

Trusted Provider of Network Power Solution

iWit Series Intergrated Cabinet Solution

Product Solution



iWit Series

Integrated small and medium Data Center

▼ iWit Product Introduction

The iWit series integrated data integrates all needed equipment into cabinet with closed hot and cold aisle, kinds of sensors monitored and managed by power and environment system, which standardize the whole data center to smaller space, comes with remote intelligent controlling, provides safe and reliable operation environment. No need for professional engineer maintenance which simplify construction, operating and maintenance.



► Product Features

➕ Safe and reliable

- All components follow domestic and international standardized production standard 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.
- Integrated design, improve overall system reliability.
- Intelligent pop-up door system ensure the continuous operation of the system effectively.
- Redundant design, integrated intelligent monitoring system, ensure the safe and reliable operation of the computer room.

✂ Rapid installation

- Engineering free design, suitable for various scenes, install rapidly.
- Modular design of power distribution, hot-swappable ,easy installation and maintenance.
- The system does not need special decoration treatment, the equipment is ready to use. Installation and commissioning cycle only need 4-6 hours.
- A single cabinet is a complete system, which can be easily and quickly expanded to 16 cabinets side by side.

🔄 High efficiency and energy saving

- Array/rack mount refrigeration, precise cooling, greatly improve cooling efficiency, compared with traditional computer room energy saving 25%.
- The system adapt N+X online high-efficiency modular UPS, equipped with intelligent sleep function making system save more energy.
- Remote operation and maintenance, human-free design, saving TCO.
- Closed hot and cold channels, cooling effectively, realize air inner circulation to reduce operating costs.

🏠 Intelligent management

- Intelligently monitor power supply and environment status.
- Instant and real-time alarm through various ways(SMS, sound and light, e-mail,phone).
- The monitoring system is compatible with many parts(screen, remote APP, local LCD, remote WEB); friendly HMI.
- Provide kinds of interface(ModbusTCP, MQTT, SNMP), easy to system integration.

► Applicable Scene

Computer rooms of medium and small enterprises, government branch offices, commercial, medical, education, power, communication and other scenes.



Communication



Commercial



Government



Medical



Education



Power source

► Floor area

The overall area of a single cabinet is 0.9m², which is suitable for computer rooms within 20-60m².

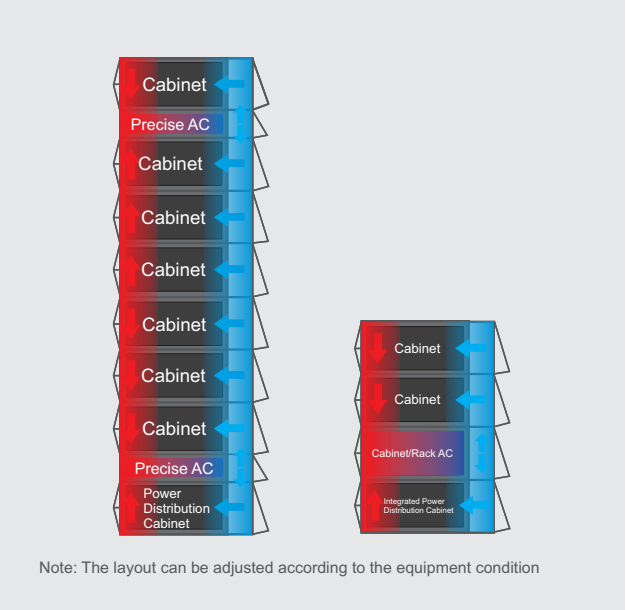
► System Capacity

Capacity of single cabinet≈3~10kVA

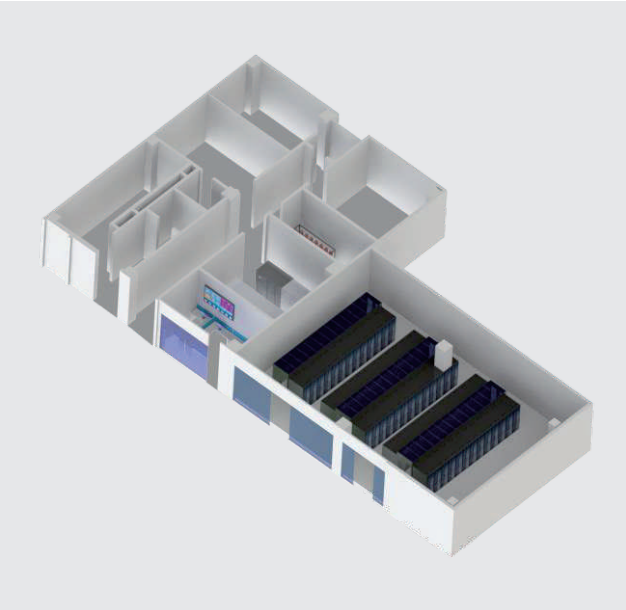
► Structure and Composition



► Airflow Reference Chart



► Application Scenario



► Parameters

iWit Series small and medium size Integrated Data Center Solution (closed hot and cold aisles)			
Overall plan	IT cabinet number	2-15 cabinets	
	Mains	Single Phase:220Vac, 50Hz, 1Ph+N+PE; Three Phase:380Vac, 50Hz, 3Ph+N+PE	
	Ambient Temperature	-20-45℃	
	IP Class	IP5X	
	Altitude	1000m, derated for>1000m	
Cabinet	Dimension(W*D*H)	600*1400*2000mm(Without caster)	
	Display	10.1 inch touch screen LCD	
	Lighting	Front and rear LED, front Tri-color LED	
	Cable entry	Top and bottom	
	Door Security	Fingerprint+IC/ID card+Password	
Power supply and distribution system	Distribution system	Total input current	63-200A
		SPD	C Level
	UPS	Capacity	10kVA-90kVA
		Input Voltage	Three Phase:208Vac, 50Hz, 3Ph+N+PE; Three Phase:380Vac, 50Hz, 3Ph+N+PE
		Operation Mode	Three-phase in, three-phase out
		Battery	Battery pack/cabinet, ±120VDC
	PDU	Normal	2pcs, 16ports(13*C10A + 3*C16)
		Intelligent	Intelligent PDU 24 ports (optional)
Refrigeration system	Power Supply		Mains power supply
	Cooling Capacity		3.7-25kW
	Installation Method		Rack-mount/array can be chosen
	Inlet Outlet Method		Air flow out from ahead and circle to back
	Compressor Type		Variable frequency
Monitoring system	Dynamic Environment Monitoring		Intelligent intergrated monitoring host
	Environment Monitoring		Standard power collection
			Smoke sensor*1, can have an addition
			Temperature&humidity sensor(optional)
			Water leakage sensor*1
			Webcam(optional)
			Infrared detector(optional)
	Other Optional Accessories		SMS alarm(optional)
			Sound and light alarm(optional)

The above parameters are for reference only, the actual configuration parameters are based on customer needs.

► The difference with traditional solution

	iWit series small and medium integrated data center	Traditional data center
Design	Pre-commissioning in dustry, put into use directly	Different supplier coordinate
Power Distribution	Rack mount, modular, including thunder protection	Isolated design, installation without thunder protection
Installation	Distributed wiring, integrated in dustry, modular	Long construction period, design on site, lack of reliability
Scalability	All components are modular, adjust module number rapidly	Lack of expandability
Construction Time	4-6 hours	40 days(including decoration)
Appearance	Unified and harmonious appearance	Hard to unified size/color
Dustproof	Totally enclosed system, IP5X,targeted protection of core equipment	Not available(high cost of dustproof)
Cooling efficiency	Enclosed hot and cold air channel, cooling by the nearest AC, improve cooling efficiency	No isolation of hot and cold air channel, low utilization
Noise	<45dB(A)	>65dB, not suitable for human long-term work
Monitoring System	Local and remote monitoring, human-free	Isolated monitoring equipment, different interface,incompetible
Client interface	Embeded Linux system, long-term operation safe and steady, graphical interface, easy management	Industrial PC, easy to crashing, monitor interface incompetible
Emergency solution	Emergency pop-up door, make good use of room to dissipate heat, maximize the time of emergency	Not available
Service	Unified brand and service, full service during the life of product	Different guarantee period service interface and phone number

Power and Environment System

► Product Introduction

The power and environment system adopts the centralized monitoring of IoT, the composition of the local power and environment monitoring host and the expanded 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 such as UPS, air conditioner, power distribution, environmental detection, 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.

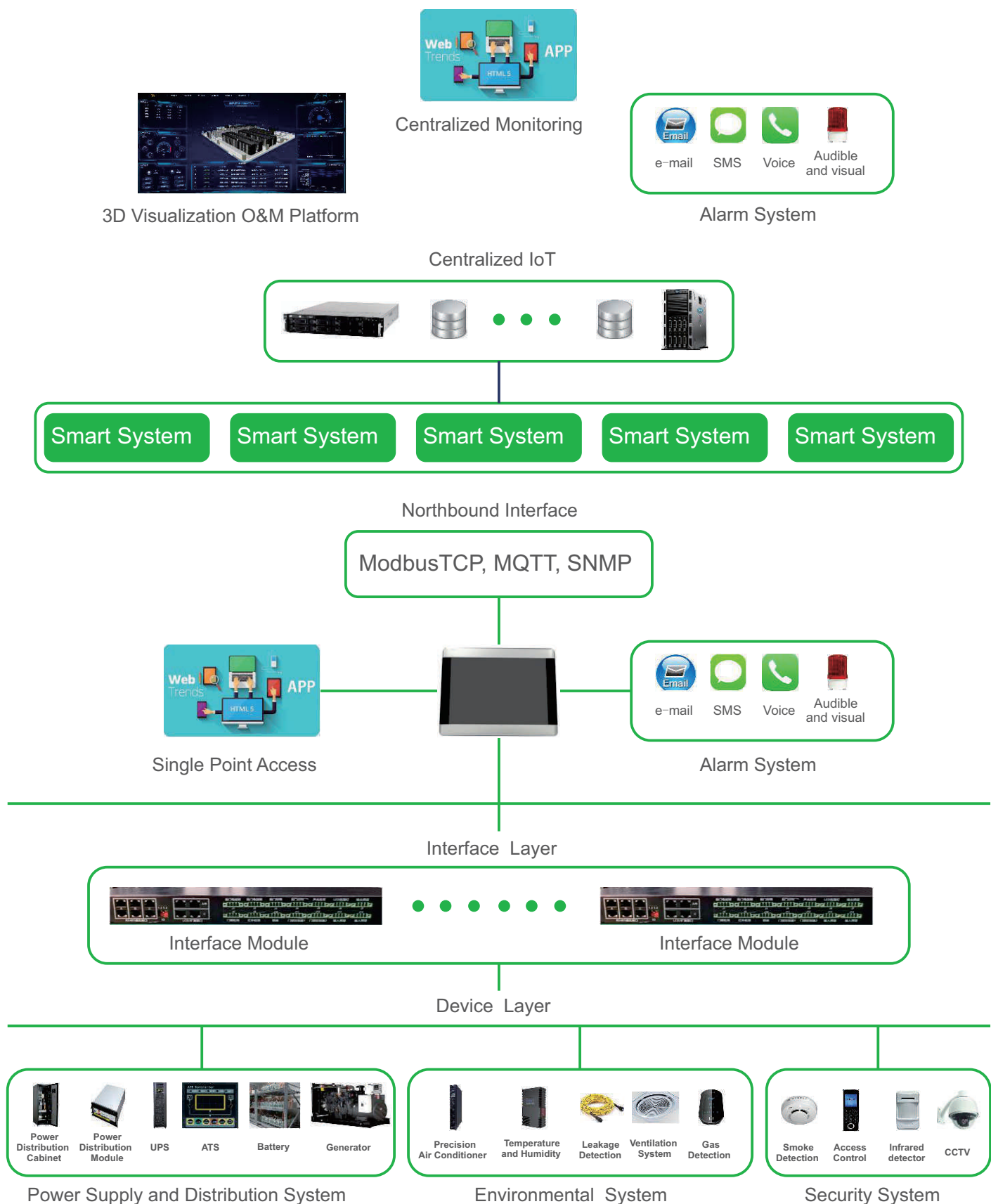


Built-in large-capacity SD card can store long time history events and data records.



LCD monitor
Mainframe visual management

► Monitoring Network Diagram



Cooling System

► Rack air conditioner

The VCS series rack air conditioner can be highly suitable for micro module product application scenarios and it enables near-end cooling and reduces the PUE value of data center. The rack air conditioner is a special air conditioner for circulating cooling the internal air flow of the cabinet, it provides stable and reliable temperature and humidity regulation services for micro-data centers, and improves the stability and reliability of all kinds of equipment in micro-data centers. iWit series supports the installation of 3.7-12.5k rack air conditioners.



3.7kW rack air conditioner



7.5kW rack air conditioner



12.5kW rack air conditioner



12.5kW rack air conditioner outdoor unit

The VCS series rack air conditioners adopt a pull-out design, which is easy to install and maintain, and have the advantages of high adaptability, high efficiency and energy saving and flexible configuration etc.

► Feature

- Compatible 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.
- Support single and multi-cabinet cooling applications and on-line expansion of cabinets.

► Indoor Unit

VCS***	Unit	3.7 (Rack)	7.5 (Rack)	12.5 (Rack)
Unit configuration	-	Constant Temp&Hum		
Total cooling capacity 2)	kW	3.7	7.5	12.5
Sensible cooling capacity 2)	kW	3.7	7.5	12.5
Air volume	m ³ /h	700	1350	2300
Sensible heat ratio	%	100	100	100
Standard distribution heating 3)	kW	1	2	3
Humidification capacity-(standard)	kg/h	0.5	0.5	0.5
Compressor type (standard)	/	DC frequency conversion		
Voltage	V	220	220	220
Frequency	Hz	50	50	50
Phase	P	1	1	1
Full load current	A	13.6	28.8	29
Unit weight	kg	30	39	58
Unit width	mm	440	440	440
Unit depth	mm	800	800	800
Unit height	mm	219 (5U)	310 (7U)	440 (10U)

► Outdoor Unit

Air Conditioner Outdoor Unit				
VCP***	Unit	5	10	18
Voltage	V	220	220	220
Frequency	Hz	50	50	50
Phase	P	1	1	1
Unit width	mm	886	882	995
Unit depth	mm	340	380	440
Unit height	mm	605	720	1256

Cooling System

► In-row air conditioner

VCR air conditioner is a kind of intelligent temperature control product especially suitable for modular data center. It is usually deployed in the cabinet arrangement, installed side by side with the server cabinet, combined with enclosed hot and cold aisle, close to the heat source and efficient cooling, creating an ideal operating environment for the key infrastructure of the data center. iWit series supports the installation of 12.5-25kW in-row air conditioners (300mm wide) to meet high-density IT load requirements.



12.5-25kW

► Outdoor unit

For the outdoor unit of the In-row air conditioner, we have two kinds of matching with it at present, one is the conventional outdoor unit and the other is the centralized outdoor unit, and their heat exchange covers 26-180kW, they can be divided into single system and double system according to the number of systems, which can meet all kinds of different needs of customers.



Conventional outdoor unit



Centralized outdoor unit

► Feature

- DC inverter scroll compressor, can dynamically adjust the cooling output in the range of 20%~100%;
- Precise control of supply/return air temperature and humidity at low load.
- High temperature of air-return design, high sensible heat ratio and high energy efficiency.
- Standard RS485 interface, support optional SNMP interface.
- Use environmentally friendly green R410A refrigerant.
- Two-stage evaporator design, the middle of the evaporator increases the water tray, which can effectively prevent water blowing;

► Indoor Unit

	Unit	VCR012	VCR025
Configuration	—	KF/Constant Temp&Humidity	
Total cooling capacity	kW	12.5	25.5
Sensible cooling capacity	kW	12.5	25.5
Refrigerant Type	—	R410A	
Compressor Type	—	DC frequency conversion	
Expansion valve Type	—	Electronic expansion valve	
Air Filter	—	G4 filter	
Fan Type	—	EC Fan	
Fan Number	Pcs	4	6
Air volume	m3/h	2800	5000
Heating capacity	kW	3	4.5
Humidification capacity	kg/h	1.5	3
Width	mm	300	300
Depth	mm	1100/1200	1100/1200
Height	mm	2000	2000

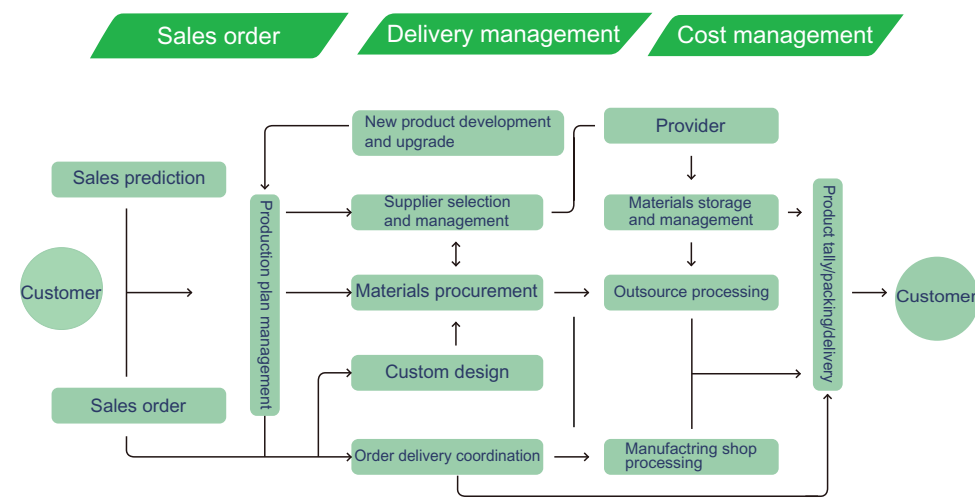
► Outdoor Unit

Model	System Num	Fan Num.	Air volume	Weight	L*W*H
Unit	pcs	pcs	m3/h	kg	mm
VCP018SF	1	2	/	64	832×310×1220
VCP038SF	1	1	12000	136	1378×982×740
VCP045SV	1	1	15000	140	1100×1100×1685
VCP076DF	2	2	22200	179	2178×1275×740
VCP076DV	2	1	20000	178	1100×1100×1775

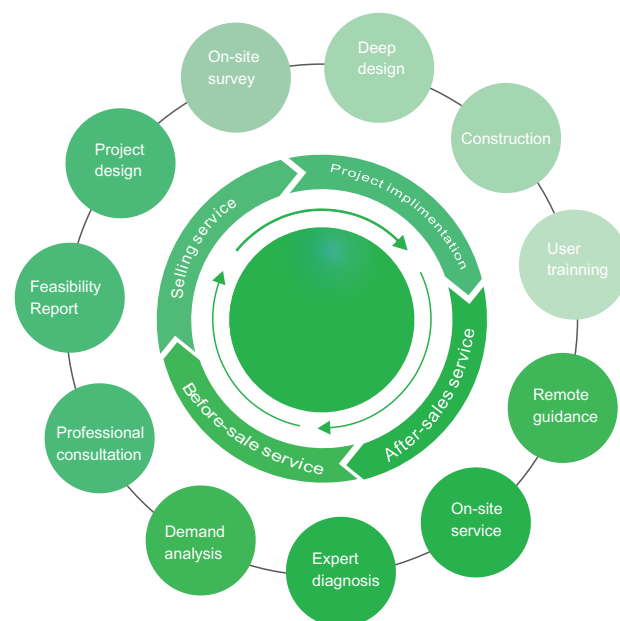
Integrated Service System

► Excellent operation management

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



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.



► Applications

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

