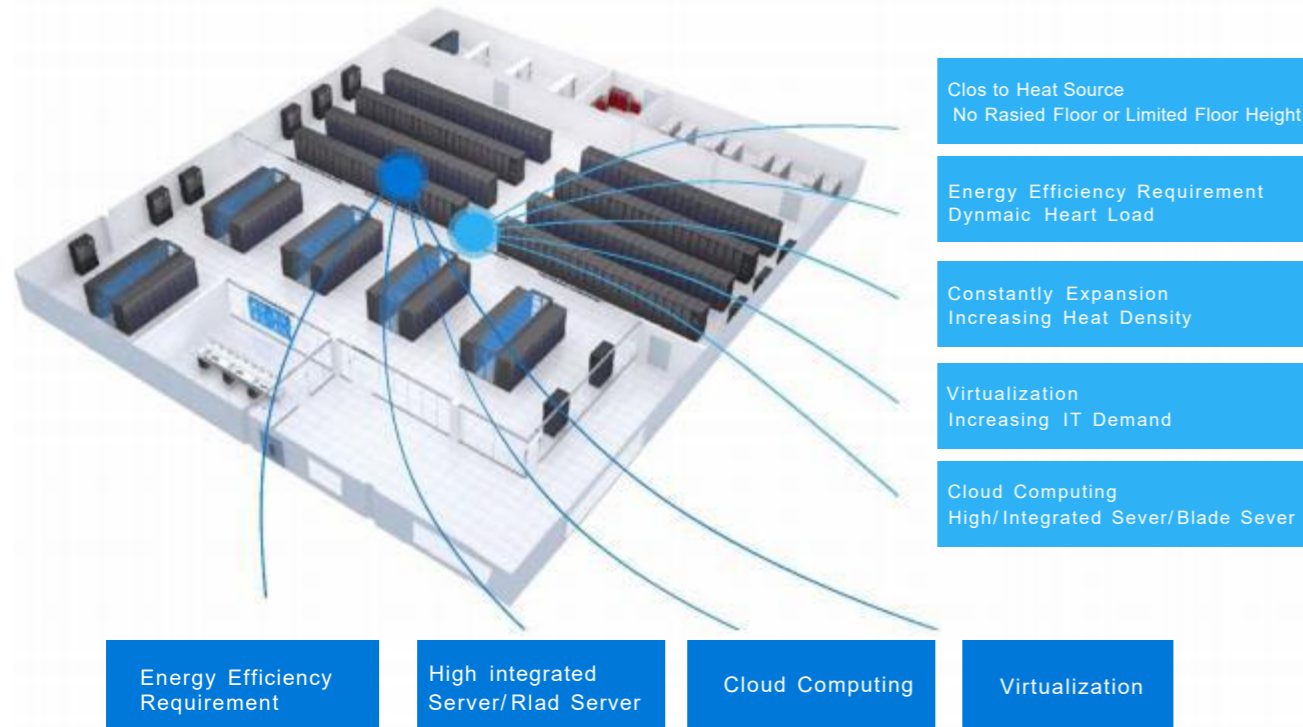


EFFICIENT COOLING SOLUTION FOR MODULARIZED DATA CENTER



Efficient cooling solution for modularized data center

- High heat density data centers
- modularized data centers
- reducing data centers PUE
- container data center
- Improving cooling system EER
- Matching cold/hot aisle design



XRow is an adaptive row-based cooling system placed closeto the heat source and ideal for rack level cooling solution for data center

Air cooled package type cooling unit, mounted at bottom or rack. No complex installation.

Capacity: 3.5kW
Height: 8U



- 1 Industry top brand compressor. Highly reliable and efficient.
- 2 Precision cooling controller monitors and protects unit constantly. Easy to be integrated into BMS to display, control and manage the system.
- 3 Compatible with standard rack size forms unified and integrated micro data center solution.
- 4 Packaged design easy for installation, service and shipping.
- 5 Rack mount means good air management of hot/cold stream and no concern of water leak.
- 6 Green refrigerant is highly efficient and no ODP.

COOL-ROW UNIT INTRODUCTION



Introduction

Frontier Tech Row Cooling Precision Air Conditioning is an ideal product for inter-column cooling in green data centers. It has the industry's best cooling efficiency. The variable frequency scroll compressor uses environmentally friendly refrigerant R410A. It has excellent intelligent control and performance. Flexible cooling capacity design: can be used in 20%~100% adjustment of cooling capacity, which greatly improves the energy efficiency of ordinary air-cooled units by 33.3%~50%. The 7-inch touch screen can comprehensively display various data in the computer room and related working conditions of the unit.

Applications

- Single rack with power larger than 3kW
- High heat density computer room
- Modular DC
- Container type DC
- DC with low PUE
- Hot spot reconstruction



300MM



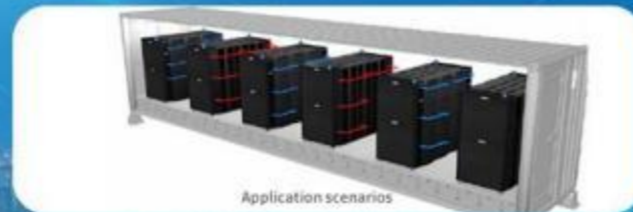
600MM



7 inch touch screen



EC fan



Application scenarios

COOL-ROW UNIT CHARACTERISTICS



Advanced Controller

Advanced team work function, Up to 16 remote temperature/humidity sensors Standard RS485 communication interface, optional SNMP and TCP/IP interfaces

Efficient ECfan system

Saving 20%-30% energy compared to traditional AC motor Soft-startup function, Low startup current

Adjust rotary speed automatically according to cooling requirements and airflow pressure, and provide airflow required

N+1 redundancy configuration of fans, ensure the airflow in case of any fan fault

Easy-maintenance designed

High Efficiency Compressor System

R410A refrigerant

Adopting scroll compressor with high reliability and energy efficiency ratio

Electronic Expansion Valve

Adjust the throttle of valve smoothly to save the energy

Wide range of operations, which can help reduce the superheat degree and improve EER

Realize cooling capacity and heat load precise matching

Quick response, realize the precise cooling

Options

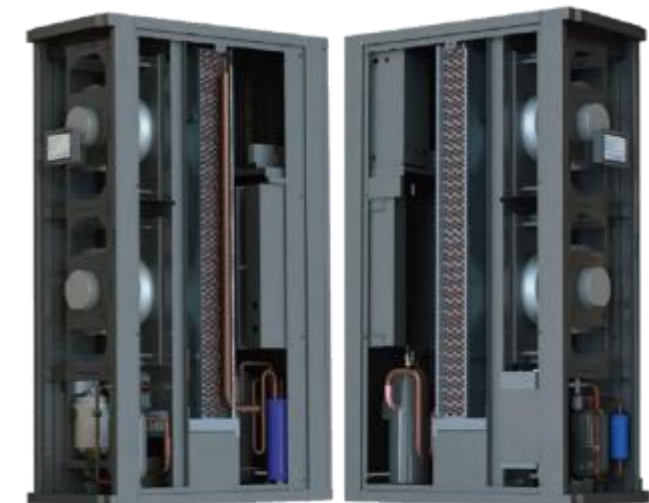
Transfer switch for Dual Power Input

GPRS SMS alarm

Low-temperature startup kits

Wired Temperature/humidity sensors

Tree-way water valve



Technical Data Of Cool-Row Series DX Unit

Model	CRA013	CRA025	CRA030	CRA040	CRA050	CRA060
Air Supply	Front/Side	Front/Side	Front/Side	Front/Side	Front/Side	Front/Side
Power Supply	380Vac/3Ph/50Hz	380Vac/3Ph/50Hz	380Vac/3Ph/50Hz	380Vac/3Ph/50Hz	380Vac/3Ph/50Hz	380Vac/3Ph/50Hz
Technical Data						
Cooling Capacity (kw)	13.2	26.7	32.5	42.6	53.3	63.9
Sensible Cooling (kw)	13.2	26.7	32.5	42.6	53.3	63.9
Maximum Operation Current	24	41	44	48	55	59
Compressor						
Type	Inverter compressors					
Refrigerant	R410A	R410A	R410A	R410A	R410A	R410A
Quantity	1	1	1	1	1	1
Fan						
Fan Type	EC centrifugal fan	EC centrifugal fan	EC centrifugal fan	EC centrifugal fan	EC centrifugal fan	EC centrifugal fan
Quantity	4	5	2	2	3	3
Air Volume (m ³ /h)	3200	5000	6600	8800	11000	12500
Heater						
Heat Type	PTC	PTC	PTC	PTC	PTC	PTC
Capacity (kw)	2	3	6	6	6	6
Class	1	1	1	1	1	1
Humidification						
Type	Electrode type					
Capacity (kg/h)	1.5	1.5	3	3	3	3
Air Filter	G4	G4	G4	G4	G4	G4
Connection Pipe						
Humidifier inlet pipe (in)	G1/2	G1/2	G1/2	G1/2	G1/2	G1/2
Drain Pipe Φ (mm)	19	19	19	19	19	19
Gas Pip Φ(mm)	15.88	19.05	19.05	19.05	22	22
Liquid Pipe Φ (mm)	9.52	12.7	15.88	15.88	19.05	19.05
Indoor Dimension-W*D*H (mm)						
Dimension	300*1200*2000 300*1400*2000	300*1200*2000 300*1400*2000	600*1200*2000	600*1200*2000	600*1200*2000	600*1200*2000
Weight (kg)	190	230	280	285	310	330
Note: Standard working conditions: indoor return air dry bulb temperature 37. C, relative humidity 24%, outdoor dry bulb temperature 35. C;						

Air Cooled Condensator

Model	CY0241	CY0451	CY0522	CY0622	CY0832	CY0893
Power Supply	220Vac/ 1Ph/50Hz	220Vac/ 1Ph/50Hz	220Vac/ 1Ph/50Hz	220Vac/ 1Ph/50Hz	220Vac/ 1Ph/50Hz	220Vac/ 1Ph/50Hz
Installation	Horizontal/Vertical	Horizontal/Vertical	Horizontal/Vertical	Horizontal/Vertical	Horizontal/Vertical	Horizontal/Vertical
Fan						
Type	Axial flow fan	Axial flow fan	Axial flow fan	Axial flow fan	Axial flow fan	Axial flow fan
Fan	1	1	2	2	3	3
Speed Mode	Stepless speed	Stepless speed	Stepless speed	Stepless speed	Stepless speed	Stepless speed
Condenser Dimension-W*D*H (mm)						
Dimension	1115* 1065*520	1315* 1165*545	2025* 1015*520	2125* 1065*545	2425* 1165*545	2625* 1165*545
Weight (kg)	91	115	156	182	226	252

Technical Data Of Cool-Row Series Of CW Unit

Model	CRW030	CRW040	CRW050	CRW060
Cooling Capacity (kW) ①	30.5	40.4	50.3	65.7
Chilled water	12. C/ 18. C			
Sensible Cooling Capacity (kW)	30.5	40.4	50.3	65.7
Water Flow (m3/h)	4.4	5.8	7.2	9.4
Pressure Drop (kPa)	55	63	70	78
Air Volume (m3/h)	5500	8000	10000	12500
Electrode Humidification (kg/h)	3	3	3	3
Humidification Current (A)	10.2	3.4	3.4	3.4
Heater (kW)	3	6	6	6
Current (A)	13.6	9	9	9
Power Supply	220V/50-60HZ	380V/50-60HZ		
Full Load Current ②	20	12.6	14.3	14.3
Dimension WxDxH (mm)	300x1200x2000	600x1200x2000		
Weight (kg)	190	250	275	290
Pipe Connection	32	40	40	40

① Working Conditioning : indoor return air dry bulb temperature 37. C, relative humidity 24%, outdoor dry bulb temperature 35. C ;

② Full Load current for on-site power distribution reference.

