Trusted Data Center Energy Solution Provider

iSmart Series
Micro Integrated Data Center

Product Solution

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iSmart series of micro integrated intelligent data center

iSmart Product Introduction ▼

The iSmart micro integrated data center solution integrates UPS, air conditioner, power distribution module, supervision system, temperature and humidity detection, light and access control in a standard 19-inch server cabinet. All equipment is pre-installed and pre-commissioned in the factory. The on-site installation is easy and convenient, which can realize rapid deployment, occupy less area, and comes with remote web interface monitoring function, which can realize remote operation and maintenance of a site.

Product Features ▼

Safe and reliable

- All components follow domestic and international standardized production standards to ensure product quality.
- Pre-installation, pre-commissioning and other process are controlled at various levels to ensure product installation and operation safe and reliable.
- A single cabinet is a complete system, suitable for various complex scenes (dust, narrow space, no insulation measures, etc.).
- Integrated design, overall delivery, avoid system design problems.
- The emergency cooling fan can delay the channel overheating and reserves time for data backup.
- The cabinet integrates an intelligent monitoring system to ensure the safe and reliable operation of the computer room.

Easy installation and rapid deployment

- Modular design of power distribution, easy installation and maintenance.
- Rack-mounted air conditioner indoor unit, pipe thread connection, easy maintenance.
- The computer room does not need special decoration treatment, and the equipment is ready to use. Installation and commissioning cycle only need 3 hours.
- A single cabinet is a complete system, which can be easily and quickly expanded to 2-3 cabinets side by side.

Efficiency and energy saving

- Proximal refrigeration, high-efficiency power supply, and the overall annual average PUE of single cabinet ≈ 1.30.
- The power distribution, UPS, monitoring, and refrigeration cabinets are integrated to save space.
- Engineering free design, free decoration and wiring, remote operation and maintenance are not on duty, saving TCO.

Intelligent management

- The monitoring system is extensible and compatible with third-party monitoring systems; friendly human-computer interface.
- Support local and remote WEB interface access, SMS alarm function.

Applicable Scene ▼

- Computer rooms of medium and small enterprises, large enterprises, government branch offices.
- Financial business offices, communication business halls and base stations.
- Commercial retail institutions, tourist attractions.
- Gas stations, toll stations, smart buildings.
- Grassroots public security agency, government agency.

Floor area ▼

The overall area of a single cabinet is 0.72㎡, which is suitable for computer rooms within 10-20 ㎡.

System Capacity ▼
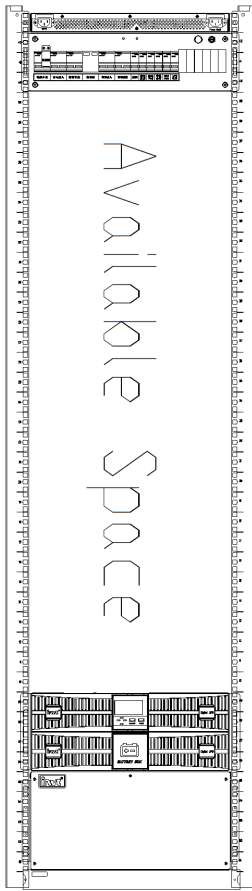
Capacity of single cabinet≈3kVA
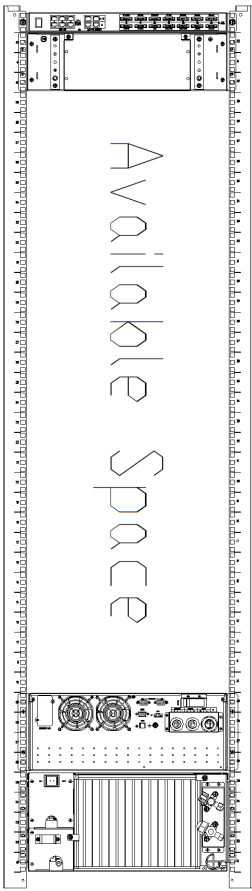
Structure and Composition ▼

Infrared Detectors

Single Cabinet Control Module

Power Distribution Module

PDU

Air Conditioner

Webcam

Audible and Visual Alarm

Intelligent Monitoring

Access Control

UPS

Standard Parts and Optional Parts List ▼

Standard Parts	Intelligent Control Screen	Single Cabinet Control Module	Power Distribution Module	PUD	Ambient Light	Lamp
	Outdoor Unit	Indoor Unit	Access Control	Temperature& Humidity Detector	Water Immersion Detector	IC Card*1
Optional Parts	UPS	Infrared Detector	Blind Plate	Webcam	SMS Alerter	Audible and Visual Alarm
	Floating Nut	Battery Pack	Battery Cabinet	IC/ID Card Guide	Guide	Tray

Product Layout Diagram ▼

Available Space

Available Space

Front View

Rear View

Airflow Reference Chart ▼

Cold channel

IT equiment

Hot channel

Air conditioner

Note: The layout can be adjusted according to the equipment layout.
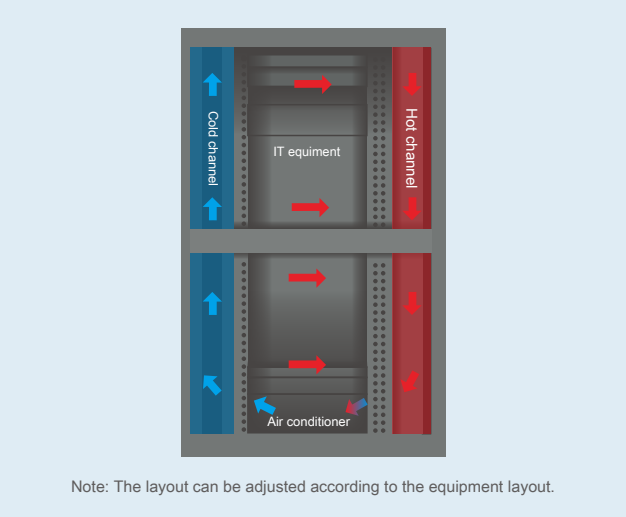
Application Scenario ▼

Product Parameter ▼

| iSmart Series Micro Integrated Data Center Enclosed Hot and Cold Aisle (low density)		
System	IT rated power	3kVA
	Mains	220Vac,50Hz/60Hz
	Ambient temperature	0-45℃
	Ambient humidity	10-95% （Relative humidity）
	IP Class	IP5X
	Altitude	1000m, dereating for >1000m
Cabinet	Dimension（W*D*H）	600*1200*2000mm（Without caster）
	Space occupation	≤32U
	Display	10.1'' touch screen LCD
	Ambient Light	Front RGB three-color ambient light
	Lighting method	Front and rear LED
	Cable entry	Top and bottom
	Access control system	Fingerprint + swipe card（IC&ID） + digital password three in one
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）
	UPS	Height	3U
		Capacity	3kVA/6kVA
		Power dstribution	Single phase in and single phase out
		Battery	Built-in battery or external battery cabinet
	PDU	Normal type	IEC C13*2pcs, 16 ports (13*10A+3*16A)
		Intelligent type	Optional for 24 ports
Monitoring System	Supervision system	Intelligent integrated monitoring host
	Single cabinet	Single cabinet control module
	Eenvironment monitoring	smoke detector*1
		Temperature&humidity detector*1
		Water leakage detector*1
		Webcam（optional）
		Infrared detector（optional）
	Other detector	SMS alarm （optional）
Emergency Ventilation	Emergency measures	Emergency pop-up door system
Cooling System	Air conditioner	Rack type （Standard for constant temperature）
	Rated cooling capacity	3.7kW
	Rated power consumption	1.2kW
	Rated air volume	700m³/h
	Drop height	-5m≤△H≤10m
Mechanical	Package dimensions	720*1338*2230mm
	Weight	188kg (without AC, UPS, battery pack)
	Cabinet color	Black (RAL9004)

eSite Cloud map monitoring system

Product Introduction ▼

The eSite cloud map monitoring system adopts the centralized monitoring of the cloud Internet of Things, the composition of the local supervision system host and the expandable control module, providing a set of the computer room monitoring system with complete functions, flexible deployment and high reliability
- Support the intelligent detection of all equipment room equipment such as UPS, air conditioning, power distribution, environmental testing, security, fire protection, etc.;
- Support multiple monitoring methods such as local LCD, local web, cloud web, mobile APP, etc.;
- Support multiple alarm methods such as telephone, SMS, email, audible and visual alarm;
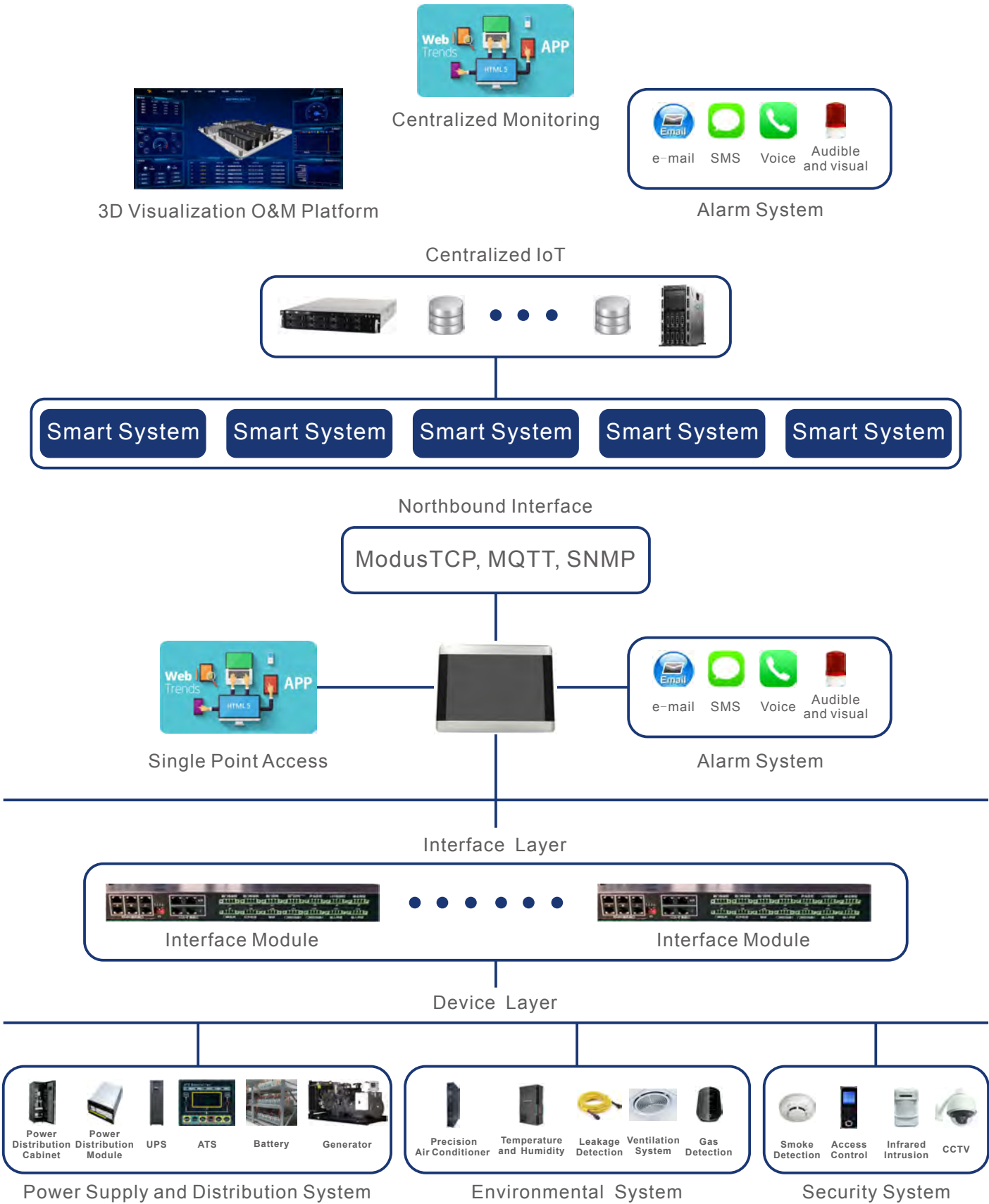- Support multiple northbound interfaces such as MQTT, ModbusTCP, SNMP, etc.;

Monitoring Interface ▼
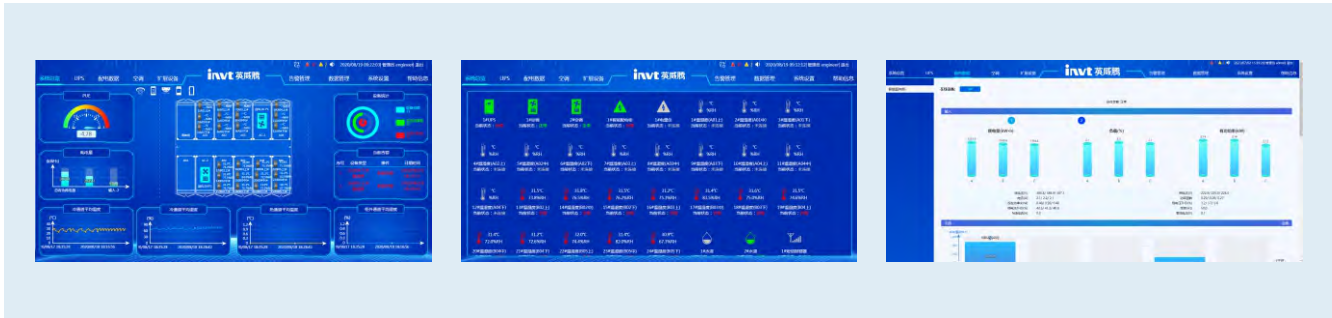
Performance Characteristics ▼

Complete history record, with event processing record function, and download and export

WEB access setting, no need for B/S structure software Installation

Standardized connection makes implementation easier and faster.

Diversified warning methods, such as SMS, mail files, sound and light.

Modular design,easy to install and maintenance.

32G Built-in large-capacity SD card can store long time history events and data records.

LCD monitor
Mainframe visual management

Monitoring Network Diagram ▼

Centralized Monitoring

3D Visualization O&M Platform

Web Trends HTML5 APP

e-mail   SMS   Voice   Audible and visual

Alarm System

Centralized IoT

Smart System   Smart System   Smart System   Smart System   Smart System

Northbound Interface

ModusTCP, MQTT, SNMP

Web Trends HTML5 APP

Single Point Access

e-mail   SMS   Voice   Audible and visual

Alarm System

Interface Layer

Interface Module   Interface Module

Device Layer

Power Distribution Cabinet   Power Distribution Module   UPS   ATS   Battery   Generator

Precision Air Conditioner   Temperature and Humidity   Leakage Detection   Ventilation System   Gas Detection

Smoke Detection   Access Control   Infrared Intrusion   CCTV

Power Supply and Distribution System   Environmental System   Security System

Rack Air Conditioner

Split-type ▼

The VCS series split-type variable frequency air conditioner provides refrigeration for the cabinet-level data center and maintains the temperature and humidity in the data center within the required range to ensure the safe operation of servers, power supplies and other equipment. Mainly used in single-cabinet, multi-cabinet micro-module computer room and micro-module computer room with high thermal density. High-efficiency refrigeration close to the heat source. Provide efficient, energy-saving, and reliable cooling services for users' cabinet-level data centers.

Integrated-type ▼

The VCS series integrated rack air conditioner mainly provides temperature control solutions for single-cabinet/multi-cabinet micro-module data room. High-efficiency refrigeration close to the heat source. It is mainly easy to install, especially it can be pre-installed into a single cabinet, and there is no need to commissioning test the air conditioner on site.

Feature ▼

- Compa. ble with various cabinets, embedded rack installation.
- Occupy less cabinet units and save more cabinet space.
- High temperature of air-return design, high sensible heat ratio and high energy efficiency.
- Come with RS-485 communication port.
- Use environmentally friendly green R410A refrigerant.

Indoor Unit ▼

VCS***	unit	3.5kW (Rack split type)		3.5kW (Rack integrated type)	
Configuration	-	Constant Temp	Constant Temp&Humidity	Constant Temp	Constant Temp
Test Condition of Total Cooling Capacity		Indoor return air dry bulb temperature: 37°C; relative humidity: 24%; outdoor dry bulb temperature: 35°C			
Total Cooling Capacity[2]	kW	3.7	3.7	3.7	3.7
Sensible Cooling Capacity[2]	kW	3.7	3.7	3.7	3.7
Air Output	m^3/h	700	700	700	700
SHR	%	100	100	100	100
Heating Capacity[3]	kW	1	1	1	1
Humidifying Capacity (Standard)	kg/h	-	0.5	-	-
Air Compressor (Standard)	/	DC Frequency Conversion		Constant Speed	
Voltage	V	220	220	220	220
Frequency	Hz	50/60	50/60	50	60
Phase	P	1	1	1	1
Full-Load Current	A	13.5	13.6	13.5	13.5
Weight	kg	27	30	62	62
Width	mm	440	440	440	440
Depth	mm	800	800	980	980
Height	mm	219 (5U)	219 (5U)	352 (8U)	352 (8U)

Outdoor Unit ▼

VCP***	Unit	5	/
Voltage	V	220	/
Frequency	Hz	50	/
Phase	P	1	/
Width	mm	900	/
Depth	mm	340	/
Height	mm	605	/

Integrated service system

Applications ▼

Excellent operation management ▼

Process-based standardized management realizes high-efficiency, quality and cost management.

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Sales order    Delivery management    Cost management
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- Sales prediction
- New product development and upgrade
- Provider
- Supplier selection and management
- Materials storage and management
- Production plan management
- Customer
- Materials procurement
- Outsource processing
- Product tally/packing/delivery
- Customer
- Custom design
- Sales order
- Order delivery coordination
- Manufactring shop processing

Implement a fully integrated service system, with customer demand as the starting point, customer satisfaction as the end point, and carry out product life cycle control.

- On-site survey
- Deep design
- Project design
- Construction
- Feasibility Report
- User trainning
- Selling service
- Project implementation
- invt
- Before-sale service
- After-sales service
- Professional consultation
- Remote guidance
- Demand analysis
- expert diagnosis
- On-site service

Education Industry

- Nanjing University of Posts and Telecommunications
- Xinchang College, Zhejiang Radio and Television University
- Xinchang County Chengdong Experimental School
- Xicheng Kindergarten, Jintan District, Changzhou City
- Hebei Dingxing Middle School
- Taiyuan University of Technology
- Harbin Songjiang Education Bureau
- Nanjing Agricultural College
- Fangshan Branch of Nanjing Foreign Language School
- Shaanxi University of Technology
- Taiyuan Normal University
- Sinan Middle School of Guizhou Province
- Tianjin No. 100 Middle School

Medical Industry

- Heilongjiang Cancer Hospital
- Shantou Chenghai Maternity and Child Health Hospital
- Yangchun Gangqiao Hospital of Yangjiang City
- Xiangtan County Maternal and Child Health Hospital
- Haicheng Central Hospital
- Pingtang County People's Hospital
- The First People's Hospital of Wuhu
- Shanxi Cancer Hospital
- Shanwei City Health and Family Planning Bureau
- Zhangjiakou Maternity and Child Health Hospital
- Baishui County Hospital of Traditional Chinese Medicine
- People's Hospital of Zheng'an County, Zunyi City
- Beishan Hospital, Wuzhou Workers' Hospital

Government Agency

- Zhuhai City Health and Family Planning Bureau
- Shenzhen Yantian Commission for Discipline Inspection
- Kunming Highway Bureau
- Qinghai Water Resources Bureau
- Suzhou City Government Building 5
- International Migration Administration
- Yugan County People's Government
- Wuzhong District Political and Legal Committee
- Yuncheng Grain Bureau
- Changzhou Xinbei District Government
- Anyang Meteorological Bureau
- National Bureau of Statistics Zhuzhou Investigation Team
- Education Bureau of Songbei District, Harbin City

Judicial and Enforcement Agency

- Dali City People's Procuratorate
- Hubei Provincial People's Procuratorate
- Luliang City Intermediate People's Court
- Heping District People's Court of Shenyang City
- Beipiao Intermediate People's Court
- Rizhao Court of Qingdao Maritime Court
- Dongchuan Public Security Branch of Xining City
- Public Security Bureau of Binzhou City, Xi'an
- Hengkou Public Security Bureau of Ankang City
- Le'an County Forest Public Security Bureau
- Baimalong compulsory drug rehabilitation, Hunan Province
- Chaling County Prison, Zhuzhou City
- Bingtuan Prison Administration Command Center

Service Industry

- Zhumadian Children's Palace, Henan Province
- Taicang Radio and Television Station, Jiangsu Province
- Suqian Radio and Television Station, Jiangsu Province
- Jilin TV Station
- Huaibei Daily News
- Computer Room of Hengyang Hongguang Logistics Park
- Jiudongtian Tourist Scenic Area
- Zhijindong Scenic Area, Bijie City
- Wulingyuan Scenic Area, Zhangjiajie City
- Wuhan Botanical Garden, Chinese Academy of Sciences
- Dongying Huatai Hotel
- Changsha Convention and Exhibition Center Hotel
- Lhasa Wanda Shopping Center, Tibet Autonomous Region

Other Applications

- Zhangjiagang Power Supply Bureau
- Changsha Research Institute of Mining and Metallurgy
- Zhangjiagang Feixiang Chemical Computer Room
- Hebei Chengan Rural Credit Cooperative
- Kunlun Bank, Urumqi Yingbin Road Sub-branch
- Changde Economic Investment Data Center
- Hengyang Rural Commercial Bank
- Jilin Agricultural Credit Company
- Suzhou Wuzhong Economic Development Zone
- Lanzhou New District Flower Auction Center
- Huaqin Communications Wuxi R&D Center
- CRRC Changde Production Base
- Office Building of Hami Tobacco Company