

Prefabricated All-in-One Data Center

FusionDC1000A-40ft

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

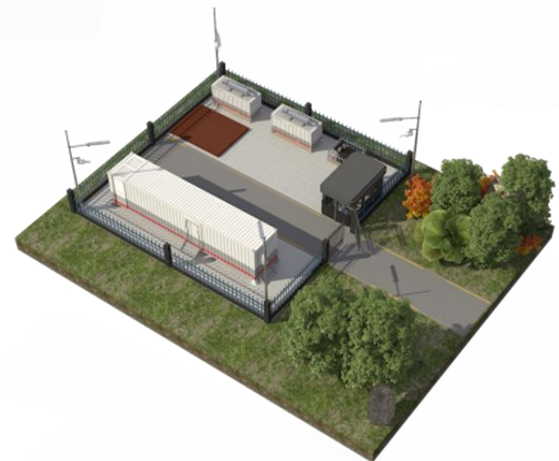
- The intelligent system ensures 3D visualization and digital management of facilities and intelligent O&M and facilitate unattended operations.

Reliable

- Its enclosure is with lifespan of 25 years and IP65 protection.
- It can resist GR-63-CORE Zone3 earthquakes and Beaufort scale 12 winds, operate ranging from -40°C to +55°C.



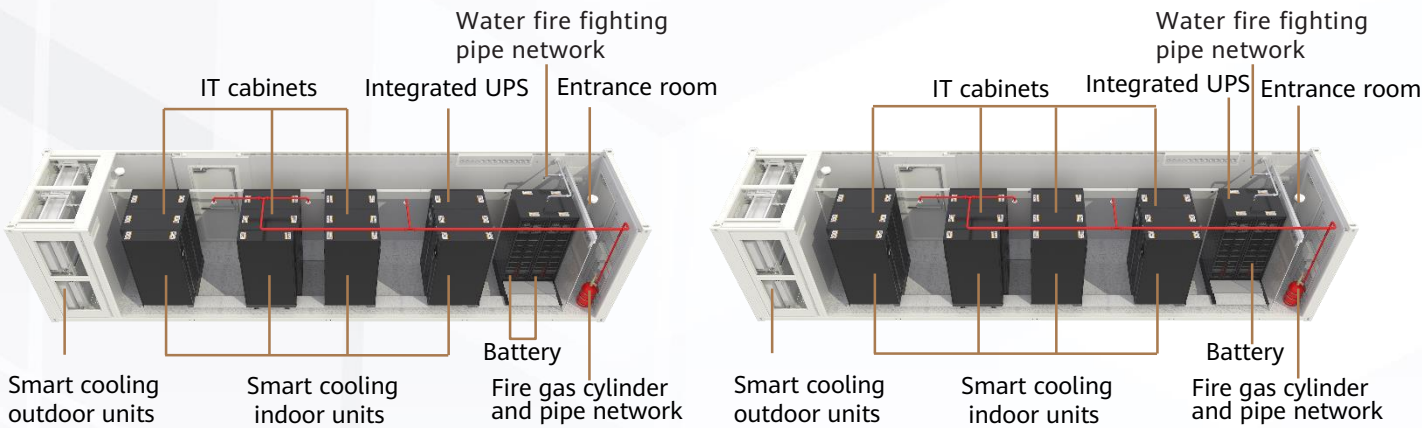
FusionDC1000A-40ft Appearance



FusionDC1000A-40ft Site

Layout

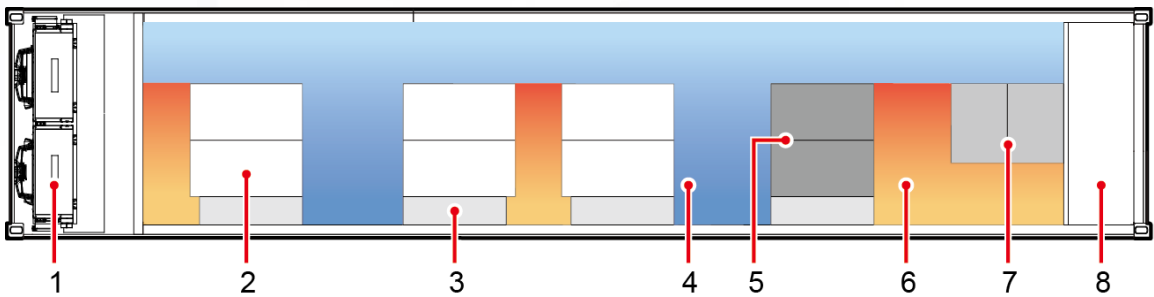
Layout inside



FusionDC1000A-40ft-IT-2N

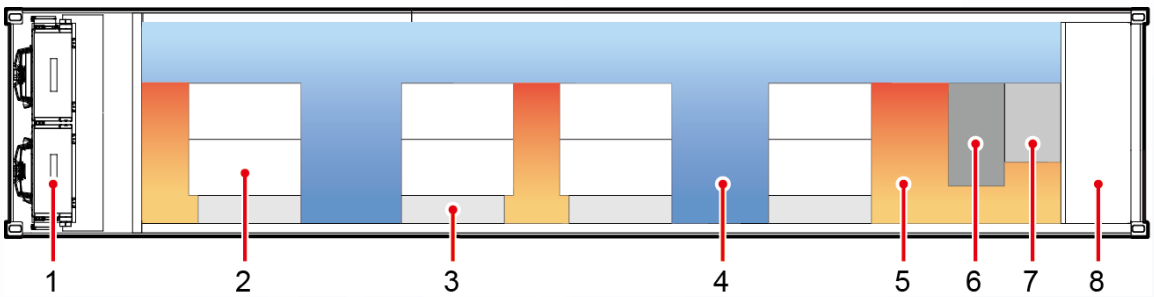
FusionDC1000A-40ft-IT-N+X

Plan View



FusionDC1000A-40ft-IT-2N

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

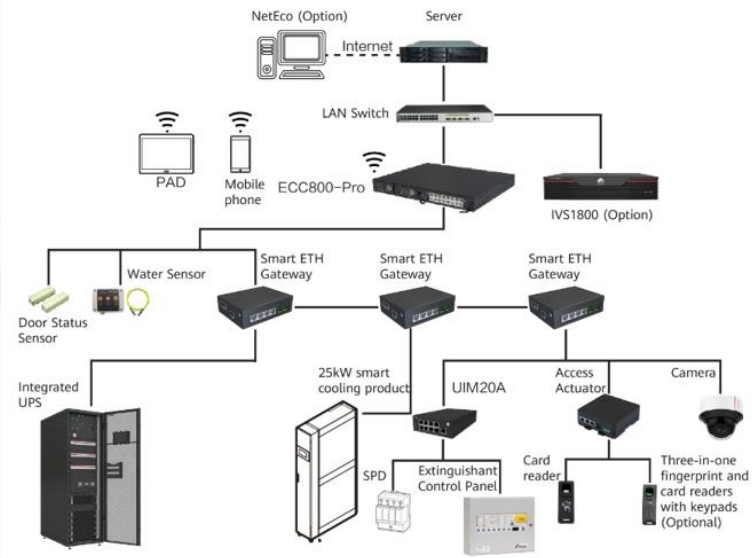


FusionDC1000A-40ft-IT-N+X

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

Managment System

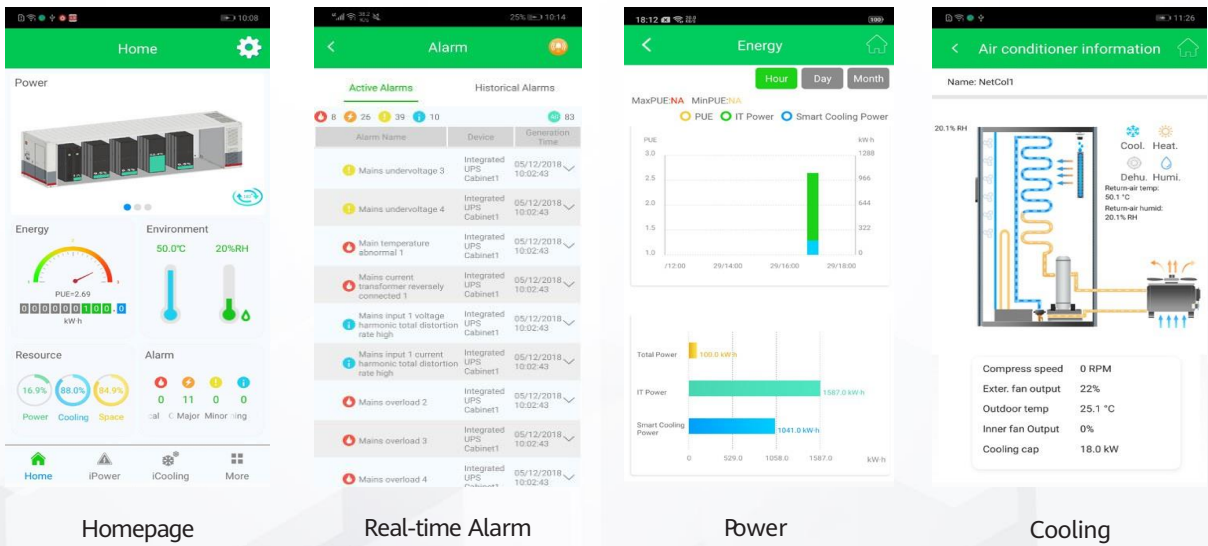
Network Diagram



Local Display (Optional)



Mobile Phone APP (Optional)



Specifications

Item		IT-N+X-380V ^①	IT-2N-380V-(Tier III) ^①	IT-2N-380V-(Non-Tier III) ^①
Entire system	Altitude range	≤4000m (Derating typically over 1000m) ^②		
	Operation relative humidity	5%-95% RH		
	Operation ambient temperature	-40 ~ +45°C, -20 ~ +55°C (Power derating typically over 45°C) ^②		
	Storage relative humidity	5%-95% RH		
	Storage ambient temperature	-40°C ~ +70°C ^③		
	Power density	Total IT load ≤ 54kW 6kW/R: 6pcs & 9kW/R: 2pcs	Total IT load ≤ 54kW 9kW/R: 6pcs	Total IT load ≤ 54kW 9kW/R: 6pcs
	Number of cabinets	8	6	6
	Cabinet dimension (H×W×D, mm)	4pcs: 2000×600×1100 4pcs: 2000×600×1200	2pcs: 2000×600×1100 4pcs: 2000×600×1200	2pcs: 2000×600×1100 4pcs: 2000×600×1200
	Environment corrosion requirements	Class A/B/C environment (Class C is not supported at -40 ~ -20°C) ^④		
	Tightness	IP65		
	Anti-seismic	GR-63-CORE Zone 3(the modular structure)		
	Anti-wind	Beaufort scale 12 (Wind speed ≤ 130km/h)		
	Atmospheric corrositivity	Meets the 1440-hour salt spray test requirements		
	System lifespan	10 years (Based on the lifespan of key components such as UPS and air conditioners.)		
	Module lifespan	25 years		
Structure system	Module dimension (D×W×H, mm)	12192×2438×2896		
	Weight	Ex-factory weight ≤ 14 tons, Maximum weight ≤ 20 tons		
	Entrance room	Support		
	Aisle dimensions	Long aisle width: 640 mm; Cold aisle width: 1150 mm; Hot aisle width: 510 mm.		
Power system	Power incoming features	380/400/415V 50/60Hz, three-phase, four-wire+PE		
	Input voltage range	380/400/415V ± 10%		
	Input current	250A		
	Power incoming surge protection	Class B, 8/20us, In=30kA, Imax=60kA		
	Power incomings Qty	2 pcs	2 pcs	2 pcs
	Power incoming panel	1 pcs	2 pcs	1 pcs
	Power cable tray	1 set	2 set	1 set
	UPS model and Qty	UPS5000-E, 1 pcs	UPS5000-E, 2 pcs	UPS5000-E, 2 pcs
	UPS power capacity	≤ 60KVA	≤ 60KVA	≤ 60KVA
	QTY of battery cabinet	1 PCS	2 PCS	2 PCS
	Battery type	SmartLi 3.0 ST	SmartLi 3.0 ST	SmartLi 3.0 ST
	Battery runtime	25 min	50 min	50 min

Specifications

Item		IT-N+X-380V ^①	IT-2N-380V-(Tier III) ^①	IT-2N-380V-(Non-Tier III) ^①
Cooling system	Cooling capacity	Up to 25kW/pcs (3+1 redundancy)		
	Unit dimensions (H×W×D, mm)	2000 × 300 × 1100		
	Compressor	DC frequency conversion		
	Fan type	EC Fan		
	Refrigerant	R410A		
	Liquid and gas pipe for refrigerant	Copper tubing		
	Temperature control range	18 ~ 27°C		
	Humidity control range	20 ~ 80% RH		
	Total heat transfer coefficient	≤ 0.36 W/(m² × K)		
Monitoring system	Card reading mode of container ACS	IC card		
	ACS for aisles	No		
	Cameras	Optional		
	Video storage	SD card (7 days video storage)		
	PAD inside the module	Optional		
Fire protection system	Automatic gas fire extinguishing system	Support		
	Extinguishing gas	FK5112		
	Water fire fighting	Water fire extinguishing pipe network and nozzle are pre-integrated in the container, and ports for external fire extinguishing water incoming are reserved.		
	EPO ^⑤	Support		
	Early smoke detection	Optional		
	Fire resistance time of external structures	60 min		

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)

⑤EPO, Emergency Power OFF. You can trip the circuit breaker of the lithium battery cabinet by pressing the EPO button, before the water fire fighting system works.