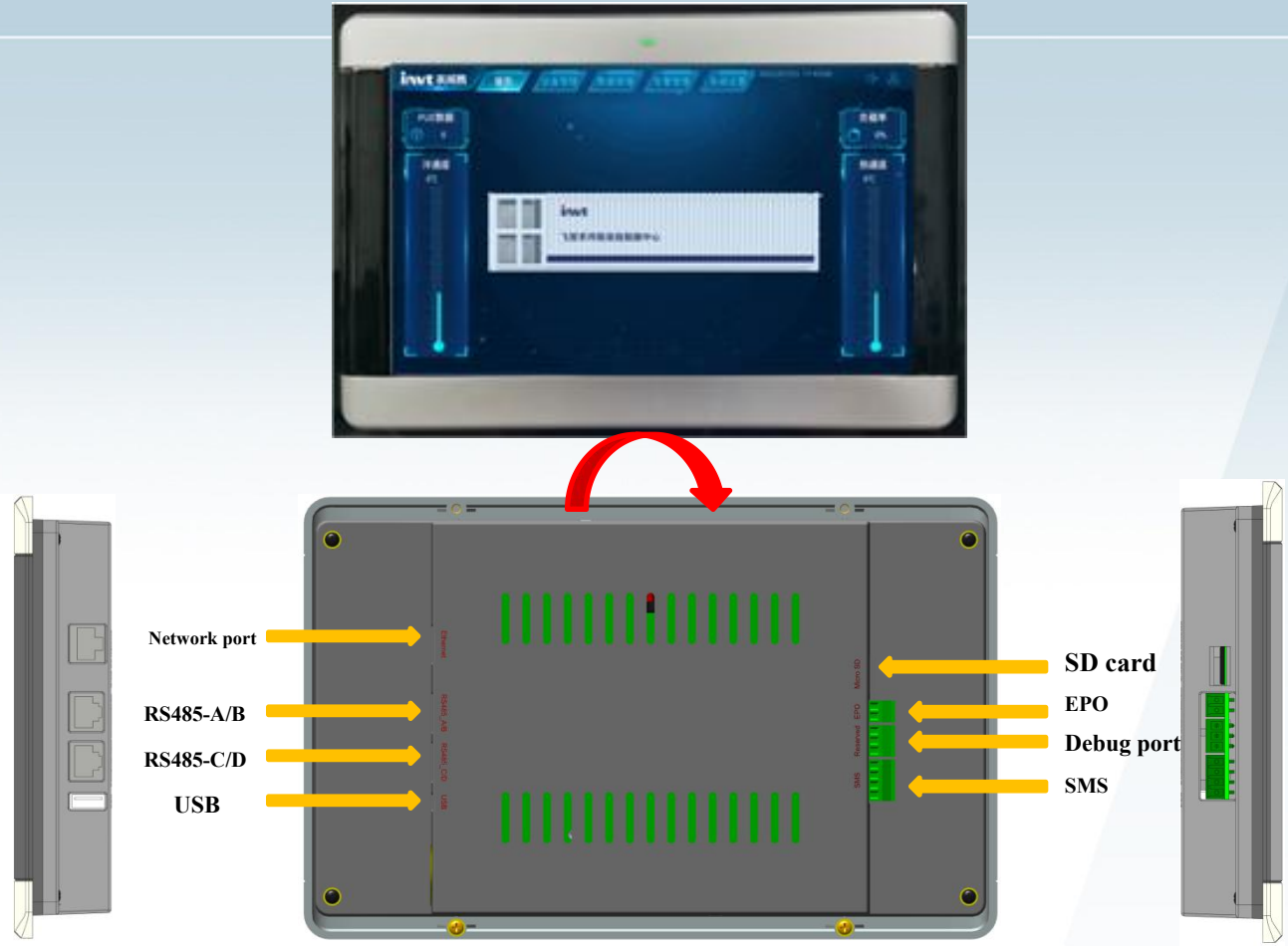
Centralized condenser

Power and environment system



- Power and environment monitoring system to achieve unified monitoring of UPS, power distribution, air conditioner, temperature and humidity, fire extinguishing system, access control system and other equipment
- Support access to the centralized monitoring platform to achieve remote supervision and unattended
- Access control system supports fingerprint, password, IC card, optional face recognition, etc.
- Support a variety of alarm methods, including APP, SMS, telephone, etc.
- The cold & hot aisles are equipped with cameras, and the outside of container can be optionally.

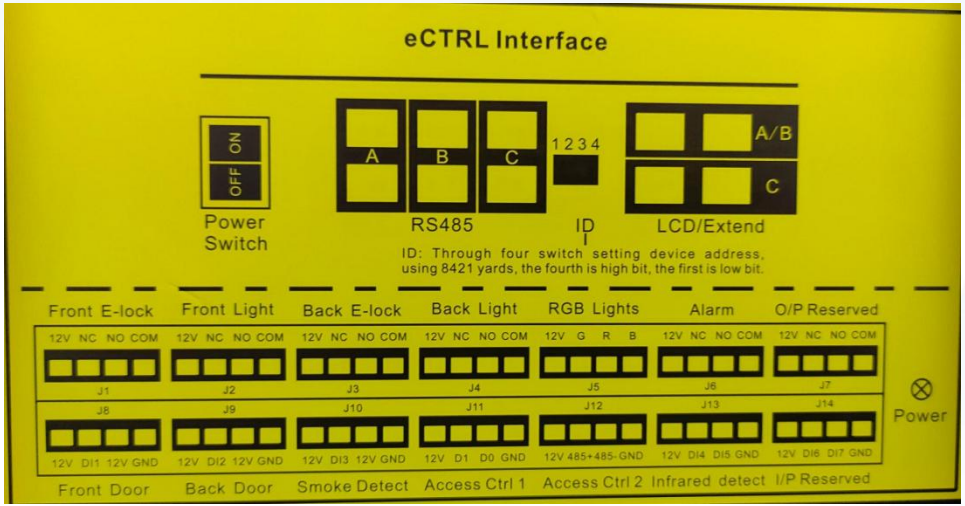
Intelligent monitoring screen ePAD-IS



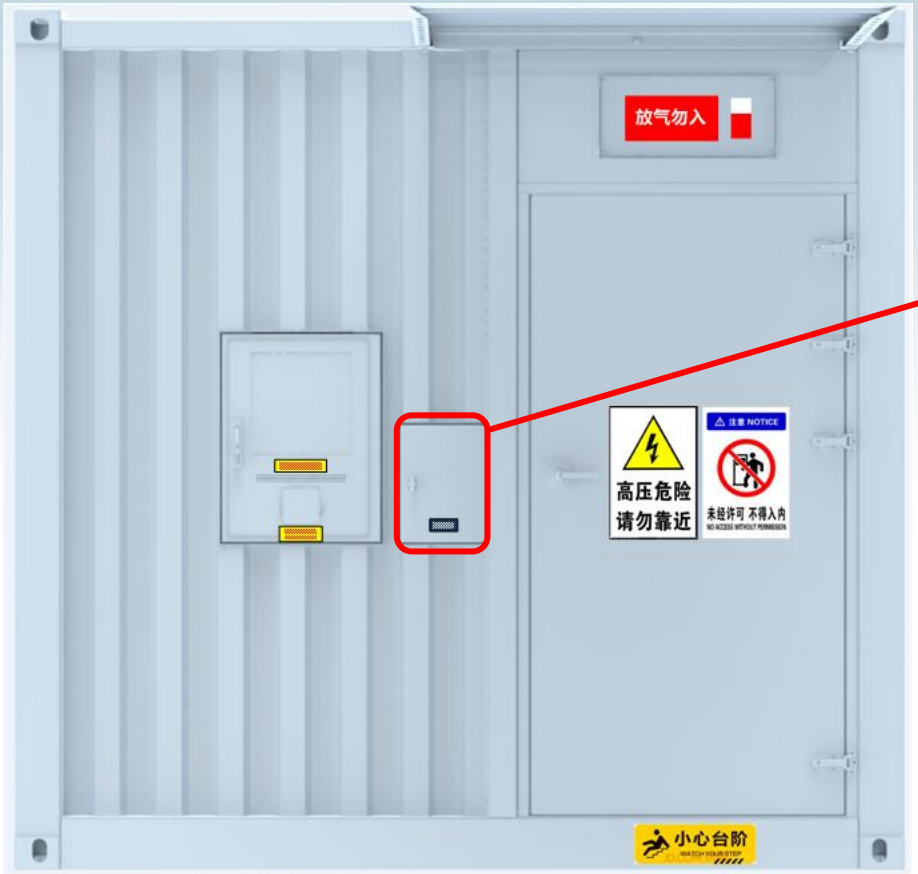
Cabinet control module

Cabinet control module is placed at the top the IT cabinet, one is installed in the host cabinet, and another one is installed in all slave cabinets.

It used for providing 12V power supply to 10.1 inch screen,, control & detect the container personnel access door, accept the linkage signal of the fire host, communicating with UPS & air conditioner, environmental detection etc.



Access control system (Fingerprint type default)



OR

Access control system as a device of authority management, combined with intelligent monitoring screen can realize the role of opening and closing the container personnel access door, identification, user management, password / fingerprint setting and modification.

Face recognition device as an option, connected to the cabinet control module, combined with the power and environment system can realize the role of opening and closing the container personnel access door, identity recognition, user management, etc.

Temperature and humidity sensor

Equipped with one in the cold aisle to monitor the temperature and humidity of the cold aisle. Another one in the hot aisle.

There are 2 network ports of the sensor.

Item	Parameter
Temperature Detection range	-40℃-+125℃
Temperature Detection accuracy	±0.2℃
Operating temperature	-20℃-+80℃
Humidity detection range	0~100%
Humidity detection accuracy	±4%
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.

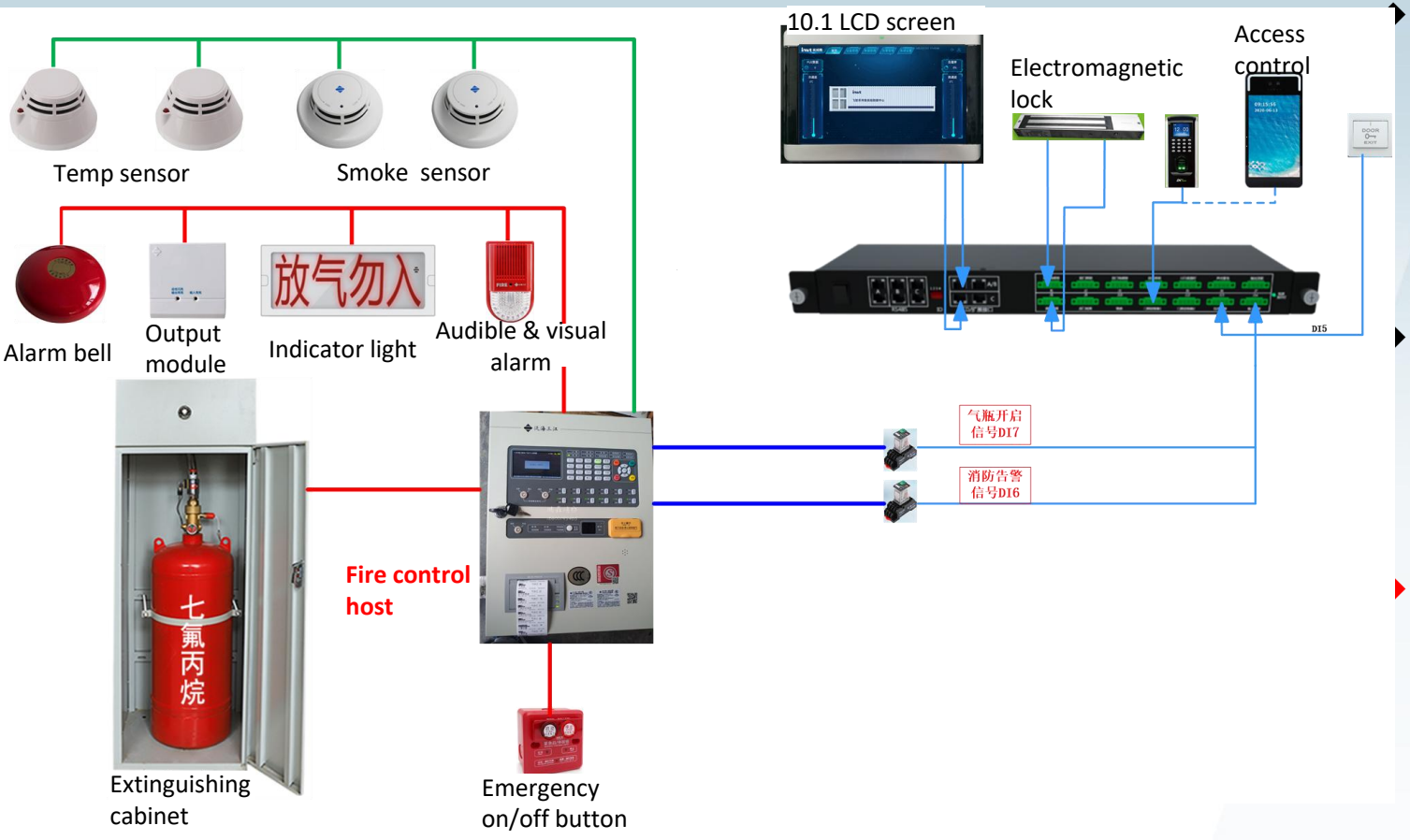
There are 2 network ports of the sensor.

Item	Parameter
Operating Voltage	12VDC
Operating environment	-20℃~+80℃, 0-95%RH (non-condensing)
Precision	Suitable for the sensor with positioning , 1m
Dimension	125*64*37mm

Smoke Sensor and Webcam

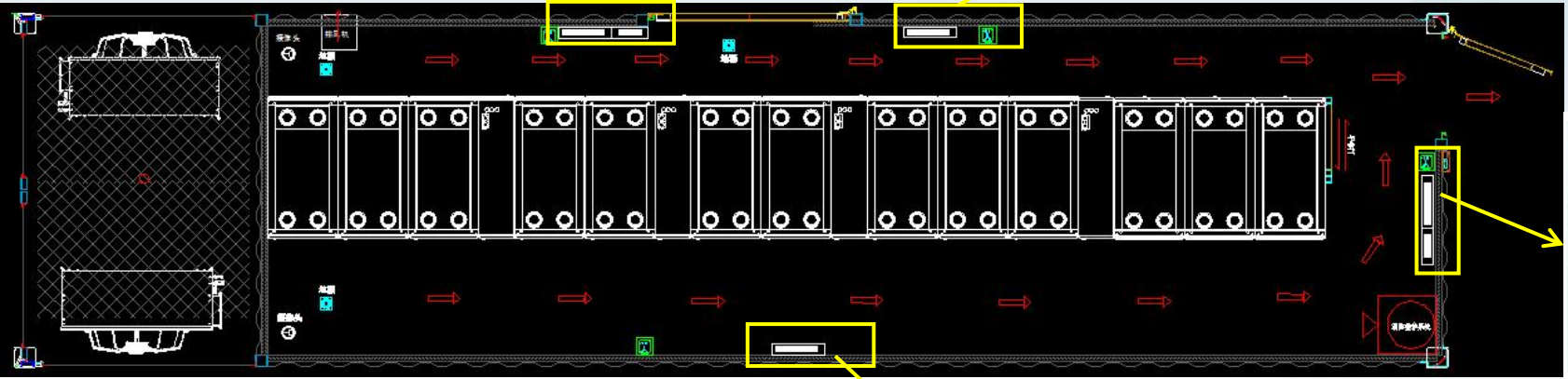
Smoke sensor (4pcs default),
Camera mounted on top of the access skylight (2pcs).

Fire extinguishing system



- Adopt automatic fire extinguishing system, flooding type fire extinguishing method, and the container is filled with extinguishing agent in a very short time to achieve rapid fire extinguishing function
- Cold and hot aisle are equipped with smoke sensing, temperature sensing, fire alarm and fire extinguisher on the side of the door inside the container
- Emergency start/stop button, manual/automatic conversion, audible/visual alarm, air release indicator are set on the outside of the container door

Safety evacuation system



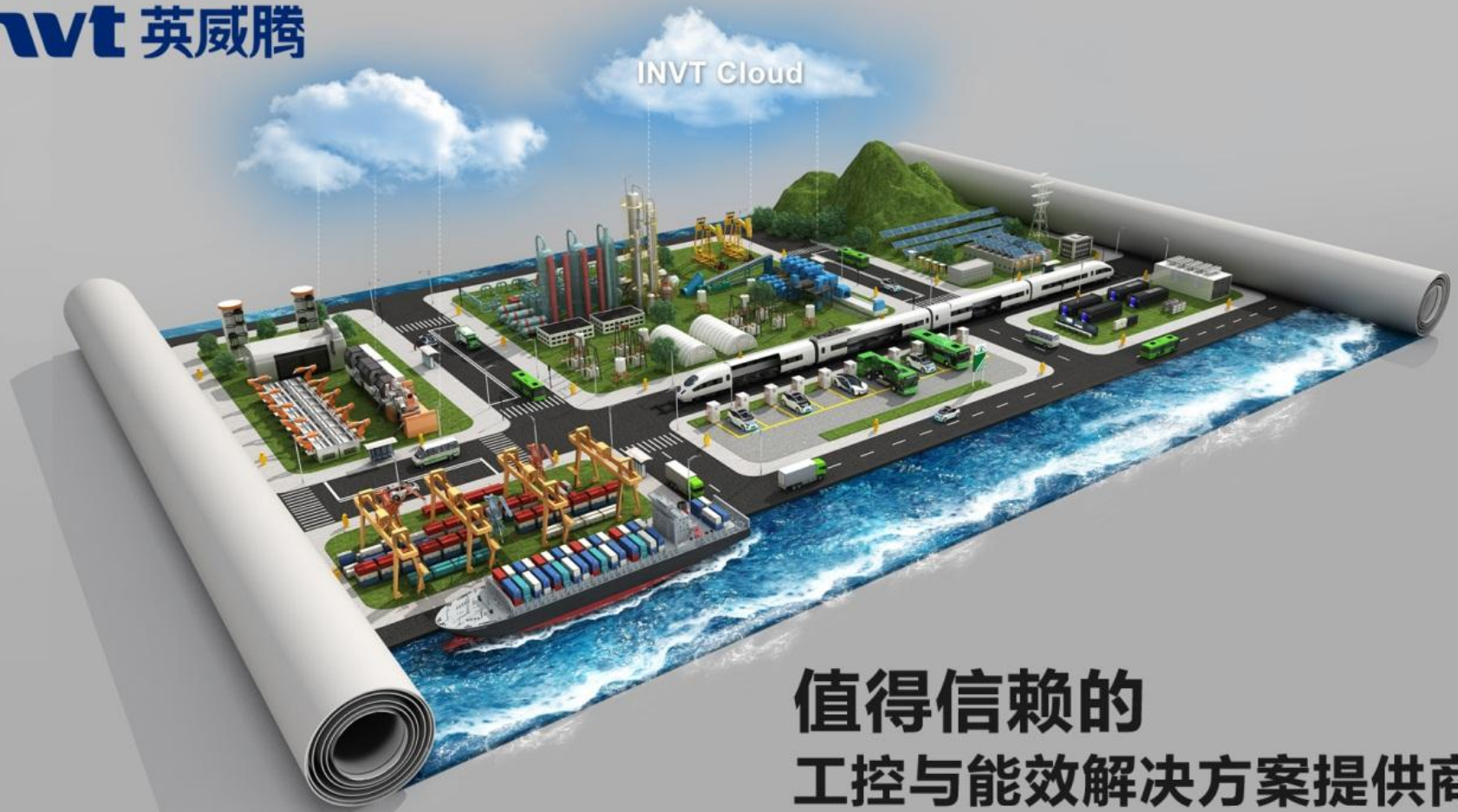
HMI interface

Local monitoring interface: 10.1-inch touch-screen color LCD

WEB monitoring interface

IoT Data Cloud System

Mobile APP interface



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