

Prefabricated All-in-One Data Center

FusionDC1000A-40ft-IT-AIO

Introduction

FusionDC1000A is a prefabricated all-in-one solution for outdoor edge DC. The solution integrates power, cooling, monitoring, firefighting, and cabinet systems into an ISO standard 40ft module. All facilities are prefabricated and pretested in the factory, which enable plug&play deployment. It is with strong ability of earthquake/wind/dust/water-proof and support long-term outdoor running.

Application Scenarios

Enterprise: small data center

Government: data center of smart city and safe city

Education: data center of university and science institute

Energy: data center of mining and exploration field

Finance: backup data center

Transportation: power supply for room of airport/railway station/port

Telecom carrier: small IT center, small IDC, DR DC, edge DC

Features & Value

Simple

- All facilities are preinstalled into one ISO standard module and pretested in the factory.
- One data center is built per module, enabling plug-and-play deployment in just one day.

Green

- Aisle containment and Integration of smart cooling, and power lead to end-to end(E2E) high efficiency and low carbon emission.

Smart

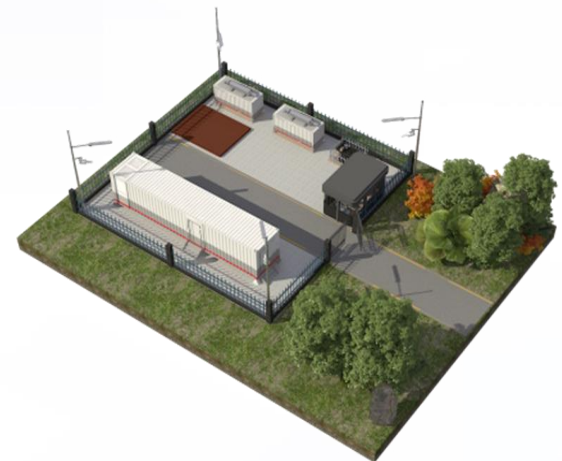
- The intelligent system ensures 3D visualization and digital management of facilities and intelligent O&M and facilitate unattended operations.

Reliable

- Its enclosure is with lifespan of 25 years and IP55 protection.
- It can resist GR-63-CORE Zone3 earthquakes and Beaufort scale 12 winds, operate ranging from -40°C to +55 °C.



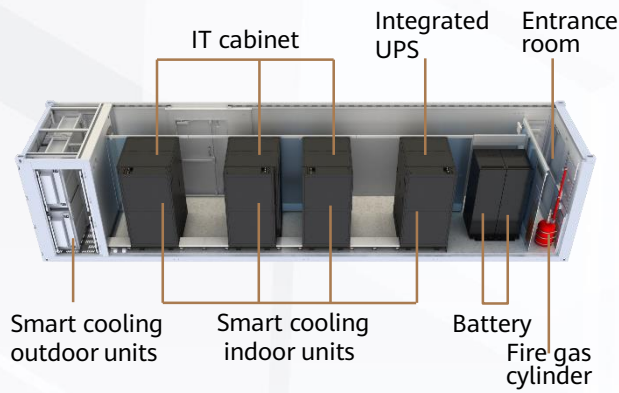
FusionDC1000A 40ft



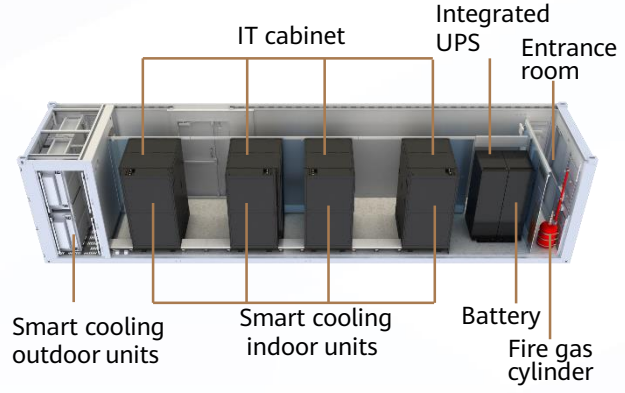
FusionDC1000A 40ft Site

Layout

Layout inside

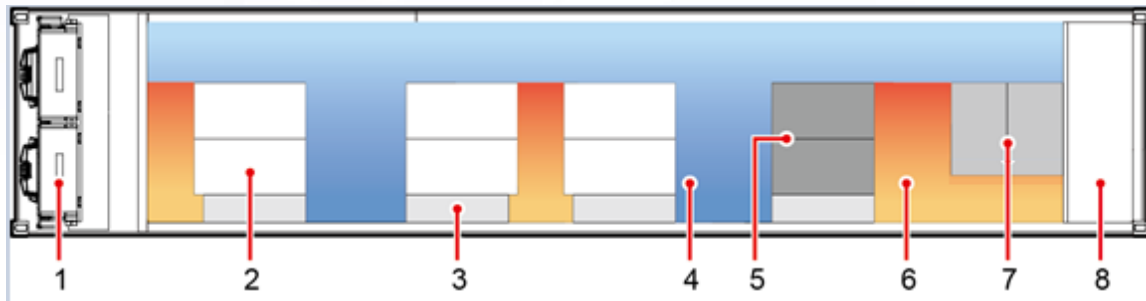


FusionDC 1000A-40ft-IT-2N



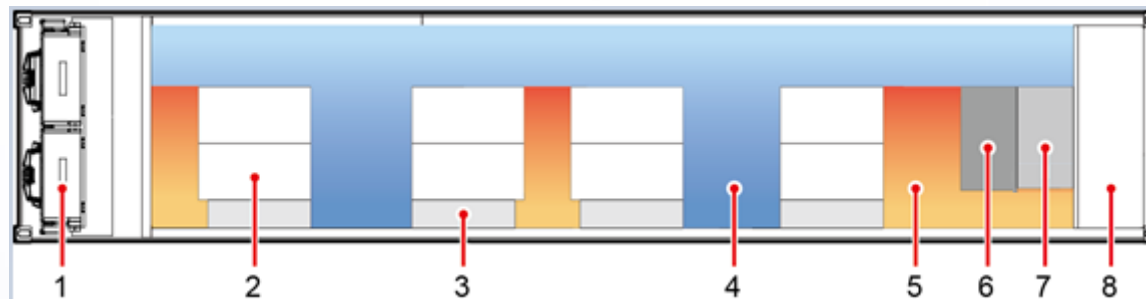
FusionDC 1000A-40ft-IT-N+X

Plan View



FusionDC1000A-40ft-IT-2N

- | | | |
|---|--------------------|--|
| (1) Smart cooling product outdoor units | (2) IT cabinet | (3) Smart cooling product indoor units |
| (4) Cold aisle | (5) Integrated UPS | (6) Hot aisle |
| (7) Battery cabinet | (8) Entrance room | |

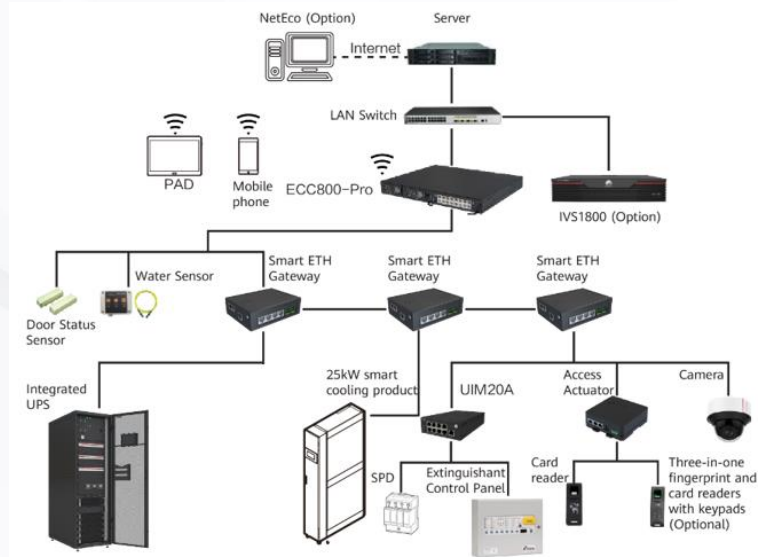


FusionDC1000A-40ft-IT-N+X

- | | | |
|---|-------------------|--|
| (1) Smart cooling product outdoor units | (2) IT cabinet | (3) Smart cooling product indoor units |
| (4) Cold aisle | (5) Hot aisle | (6) Integrated UPS |
| (7) Battery cabinet | (8) Entrance room | |

Management System

Network Diagram



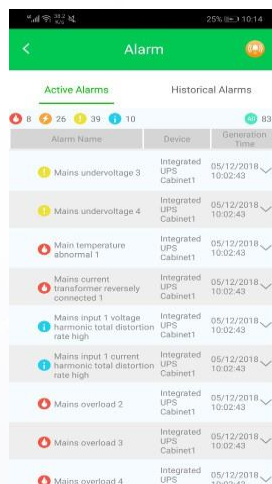
Local Display (Optional)



Mobile Phone APP (Optional)



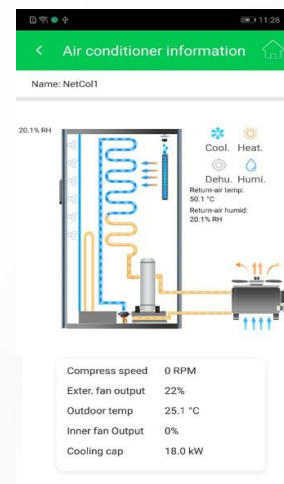
Homepage



Real-time Alarm



Power



Cooling

Specifications

Type		40ft-IT-N+X-380V ^①	40ft-IT-2N-380V ^①	
Entire system parameters	Deployment Site	Outdoor, awning, warehouse		
	Altitude range	≤4000 m (Power derating occurs when the altitude is greater than 1000 m) ^②		
	Humidity range	5%-95% RH		
	Operating temperature	-20°C- +55°C(Power derating occurs when the temperature is higher than 45°C) ^②		
	Storage temperature	-40°C - +70°C ^③		
	Storage humidity	5%-95% RH		
	Power density	Total power ≤ 54kW 6kW/R: 6pcs 9kW/R: 2pcs	Total power ≤ 54kW 9kW/R: 6pcs	
	Number of cabinets/container	42U/cabinet, 8 pcs IT cabinets	42U/cabinet, 6 pcs IT cabinets	
	Cabinet dimensions (W × D × H)	4pcs: 600 × 1100 × 2000 mm and 4pcs: 600 × 1200 × 2000 mm	2pcs: 600 × 1100 × 2000 mm and 4pcs: 600 × 1200 × 2000 mm	
	Environment corrosion requirements	Class A/B/C environment (Deployments below -20°C are not supported in Class C environments) ^④		
	Waterproof and dustproof	IP55		
	Anti-seismic	GR-63-CORE Zone 3(the modular structure)		
	Anti-wind	Wind speed 32.7m/s		
	Anti-salt fog	Meets the 1440-hour salt spray test requirements		
	Structure parameters	Module service life	Equivalent service life: 25 years	
Fixed-form		Preferentially installed on the ground ^⑤		
Dimensions(D × W × H)		12192 × 2438 × 2896 mm		
Weight		Preinstalled weight before delivery ≤ 14T, fully-configured devices ≤ 20T		
Electrical parameters	Transition hallway	Yes		
	Aisle dimensions	Long aisle width: 640 mm; Cold aisle width: 1150 mm; Hot aisle width: 510 mm.		
	Power mode	380/400/415V 50/60Hz, three-phase, four-wire+PE		
	Input voltage range	380/400/415V ± 15% (for 415V, the positive tolerance is +10%)		
	Input channels	2 channels	2 channels	
	UPS model and quantity	UPS5000-E, 1 pcs	UPS5000-E, 2 pcs	
	Power capacity	≤ 60KVA (2 modules+1 redundancy)	≤ 60KVA (Full kit 1+1, 2 modules/rack)	
	Total input surge protection	Class B, 8/20us, In=30kA, I _{max} =60kA		
	QTY of battery cabinet	1 PCS	2 PCS	
Battery	Lead-acid Battery		Lead-acid Battery	
Power backup time	7 min	7 min each backup power supply		

Specifications

Type		40ft-IT-N+X-380V ^①	40ft-IT-2N-380V ^①
Cooling Parameters	Cooling capacity	25kW/pcs(3+1 redundancy)	
	Unit dimensions (W×D×H)	300 × 1100 × 2000 mm	
	Compressor	DC frequency conversion	
	Refrigerant	R410A	
	Fan	EC Fan	
	Pipe	Copper tubing	
	Temperature control range	18 - 27°C	
	Humidity control range	20% - 80% RH	
	Thermal insulation performance	Total heat transfer coefficient ≤ 0.36 W/(m ² × K)	
	Refrigerant leakage detection	Optional	
Detection parameters	Container access control	IC card access control (standard configuration)	
	Video surveillance	Support	
	Video storage	SD card (7 days video storage)	
	Local display in the module	PAD (Optional)	
Fire protection parameters	Automatic gas fire extinguishing system	Support	
	Gas	FK5112	
	Fireproof performance	Standard 60-minute fire resistance for external structures	

①N+X and 2N indicate the redundancy levels of the power supply and distribution system. N+X indicates UPS module redundancy; 2N indicates UPS full kit redundancy;

②For more information, please view the product description or contact Huawei technical support;

③The storage temperature range of battery is not the same

④The basic concept of A/B/C environment is defined by GB/T15957 and Huawei enterprise standards. The corresponding ISO9223/12944 environments are classified into C1, (C2, C3), and C4; Class C environment: At least 500m away from strong corrosive environments (Such as seaside and heavily polluted chemical plants)

⑤The data center can also be installed on a concrete platform. Four pieces of 300 mm high steel bases are configured at the bottom of the module.