



Huawei Data Center Facilities Solutions **Catalogue**



HUAWEI TECHNOLOGIES CO., LTD.

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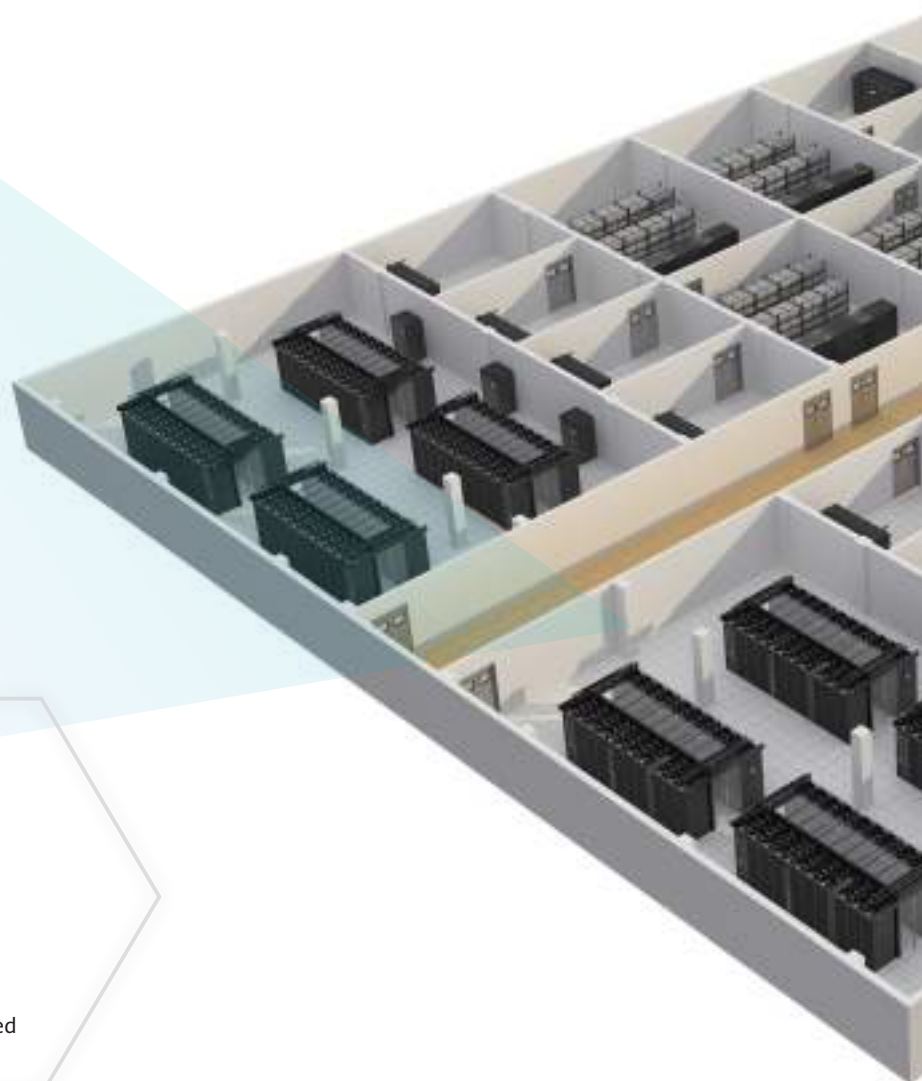
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NetEco6000
Data Center Infrastructure
Management System



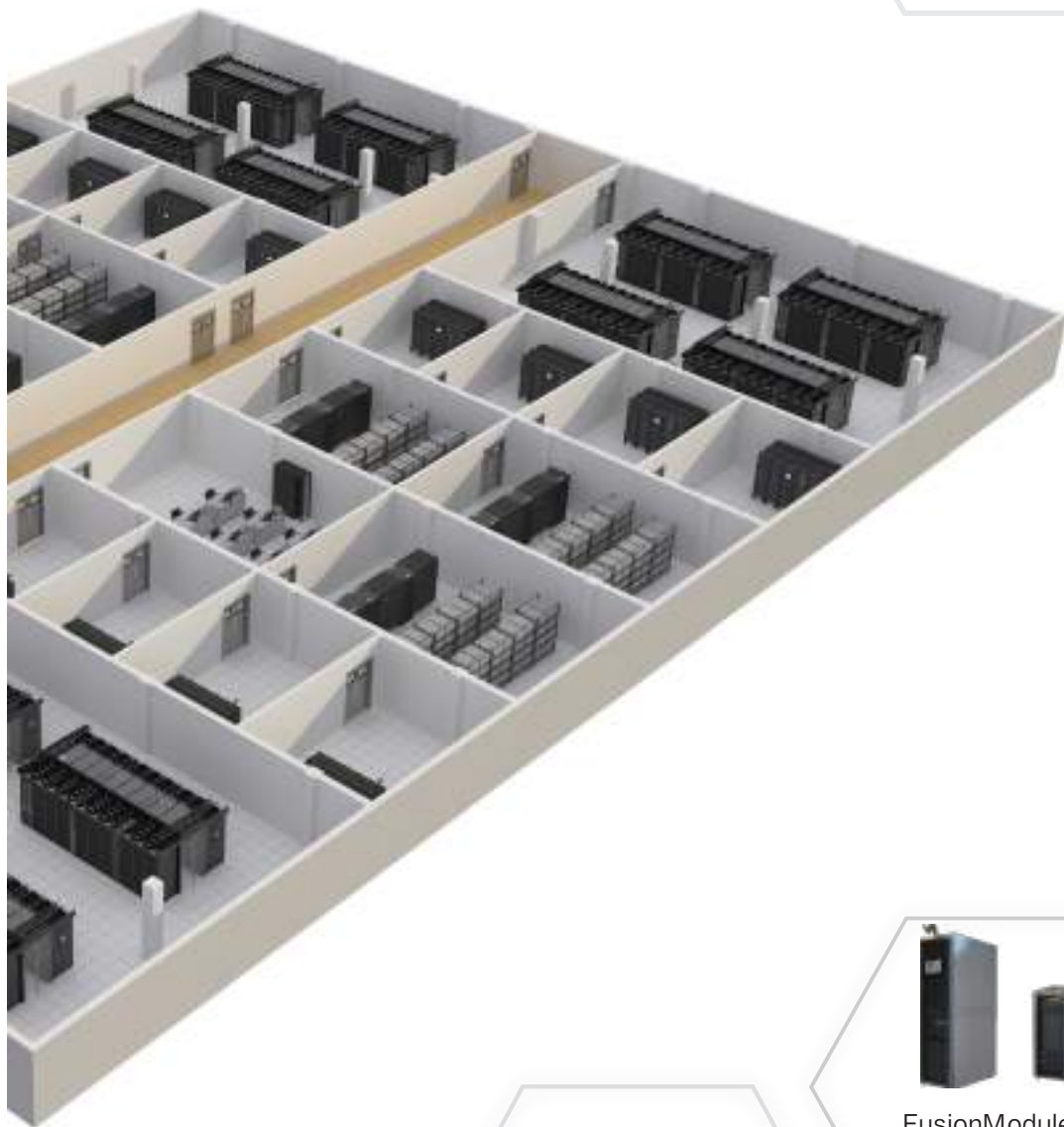
NetCol8000
In-room air cooled
smart cooling



Indirect evaporative
cooling solution



NetCol5000
In-row air cooled
smart cooling



UPS solution



SmartLi



PDU8000



FusionModule500
Smart Integrated Edge
Data Center



FusionModule2000
Smart Modular Data
Center

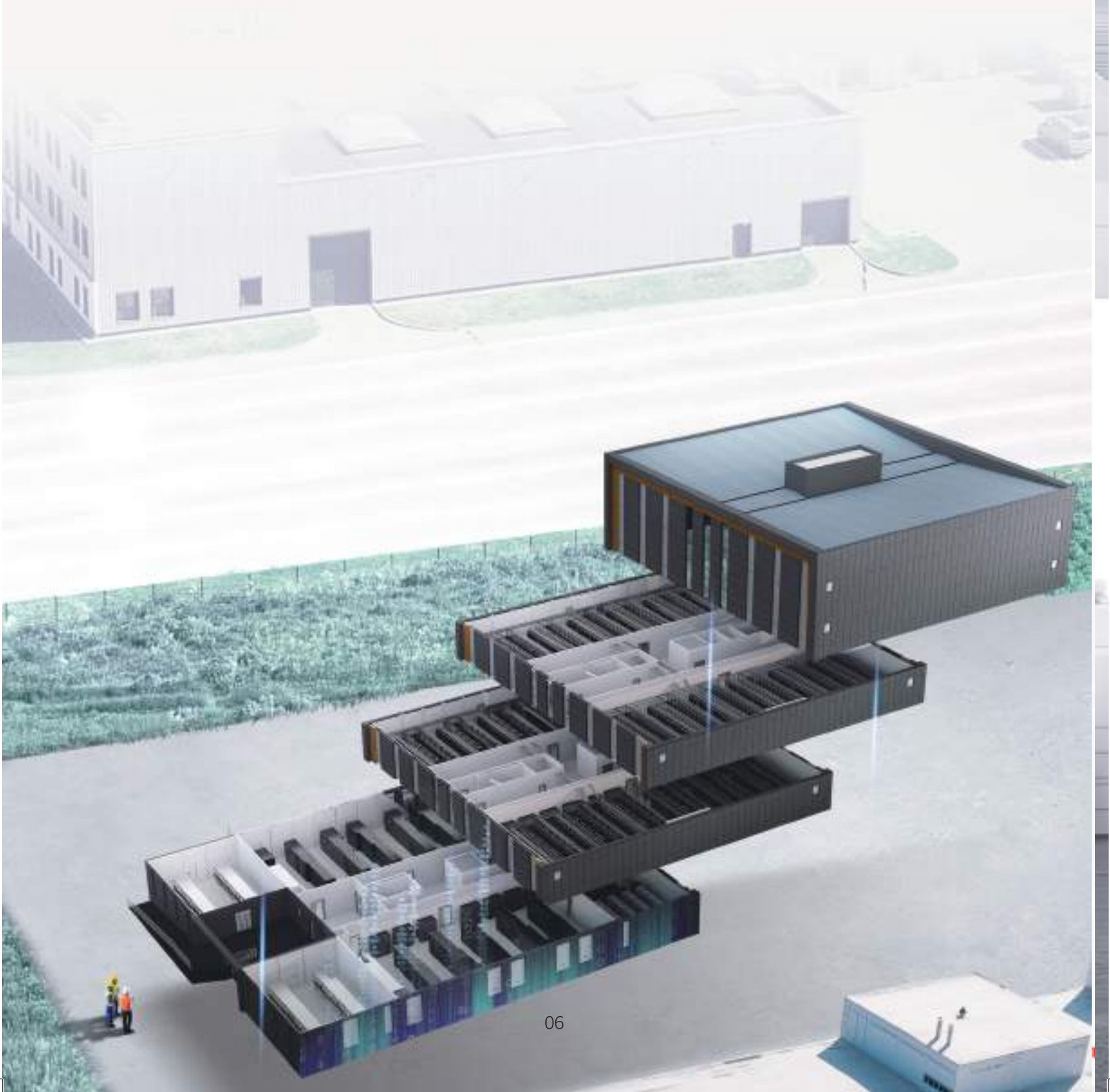


FusionModule800
Smart Modular Edge Data
Center

1

Power ICT in a Smart Way

Smart Modular Data Center Solutions





Contents

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Power ICT in a Smart Way

Smart Modular Data Center Solutions

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Indoor Modular Data Center



FusionModule500



FusionModule800



FusionModule2000

Outdoor Prefabricated Data Center



FusionDC1000A



FusionDC1000B



FusionDC1000C

FusionModule2000

Indoor Modular Data Center

Introduction

Huawei FusionModule2000 is a new generation smart modular data center solution, which dedicated to providing customers with simple, efficient, and reliable data center solutions.

It's a modular-designed, highly integrated solution which comprises power supply system, cooling system, rack & structure system, cabling system, management system within a module, meeting the requirements for quick delivery and on-demand deployment.

Furthermore, the Huawei smart module uses the i3 intelligent management system to comprehensively improve the reliability and efficiency of power supply and cooling systems. This significantly improves data center availability, and O&M efficiency.

Application Scenarios

The FusionModule2000 is mainly applicable to small- and medium-sized data centers. The solution features simple design and high building adaptability, lowering the requirements of room height and reconstruction. It meets the data center deployment requirements of various sectors such as enterprise headquarters or large branches, bank headquarters and secondary branches, governments, carriers, education, and healthcare.

Features & Value

Simple

- Modular design, one module one DC, on-demand deployment and flexible expansion

Green

- iCooling intelligent optimization*, reducing the energy consumption of cooling system by 8% to 15%
- SmartLi Inside* supports Huawei smart lithium batteries deployed in the module. Compared with traditional lead-acid batteries, footprint is reduced by 70% under the same load and same backup time.
- Wet film humidification*: Compared with traditional electrode humidifiers, wet film humidifiers reduce energy consumption by 95%.
- Industry's first air-cooled smart modular DC PUE test and certification, The annual average PUE is as low as 1.245 @Beijing.

Smart

- iManager: Space, Power, Cooling (SPC) visualization, automatic asset management simplified O&M. 3D view* clear display of key information and alarms about power distribution and cooling system, automatic management of assets*, automatic asset tracking, and no manual counting.
- Local 10.1-inch touch PAD, intuitive display of intelligent features, simplifying O&M

Reliable

- iPower: Visualization of power supply chain, fault auto-locating and auto shutdown for proactive protection;
- SmartLi Inside* supports Huawei smart lithium batteries deployed in the module. Three-layer BMS ensure the reliability of lithium batteries.
- Innovative intelligent refrigerant leakage detection prevents cooling capacity decrease or air conditioner breakdown.



Standard Dual- row



Standard Dual-row Smart Screen Version*



Simplified Single-row

Specifications

Item	Specifications	
Micro Module	Dimension	Single row (with aisle containment) (L×W×H): L×2400×2410mm; L×1350×2410mm; L×1600×2300mm Dual row (with aisle containment) (L×W×H): L×3600×2410mm; L×3400×2410mm; L×3600×2610mm
	Cabinets per module	Single row≤24 cabinets; dual row: ≤48 cabinets
	Power supply	380/400/415Vac, 50/60Hz, 3Ph+N+PE
	Max IT load per module	125kW (with integrated UPS)/ 145kW (with integrated PDC)/ 310kW (with New main way)/ 235kW (with precision PDC)
	Operation condition	Ultra low temperature condition: -40°C to 45°C(Need low-temp kit) T1 condition: -20°C to 45°C; T3 condition: -5°C to 55°C(Need T3 outdoor unit)
		Routed in/out through the top of cabinets
	Installation	Installing on concrete floor or raised floor
Cabinet	Dimensions (H×W×D)	2000mm×600/800mm×1200mm; 2000mm×600mm×1100mm; 2200mm×600/800mm×1200mm
	Space available	42U/47U
	Cabinet Porosity	Front and rear doors: hexagonal mesh door design, porosity rate ≥ 80%
	Protection level	IP20
Air-cooled In-row air conditioner	Cooling capacity	25kW/35kW/46kW
	Dimensions (H×W×D)	25kW:2000mm×300mm×1100mm; 35kW:2000mm×600mm×1200mm;46kW:2000mm×600mm×1200mm
	Power supply	380V AC~415V AC 50/60Hz, 3Ph+N+PE
	Refrigerant	R410A
Integrated UPS (UPS inside)	Input voltage	380/400/415Vac, 50/60Hz, 3Ph+N+PE
	Input	250/400A MCCB (single input); 250A/400A ATS (dual input)
	Input power factor	Full load > 0.99, Half load > 0.98
	Output power factor	1.0
	Rated capacity	30~125kVA: IT Load ≤ 120 kW, power modules ≤ 4, the capacity of a single power module is 30 kVA IT Load > 120 kW, power modules ≥5, the capacity of a single power module is derated to 25 kVA
	Output	IT: 40A/1P×24×2; A/C: 40A or 63A/3P×8; lighting: 10A/1P×3
	Efficiency	≥ 96% (Linear Load)
Integrated power distribution cabinet (UPS outside)	Input voltage	380/400/415Vac, 50/60Hz, 3Ph+N+PE
	Input	IT: 160/250A MCCB; A/C: 160/250A MCCB (single/dual input)
	Rated input current	IT: 160A/250A, Air conditioner: 160A/250A
	Output	IT: 40A/1P×24×2; A/C: 63A/3P×16; lighting: 10A/1P×3
	AC SPD	20kA, 8/20μs
Precision power distribution cabinet (UPS outside)	Input voltage	380/400/415Vac,50/60Hz,3Ph+N+PE
	Input	160/250/400A MCCB (single/dual input)
	Output	40A/1P, max 144 routes
Smart busway (UPS outside)	Input voltage	380/400/415Vac,50/60Hz,3Ph+N+PE
	Input	250/400A MCCB (single input)
	Output	40/63A 1P (6 branches in one Power Distribution Unit, can be expanded with the length of cabinet)
SmartLi Inside	Single Lithium battery cabinet	Contains 16 battery modules. Two battery strings are connected in parallel, and each battery string contains eight battery modules connected in series.
	Number of Lithium battery cabinets	2N scenario: ≤ 4 battery cabinets; N+1 scenario: ≤ 2 battery cabinets
	Typical backup time	The backup time can be 15 minutes, 30 minutes, or 1 hour

Recommended Configurations—UPS Inside



R24 Dual-Row Cabinets with Lithium Batteries Installed in Row



Dual-Row Cabinet Scenario

IT	IT	IT	IT	Smart Cooling	IT	IT	IT	Smart Cooling	IT	IT	IT	Smart Cooling	IT	IT	IT
R24-112kW (aisle)															
Integrated UPS	Battery cabinet	Battery cabinet	IT	Smart Cooling	IT	IT	IT	IT	IT	IT	IT	Smart Cooling	IT	IT	IT

R24 Typical Layout of the UPS and Lithium Batteries in Row

IT Load (kW)	Power Supply	Redundancy	A/C Configuration	Battery
30	Integrated UPS	N+ 1/ 2N	25kW×2	In-row (Battery cabinet)/ Outside Installation
40			25kW×3	
60			35kW×3	
80			35kW×4	
100			46kW×4	
125			46kW×5	

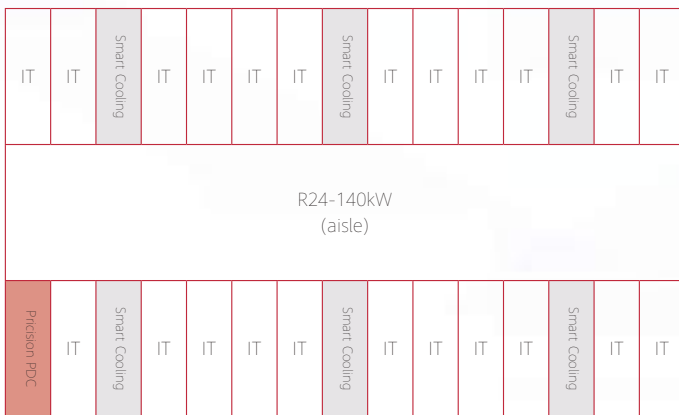
Recommended Configurations—UPS Outside Installation



UPS Outside the Module(Precision PDC)



UPS Inside the Module(Smart Busway)



R24 Typical Layout of Dual-Row
(Precision PDC)



R24 Typical Layout of Dual-Row
(Smart Busway)

IT Load (kW)	IT Power Supply	AC Power Supply	Redundancy	AC Configuration
20	Integrated PDC/Precision PDC/Smart Busway	Integrated PDC/ Power Distribution Box	N+1/2N	25kW×2
30				35kW×2
40				25kW×3
60				35kW×3
90				35kW×4
120				46kW×4
145	Smart Busway/Precision PDC	Power Distribution Box	N+1/2N	46kW×5
160				46kW×6
198				46kW×6
235				46kW×7
235	Precision PDC			

FusionModule2000-S

Single Row Smart Modular Data Center Solution

Introduction

FusionModule2000-S is a new generation smart modular data center solution, which dedicated to providing customers with simple, efficient, and reliable data center solutions.

FusionModule2000-S adopts a modular design and integrates power supply, temperature control, cabinet, aisle, cabling, and monitoring system in a single row of aisles, meeting the requirements for quick delivery and on-demand deployment.

In addition, FusionModule2000-S uses i3 to build intelligent core subsystems and introduces AI technologies to implement intelligent linkage control of power supply and cooling, and automatically manages equipment room assets, significantly improving data center reliability, availability, and O&M efficiency.

Application Scenarios

- High-density HPC supercomputing: 1600mm deep cold and hot aisle containment. Supports a maximum of 30 kW/R cabinet. A 900 mm deep server can be installed, It can be used in supercomputing applications in universities and research institutes.
- Simplified MDC: 1350 mm deep hot aisle containment, simplified design, aisle-free design, strong building adaptability, and applicable to most equipment rooms in harsh conditions such as small space and low floor height.

Features & Value

Simple

- All-in-one design, one-stop fast deployment, flexible expansion
- The minimum deployment height is only 2.3 m.
- The 1350 mm deep aisle can be contained in the hot aisle, and the 1600 mm deep aisle can be contained in the cold and hot aisle.

Green

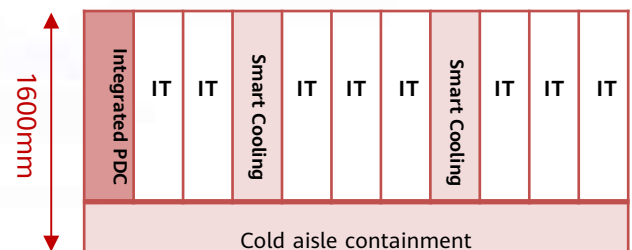
- Integrated cooling, power supply, and monitoring, SmartLi Inside* supports Huawei smart lithium batteries deployed in the module. saving 50%+ footprint compared with traditional solution.
- Cold and hot aisle containment ,high environment adaptability.
- Low PUE: 30% lower PUE compared with the traditional DC

Smart

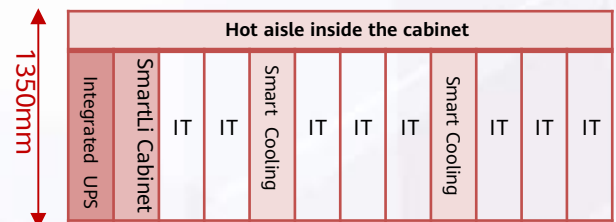
- Vertical intelligent partitioning, precisely matching the heat dissipation of the IT equipment. Intelligent follow-up of air volume and cooling capacity, stable running without hot spots

Reliable

- Support N+1 cooling system backup and 2N power backup, providing highly reliable power supply and cooling.
- Cold and hot aisle containment, automatic door opening in emergency, ensuring emergency heat dissipation..



Typical layout of the HPC scenario



Typical layout of the simplified MDC scenario

Specifications

Item	Specifications	
Cabinet and Aisle	Dimesions (L×W×H)	L×1350mm×2000mm (with hot aisle containment) L×1600mm×2000mm (with hot and cold aisle containment)
	Power supply	380/400/415Vac,50/60Hz,3Ph+N+PE
	Cabinets per module	≤24 cabinets (Including power supply, cooling and battery cabinets)
	Operation condition	Ultra low temperature condition: -40°C to 45°C Need low-temp kit) T1 condition: -20°C to 45°C;
	Cable routing	Routed in/out through the top of cabinets
	Maintenance space	≥1350mm(front), ≥900mm(rear)
	Installation mode	Installing on concrete floor or raised floor
	Air-cooled In-row air conditioner	Cooling capacity
Dimensions(W×D×H)		600mm×1350mm×2000mm
Power supply		380V AC~415V AC 50/60Hz 3Ph+N+PE
Recommended circuit breaker		63A/3P
Power supply mode		Supports dual power supplies, Supports UPS power supply in HPC scenarios.
AC configuration		N+1
Air volume		9000m ³ /h@46kW
Length of water sensor		Standard 5 m (can be extended to 50 m)
Air-cooled outdoor unit@ T1 working condition	Refrigerant	R410A
	Power supply	380V~415V AC,3PH/N/PE,50Hz/60Hz
	Dimension(W×D×H)	1356mm×1094mm×1107mm
	Net/gross weight (kg)	122/169
	Air volume	12000m ³
	height deviation	-8~30m (If the outdoor unit is lower than the indoor unit, the value is negative.)
Monitoring/management system	Length of the pipe	0~100m (between ondoor and outdoor units)
	Management system	ECC800-Pro
	Power supply mode	Single/Dual
	Water leakage sensor	Standard configuration
	Smoke sensor	Standard configuration
	Access control	Intelligent electronic lock, fire extinguishing linkage, and automatic spring door
Integrated UPS	Temperature sensor	Configure 1 PCS for each air conditioner, Cabinet-level temperature map is optional.
	Rated capacity	60kW/125kW
	Input	250/400A MCCB (single input); 250A/400A ATS (dual input)
Integrated power distribution cabinet	Output	IT: 2×24×40A/1P, A/C: 8×40A/3P or 8×63A/3P, Lighting: 3×10A/1P
	Rated capacity	95kW/145kW
Precision power distribution cabinet	Input	IT: 160/250A MCCB; A/C: 160/250A MCCB (single/dual input)
	Output	IT: 40A/1P×24×2; 63A/1P×24×2; 40A/3P×8×2;A/C: 63A/3P×8 or 40A/3P×8 ; lighting: 10A/1P×3
New main way	Rated capacity	95/148.5/235/310kW
	Input	160/250/400A MCCB (single/dual input), 630A MCCB (single input)
	Output	40A/1P, 63A/1P, 40A/3P, 63A/3P, max 144 routes per rack
	Rated capacity	161kW@415VAC,148kW@380VAC @ 250A MCCB 258kW@415VAC, 236kW@380VAC @ 400A MCCB 339kW@415VAC, 310kW@380VAC @ 630A MCCB
New main way	Input	250A/400A/630A MCCB
	Output	40A,63A/1P x6 or 63A,40A/3P x 2

Note:

- 1, Basic configuration 1A, 5 are only applicable to Tier I DC.
- 2, The cooling capacity 12.5kW is obtained when the indoor dry bulb temperature is 37.8°C, and outdoor dry bulb temperature is 35°C,relative humidity 20%.
- 3, ATS is optional and can be installed on site
- 4, T1:-20°C~ +45°C , LT: -40°C~ +45°C;T3:-10°C~ +55°C
- 5, BC1A cooling without heating and humidification, the others are all have one cooling with heating and humidification
- 6, The Converged cabinet part number don't include cooling out door unit. Three type of outdoor unites are freely configured with the converged cabinet.

FusionModule800

Small Smart Data Center

Introduction

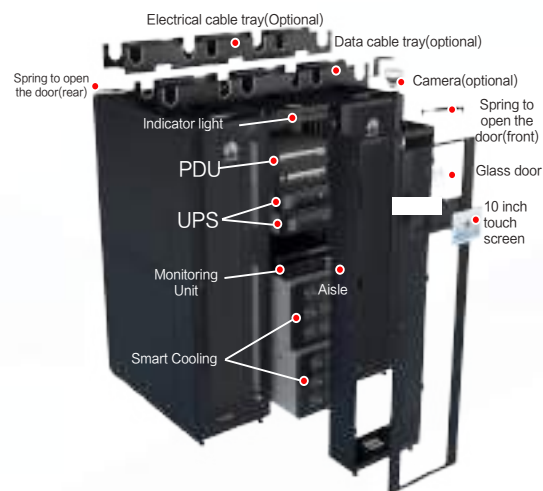
FusionModule800 Smart Small Data Center is a new-generation data center solution. It is integrated with PDU, UPS, monitoring, cooling and rack system in a comprehensive rack in order to save space. IT racks can be deployed flexibly on both sides. A single module can support maximum 12 racks and 25kW IT load (T3: IT Load $\leq 21\text{kW}$), the maximum power density for each rack is 7kW/R (T3: $\leq 6\text{kW}$). Cold and hot aisle containment to saving Energy and reduce noise.

Application Scenarios

- Finance, Education, Health Care, Public Security, SMEs, Retailing & Merchandising, Edge DC, etc.

Features & Value

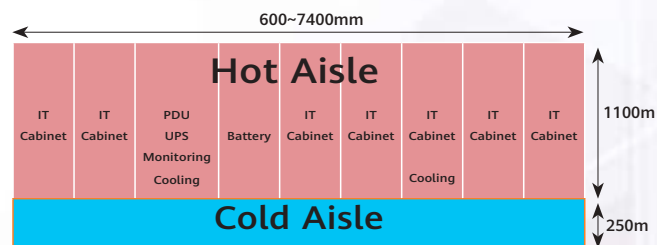
- **Simple**
 - All components are prefabricated in factories. only need to be combined onsite, hardware are installed in 4 hours, 2 days business on line.
 - Fire fighting module inside*, on need reconstruction
 - Real-time monitoring of mobile apps, centralized monitoring of multiple sites*.
- **Green**
 - High integrated design + lithium battery, Saves 2 to 3 cabinets footprint.
 - containment, dustproof and noise reduction, and Higher efficiency of cooling system
- **Smart**
 - Facial recognition, password-free login, and key-free door opening
 - Intelligent O&M, unified management of multiple data centers*
- **Reliable**
 - Reliable dehumidification at low load to avoid condensation in the data center
 - Highly stable LFP battery cell, no fire risk and more reliable
 - Open rack doors automatically in case of cooling system failure and the temperature exceeds the limit



FusionModule800 Architecture



FusionModule800 Application



Specifications

Item	Description	Specification	
Overall Parameters	Power system	380/400/415Vac, 50Hz, 3Ph+N+PE	
	Aisle containment	Cold and hot aisle containment	
	System protection level	IP20	
	Ambient temperature	T1*:-20°C~+45°C; T3*: -10°C~+55°C; LT*: -40°C~+45°C	
	Maximum cabinet quantity	12	
	Quantity of IT cabinets	0~10	
	Maximum IT load	25kW (T1* & LT*); 21kW (T3*)	
	Max power density /Rack	7kW (T1* & LT*); 6kW (T3*)	
	IT cabinet weight	Static load 1500kg, Dynamic load 1000kg	
	Total Dimensions	2000×(600-7400)×1350(H×W×D mm)	
Cooling system	Cooling capacity	12.5kW ^a	
	Configuration	N, N+1	
	Cooling mode	Direct expansion air-cooled	
	Installation	Rack- mounted	
	Air volume	2600m ³ /h	
	Air supply mode	Front supply, rear return	
Power System	SPD	CLASSII/C, In 20kA, I _{max} 40kA, 8/20us	
	Input power	Single or dual inputs	
	UPS capacity	10kVA	
	UPS configuration	N, N+1	
	UPS input voltage range	80~280Vac,40-70Hz,1Ph+N+PE	
	UPS output power factor	1	
	UPS efficiency	Up to 96%	
	Battery type	Lithium battery	
	Battery capacity	100Ah @ 0.2C,35°C (4800Wh @ 0.2C,35°C)	
	Backup time	60min~240min	
	rPDU (Optional)	No-Intelligent rPDU: IEC or GB,on site installation Intelligent rPDU:IEC,on site installation	
Maintenance bypass	Standard		
Monitoring system	Function	Remote web page access and unified management of multiple branches	
	Local monitoring	10-inch tablet screen , supporting facial recognition login and keyless door opening	
	Standard functions	Smoke sensor, T&H sensor, intelligent lock, 10-inch PAD, SMS/email alarm, and local app O&M	
	Optional functions	Video surveillance, water leakage sensor, and mobile O&M	
Basic Configuration Introduction			
IT load	T1/LT: 0~8.5kW; T3: 0~7kW	T1/LT: 8.5kW~17kW; T3: 7kW~14kW	T1/LT: 17KW~25kW; T3: 14KW~21kW
Basic configuration	BC1A*	BC4	BC5
Aisle type	Single row, cold & hot aisle containment		
UPS(KVA)	10+0	10*2+10	10*3+0
Smart cooling	1+0	2+0	3+0
Power input	Single input is default (ATS optional)		
Battery type	lithium battery		
IT output	12	12	20

Note:

1, Basic configuration 1A, 5 are only applicable to Tier I DC.

2, The cooling capacity 12.5kW is obtained when the indoor dry bulb temperature is 37.8°C, and outdoor dry bulb temperature is 35°C,relative humidity 20%.

3, ATS is optional and can be installed on site

4, T1:-20°C~ +45°C , LT: -40°C~ +45°C;T3:-10°C~ +55°C

5, BC1A cooling without heating and humidification, the others are all have one cooling with heating and humidification

6, The Converged cabinet part number don't include cooling out door unit. Three type of outdoor unites are freely configured with the converged cabinet.

FusionModule500

Integrated Cooling Solution

Introduction

Huawei FusionModule500 is a new-generation edge data center solution, which integrates the UPS, PDU, cooling, monitoring, power backup, and fire extinguishing system* in one cabinet, it can support a maximum of 3kW IT&CT loads. FusionModule500 is pre-tested, pre-installed, and pre-commissioning before delivery, enabling quick deployment on site. The remote web-based monitoring function enables remote O&M for a single site. In addition, with Huawei data center management system, It can also implement centralized management of multiple branches.

Application scenarios

- Finance, Education, Health Care, Public Security, SMEs, Retailing & Merchandising, Edge DC, etc.

Feature

Simple

- All-in-one design and integrated cooling unit inside, quick deployment within 2 hours
- Fire fighting module inside*, on need reconstruction

Green

- Highly integrated design, space saving by 50%
- Hot and cold aisle containment to improve the cooling efficiency and reduce noise
- SmartLi inside, smaller size with longer lifecycle

Smart

- Facial recognition, password-free login, and key-free door opening
- Intelligent O&M, unified management of multiple data centers*

Reliable

- Highly stable LFP battery cell, no fire risk and more reliable
- Open rack doors automatically in case of cooling system failure and the temperature exceeds the limit



Integrated cabinet



Specifications

Item		Description	Specification
System features	Power system		220/230/240V AC, 1Ph+N+PE, 50/60Hz
	Aisle containment		Cold and hot aisle containment
	Installation mode		Concrete floor or raised floor
	Cable route		From the top
	Humidity and temperature		0°~40°, 5~95%
	Altitude		0~1000m (when the altitude is greater than 1000m, the capacity is derated)
	Maximum ICT load		3kW
	Total dimensions		600mm×2000mm×1100mm (W×H×D mm)
	ICT space		≤22U ^a
	Protection level		IP20
	Weight		360KG (@3kW, 1h battery backup)
Power system	Input and output	Input	220/230/240V AC, 1Ph+N+PE, 50/60Hz, 63A, Single or dual inputs
		Output	220V AC, 48V DC (48V output power ≤ 1500 W)
	UPS	Capacity	6kVA
		Configuration	Single UPS
		Voltage input range	80~280Vac, 40-70Hz, 1Ph+N+PE
		Power factor	1
	Battery	Efficiency	Up to 96%
		Battery capacity	48V DC, 100Ah @ 0.2C
		Dimension	442mm × 130mm × 396mm (W×H×D mm)
		Backup time	1h~4h ^b
Cooling system		Cooling capacity	3.5kW
		Cooling mode	Direct expansion air-cooled
		Air supply	Front air supply and rear air return
		Installation	Rack-mounted installation
Monitoring system		Function	Remote web page access and unified management of multiple branches ^c
		Local monitoring	10-inch tablet screen , supporting facial recognition login and keyless door opening
		Standard functions	Smoke sensor, T&H sensor, intelligent lock, 10-inch PAD, SMS/email alarm, and local app O&M
		Optional functions	Video surveillance, water leakage sensor, and mobile O&M

Remark:

ICT space = 22U is calculated based on 3kW and 1h backup time without fire extinguish module. The actual available space depends on specific configuration.

FusionModule500 supports up to 4h battery backup, and the actual backup time depends on the number of battery modules;

The cooling capacity is obtained when the indoor dry bulb temperature is 37°, the indoor wet bulb temperature is 24°, and the outdoor dry bulb temperature is 35°C. The actual cooling capacity varies depending on the indoor and outdoor ambient temperatures and relative humidity.

Unified management of multiple branches requires Huawei intelligent data center management system;

Water leakage detection is an optional function, and the dot-type/rope-type detection sensor can be selected.

The SMS/email alarm function needs to be used with the SIM card/network. The mobile O&M app needs to be used with Huawei intelligent data center management system.

FusionDC1000A

Prefabricated All-in-one Data Center(40ft)-IT

Introduction

Huawei FusionDC1000A is an advanced outdoor and prefabricated all-in-one data center facility solution. The solution can be applied to multiple industries and scenarios and has simple, green, smart, and reliable features.

Applicable and Scenario

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 IDC, DR DC, edge DC

Features & Value

Simple

- Subsystems are factory-prefabricated; One DC within One container
- No new building; Onsite installation within one day; Plug-and-play
- Moveable design makes relocation easy and deployment flexibly

Green

- Ultimate subsystem energy efficiency design, industry-leading PUE
- Dynamic optimization of system energy efficiency by AI technology
- One-stop delivery, less onsite construction waste and pollution

Smart

- NetEco intelligent system ensure full-facility 3D visualized management
- Intelligent O&M, reducing O&M costs and improving resource utilization
- Efficient O&M anywhere & anytime with mobile APP

Reliable

- Durable enclosure with 25-year service life; IP55 protection ; GR-63-CORE Zone3 anti-seismic; Standard 60-minute fire resistance for external sheathing structures (structural walls); EN1627-EN1630 Class 3 anti-theft (optional)
- 3D temperature map eliminates the risk caused by hot spots. Full-link monitoring for power supply and distribution can isolate the fault actively; Automatic refrigerant detection can provide early-alarm to ensure reliable cooling running
- The intelligent monitoring system is used to implement reliable backup power and visualized O&M management of lithium batteries



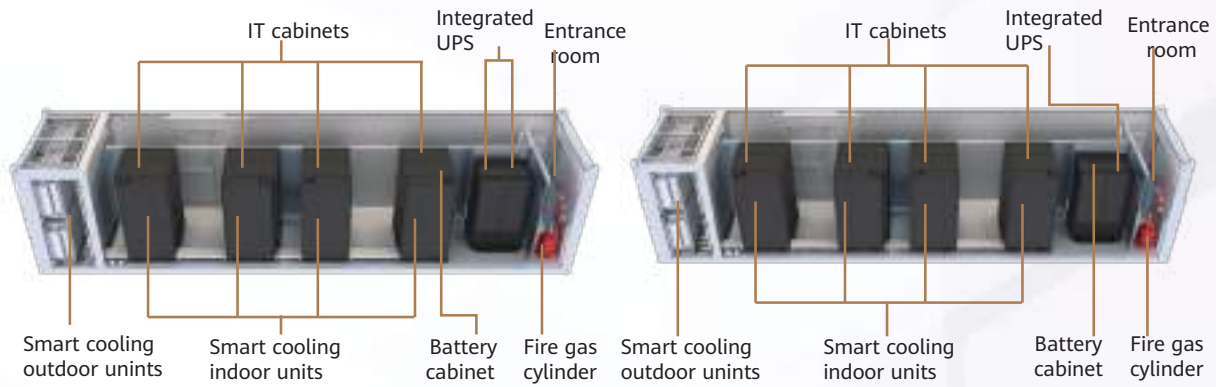
FusionDC1000A 40ft



FusionDC1000A 40ft Site

Layout(VRLA)

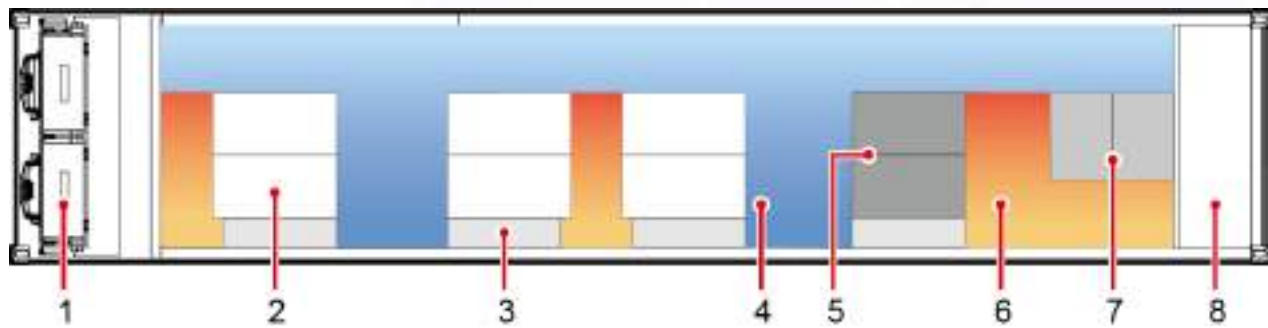
Layout inside



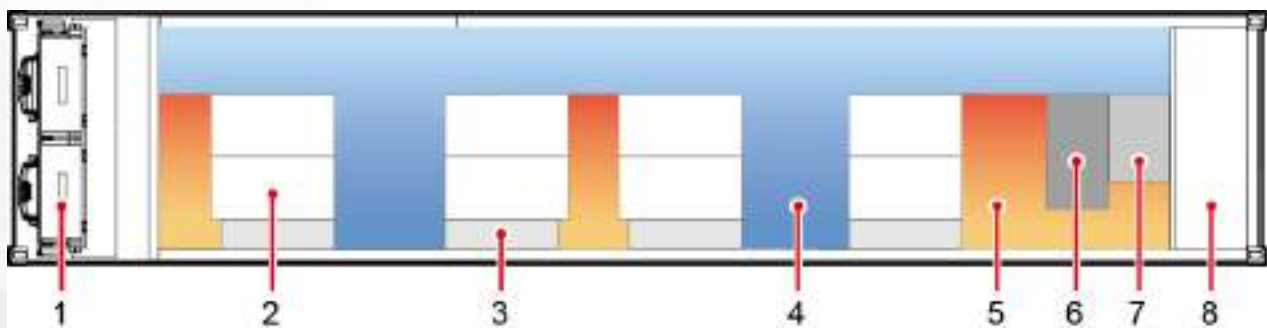
FusionDC 1000A-40ft-IT-2N

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

Plan View



- (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) SmartLi
- (8) Entrance room

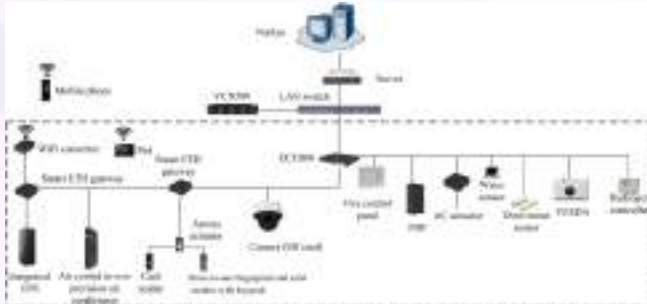


FusionDC1000A-40ft-IT-N+X-VRLA

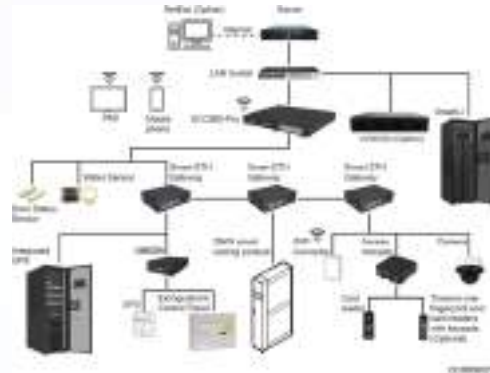
- (1) Smart cooling product outdoor units
- (2) IT cabinet
- (3) Smart cooling product indoor units
- (4) Cold aisle
- (5) Hot aisle
- (6) Integrated UPS
- (7) SmartLi
- (8) Entrance room

Management System

Monitoring network



FusionDC1000A-40ft-IT-VRLA



FusionDC1000A-40ft-IT-SmartLi

PAD local display



Mobile Phone APP



Homepage



Current Alarm



Asset binding



Cooling



System configuration

Specifications

Type	40ft-IT-N+X-380V ^①	40ft-IT-2N-380V ^②		
Entire system parameters	Deployment Site	Outdoor, awning, warehouse		
	Altitude range	Maximum altitude: 4000m (Power derating occurs when the altitude is greater than 1000m) ^②		
	Humidity range	5%-95% RH		
	Operating temperature	-20 ^① - +55 ^① (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	≤54kW
		6kW/R: 6pcs	9kW/R: 6pcs	
		9kW/R: 2pcs		
	Number of cabinets/container	42U/cabinet, 8pcs IT cabinets		
	Cabinet dimensions (W×D×H)	4pcs: 600×1100×2000mm	2pcs: 600×1100×2000mm	
		4pcs: 600×1200×2000mm	4pcs: 600×1200×2000mm	
	Environment corrosion requirements	A/B/C environment; Class C environment: At least 500m away from strong corrosive environments (Such as seaside and heavily polluted chemical plants) ^④		
	Waterproof and dustproof	IP55		
	Anti-seismic	GR-63-CORE Zone 3/9 intensity (the container)		
	Anti-theft	EN 1627 - EN 1630 Class 3 (optional)		
Anti-bullet	GJB 4300-2002 V&N.I.J.0108.01 IIIA (customized configuration)			
Anti-wind	Wind speed≤30m/s			
Anti-salt fog	Meets the 1440-hour salt spray test requirements.			
Container service life	Equivalent service life: 25 years			
Fixed-form	Preferentially installed on the ground ^⑤			
Structure parameters	Dimensions(H×W×D)	2896mm×2438mm×12192mm		
	Weight	Preinstalled weight before delivery ≤ 14T, fully-configured devices ≤ 20T		
	Integrated cabling	Customized configuration		
	Transition hallway	Yes		
	Aisle dimensions	Long aisle width: 640 mm; Cold aisle width: 1150 mm; The width of the hot aisle is greater than or equal to 610 mm		
	Cabinet sliding	A 1.2m deep cabinet can slid 200mm in both directions		
Electrical parameters	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,1pcs	UPS5000-E,2pcs	
	Power capacity	≤60KVA	≤60KVA	
		(2 modules+1 redundancy)	(Full kit 1+1 redundancy, 2 modules/rack)	
	Total input surge protection	Class B, 8/20us, In=30kA, I _{max} =60kA		
	Battery specifications	40AH SmartLi	40AH SmartLi×2	
Backup time	15min	20min		

Specifications

Type	40ft-IT-N+X-380V ^①	40ft-IT-2N-380V ^①
Cooling Parameters	Cooling capacity	25kW/pcs(3+1 redundancy)
	Unit dimensions (H×W×D)	2000mm×300mm×1100mm
	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	Yes
Monitoring parameters	Container access control	IC card access control (standard configuration); Three-in-one access control (customized configuration)
	Video surveillance	Huawei high-definition IP camera
	Video storage	SD card (7 days video storage); VCN (optional)
	Local display in the container	Customized configuration(PAD)
	View function	Customized configuration
	Mobile O&M	Customized configuration
	E-mail	Customized configuration
	SMS alarm	Customized configuration
	Temperature nephogram	Customized configuration
U space management	Customized configuration	
Fire protection parameters	Automatic gas fire extinguishing system	CE Version
	Very early smoke detection	Customized configuration(ASD)
	Gas	HFC-227ea
	Fireproof performance	Standard 60-minute fire resistance for external sheathing structures (structural walls)

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 the lithium battery is from 0°C to +40°C;

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;

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

FusionDC1000A

Prefabricated All-in-one Data Center(20ft)-CT

Introduction

Huawei FusionDC1000A outdoor AIO CO solution integrates the power system, cooling system, and monitoring system. It applies to multiple industries and scenarios and meets customers' requirements for simplified deployment, safety and reliable, and intelligent management of small outdoor communication equipment rooms.

Application Scenarios

- Wireless BTS/Node B/Enb, BBU-hotel/CRAN access site
- Fixed network access & convergence site, and fixed network modernization
- National broadband network
- Telecom network by grid company

Features & Value

Simple

- Subsystems are factory-prefabricated; One stop within One container
- One-stop delivery; Onsite installation within one day
- Applicable to various sites and spaces; Flexible deployment

Green

- Ultimate subsystem energy efficiency design
- Dynamic optimization of system energy efficiency by AI technology
- One-stop delivery, less onsite construction waste and pollution

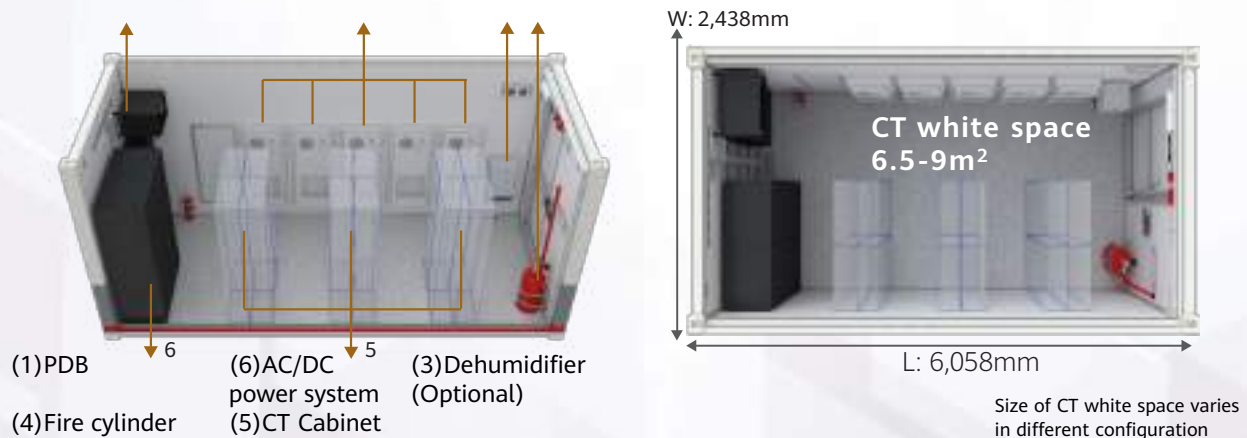
Smart

- Centralized and remote management of multiple sites with NetEco
- Efficient and visualized management of subsystem
- Efficient O&M anywhere & anytime with mobile APPR

Reliable

- Durable enclosure with 25-year service life; IP55 protection (IP65 optional);
- GR-63-CORE Zone3 anti-seismic; EN 1627~EN 1630 Class 3 anti-theft(optional)
- BoostLi lithium battery with digital intelligent O&M system, achieving ultimate backup power reliable

Layout



FusionDC1000A-20ft-8kW/16kW



FusionDC1000A 20ft Site

Specifications

Type	20ft-CT-N+X-380V-8kW ^③	20ft-CT-2N-380V-8kW ^③	20ft-CT-N+X-380V-16kW ^③	20ft-CT-2N-380V-16kW ^③				
Entire system parameters	Deployment Site				Outdoor, awning, warehouse			
	Altitude range				Maximum altitude: 3000m (Power derating occurs when altitude \geq 1000m) ^②			
	Humidity range				5%-95% RH			
	Operating temperature				-20 \square -+55 \square (Power derating occurs when the temperature is higher than 35 \square C) ^②			
	Storage temperature				-40 \square C - +70 \square C ^③			
	Storage humidity				5%-95% RH			
	Power density				Total power \leq 8kW Total power \leq 8kW Total power \leq 16kW Total power \leq 16kW			
	Number of cabinets/ Container				N63 cabinet: 13 Pcs			
					N66 cabinet: 6 Pcs			
					N68 cabinet: 4 Pcs			
	Cabinet dimensions (W \times D \times H)				N63 cabinet: 600 \times 300 \times 2200mm (air intake at front and exhaust at top)			
					N66 cabinet: 600 \times 600 \times 2200mm (air intake at front & back and exhaust at top)			
	CT White space				9m ² 8m ² 8m ² 6.5m ²			
	Environment corrosion requirements				Class A/B environment(standard configuration); Class C environment(customized configuration) ^④			
	Waterproof & dustproof				IP55			
	Anti-seismic				GR-63-CORE Zone3/9 intensity (the container)			
	Anti-theft				EN 1627 - EN 1630 Class 3 (optional)			
	Anti-elasticity				GJB 4300-2002 V&N.I.J.0108.01 IIIA (customized configuration)			
	Anti-wind				Wind speed \leq 30m/s			
	Anti-salt fog				Meets the 1440-hour salt spray test requirements			
Container service life				Equivalent service life: 25 years				
Fixed-form				Preferentially installed on the ground ^⑤				
Structure parameters	Dimensions(H \times W \times D)				2896mm \times 2438mm \times 6058mm			
	Internal dimensions(H \times W \times D)				2585mm \times 2212mm \times 5690mm			
	Weight				Preinstalled weight before delivery \leq 7.5T, maximum load-bearing capacity \leq 10T			
	Integrated cabling				Customized configuration			
	Entrance room				Customized configuration			
	Cable routing mode				Cables can be routed in from the bottom or end			
	Aisle dimensions				Long aisle: \geq 800 mm; maintenance aisle: \geq 600 mm Long aisle: \geq 750 mm; maintenance aisle: \geq 600 mm			
Electrical parameters	Power mode				380/400/415V, 50/60 Hz, three-phase, four-wire+PE			
	Input voltage range				380/400/415V \pm 15% (for 415 V , the positive tolerance is 10%)			
	Configuration of DC Power Supply				MTS9604B, total capacity \leq 18kW (5modules +1 redundancy) MTS9604B, total capacity \leq 18kW (Full kit 1+1 redundancy, 6 modules/rack) MTS9604B, total capacity \leq 24kW (Full kit 1+1 redundancy, 7modules +1 redundancy) MTS9604B, total capacity \leq 24kW (Full kit 1+1 redundancy, 8 modules/rack)			
	Input channels				1 2 1 2			
	Input current				160A 250A 160A 250A			
	DC power output				BLVD Circuit breaker: 100A \times 2, 63A \times 2 BLVD Circuit breaker: 100A \times 4, 63A \times 4, 16A \times 4, 10A \times 2 BLVD Circuit breaker: 100A \times 2, 63A \times 2, 16A \times 2, 10A \times 2 BLVD Circuit breaker: 100A \times 4, 63A \times 4, 16A \times 4, 10A \times 4			
					LLVD Circuit breaker: 100A \times 2, 32A \times 5 LLVD Circuit breaker: 100A \times 4, 32A \times 11 LLVD Circuit breaker: 100A \times 2 LLVD Circuit breaker: 100A \times 4, 32A \times 6, 16A \times 2			
					LLVD Fuse: 100A \times 2 LLVD Fuse: 100A \times 4 LLVD Fuse: 100A \times 2 LLVD Fuse: 100A \times 4			
	Total input surge protection				Class3, In=20kA(8/20 μ s), Imax=40kA(8/20 μ s)			
	Battery specifications				BoostLi-150AH \times 4 BoostLi-150AH \times 8 BoostLi-100AH \times 8 BoostLi-100AH \times 16			
Backup time				3hours(initial state) 6hours(initial state) 2hours(initial state) 4hours(initial state)				

Specifications

Type	20ft-CT-N+X-380V-8kW ^①	20ft-CT-2N-380V-8kW ^①	20ft-CT-N+X-380V-16kW ^①	20ft-CT-2N-380V-16kW ^①
Cooling Parameters	Cooling capacity	3kW/pcs(4+1 redundancy)		4.75kW/pcs(5+1 redundancy)
	Unit dimensions (H×W×D)	1300mm×500mm×250mm		1300mm×500mm×350mm
	Compressor	Constant frequency		
	Refrigerant	R134A		
	Fan	EC Fan		
	Pipe	Copper pipe		
	Humidifier	Customized configuration		
	Dehumidifier	Optional		
	Air conditioner backup power	Customized configuration ^⑥		
	Temperature control range	18 - 32°C		
	Humidity control range	20% - 80% RH		
	Thermal insulation performance	Total heat transfer coefficient≤0.59 W/(m ² ×K)		
	Monitoring parameters	Container access control	IC card access control (standard configuration); Three-in-one access control (customized configuration)	
Video surveillance		Huawei high-definition IP camera		
Video storage		SD card (7 days video storage); VCN (optional)		
Local display in the container		Customized configuration(PAD)		
Mobile O&M		Customized configuration		
E-mail		Customized configuration		
Fire extinguishing parameters	SMS alarm	Customized configuration		
	Automatic gas fire extinguishing system	CE Version		
	Very early smoke detection	Customized configuration(ASD)		
Gas	HFC-227ea			

1.The power supply and distribution system has two configurations: 8 kW and 16 kW. Each configuration has two power distribution architectures: N+X and 2N. Two sets of DC power supplies are configured in 2N mode, and one set of DC power supply is configured in N+X mode.

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

3.The storage temperature range of the lithium battery is from 0°C to +40°C;

4.The 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;

5.The container can also be installed on a concrete platform. Four 300 mm high steel bases are configured at the bottom of the container;

6.An additional inverter is needed which will reduce the backup time of the main devices.

FusionDC1000A

Prefabricated All-in-one Data Center(20ft)-ICT

Introduction

Huawei FusionDC1000A outdoor AIO CO solution integrates the power system, cooling system, and monitoring system. It applies to multiple industries and scenarios and meets customers' requirements for simplified deployment, safety and reliable, and intelligent management of small outdoor communication equipment rooms.

Application Scenarios

- Wireless BTS/Node B/Enb, BBU-hotel/CRAN access site
- Fixed network access & convergence site, and fixed network modernization
- National broadband network
- Telecom network by grid company

Features & Value

Simple

- Subsystems are factory-prefabricated; One stop within One container
- One-stop delivery; Onsite installation within one day
- Applicable to various sites and spaces; Flexible deployment

Green

- Ultimate subsystem energy efficiency design
- One-stop delivery, less onsite construction waste and pollution

Smart

- Centralized and remote management of multiple sites with NetEco
- Efficient O&M anywhere & anytime with mobile APP

Reliable

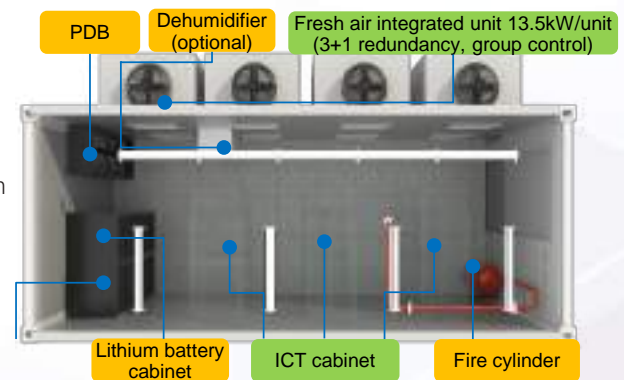
- Durable enclosure with 25-year service life
- GR-63-CORE Zone3 anti-seismic; IP55 protection
- BoostLi lithium battery with digital intelligent O&M system, achieving ultimate backup power security



FusionDC1000A-20ft-ICT-AIO



FusionDC1000A-20ft-ICT-AIO Site



FusionDC1000A-20ft-ICT-AIO Layout

Specifications

Type(One typical configuration and multiple reference designs) ^①		Typical configuration: FusionDC1000A-20ft-N+X- 380V-IT:8kW & CT:10kW	Reference design 1 : FusionDC1000A-20ft-2N- 380V- IT:8kW & CT:10kW	Reference design 2: FusionDC1000A-20ft- N+X-380V-CT 24kW	Reference design 3: FusionDC1000A-20ft-2N- 380V-CT 24kW	
Entire system parameters	Deployment Site	Outdoor, awning, warehouse				
	Altitude range	Maximum altitude: 3000m (Power derating occurs when altitude $\geq 1000\text{m}$) ^②				
	Humidity range	5%-95% RH				
	Operating temperature	-20°C - $+55^{\circ}\text{C}$ (Power derating occurs when the temperature is higher than 35°C) ^②				
	Storage temperature	-40°C - $+70^{\circ}\text{C}$ ^③				
	Storage humidity	5%-95% RH				
	Power density	Total power: IT $\leq 8\text{kW}$, CT $\leq 10\text{kW}$		Total power: CT $\leq 24\text{kW}$		
	Number of cabinets/ Container	N63 cabinet:	15 Pcs	11 Pcs	15 Pcs	11 Pcs
		N66 cabinet:	6 Pcs	4 Pcs	6 Pcs	4 Pcs
		N68 cabinet:	4 Pcs	4 Pcs	4 Pcs	4 Pcs
	Cabinet dimensions (W×D×H)	N63 cabinet:	600×300×2200mm (air intake at front and exhaust at top)			
		N66 cabinet:	600×600×2200mm (air intake at front & back and exhaust at top)			
		N68 cabinet:	600×800×2200mm (air intake at front and exhaust at back)			
	CT White space	9m ²	8m ²	9m ²	8m ²	
	Environment corrosion requirements	Class A/B environment(standard configuration); Class C environment(customized configuration) ^④				
	Waterproof & dustproof	IP55				
	Anti-seismic	GR-63-CORE Zone3/9 intensity (the container)				
	Anti-theft	EN 1627 - EN 1630 Class 3 (optional)				
	Anti-bullet	GJB 4300-2002 V&N.I.J.0108.01 IIIA (customized configuration)				
	Anti-wind	Wind speeds $\leq 30\text{m/s}$				
Anti-salt fog	Meets the 1440-hour salt spray test requirements					
Container service life	Equivalent service life: 25 years					
Fixed-form	Preferentially installed on the ground ^⑤					
Electrical parameters	Power mode	380/400/415V, 50/60 Hz, three-phase, four-wire+PE				
	Configuration of DC Power Supply	$\leq 36\text{ kW}$ (36kW in actual configuration, rectifiers: 9×4 kW/unit)		$\leq 36\text{ kW}$ (36kW in actual configuration, rectifiers: 9×4 kW/unit)		
	Input channels	2				
	Input current	250A				
	DC power output (Available)	BLVD:	63A×6	63A×12	63A×6	63A×12
		LLVD:	63A×2	63A×4	125A×2, 63A×2	125A×2, 63A×2
		LLVD Fuse:	500A×2	500A×4	500A×2	500A×4
		Battery:	500A×3	500A×6	500A×3	500A×6
	AC subrack output (available)	16A×12	16A×24	/	/	
	DC subrack output (available)	BLVD:	16A×1	16A×3,32A×4	16A×1	16A×3,32A×4
		LLVD:	16A×4,32A×2,63A×4	16A×8,32A×4,63A×8	16A×4,32A×2,63A×4	16A×8, 32A×4, 63A×8
	Total input surge protection	$I_n=30\text{kA}(8/20\mu\text{s})$, $I_{\text{max}}=60\text{kA}(8/20\mu\text{s})$				
	Battery specifications	BoostLi-150Ah × 15	BoostLi-100Ah × 22	BoostLi-150Ah × 15	BoostLi-100Ah × 22	
Backup time	4hours(initial state)					

Specifications

Type(One typical configuration and multiple reference designs) ^①	Typical configuration: FusionDC1000A-20ft-N+X- 380V-IT:8kW & CT:10kW	Reference design 1: FusionDC1000A-20ft-2N- 380V- IT:8kW & CT:10kW	Reference design 2: FusionDC1000A-20ft-N+X- 380V-CT 24kW	Reference design 3: FusionDC1000A-20ft- 2N-380V-CT 24kW
Cooling Parameters	Cooling capacity	13.5kW/unit(3+1 redundancy)		13.5kW/unit(2+1 redundancy)
	Unit dimensions (H×W×D)	2198mm×1160mm×655mm		
	Compressor	DC variable frequency		
	Refrigerant	R134A		
	Fan	EC Fan		
	Group control	Customized configuration		
	Humidifier	Customized configuration		
	Dehumidifier	Optional		
	Air conditioner backup power	Customized configuration ^⑥		
	Temperature control range	18 - 32°C		
	Humidity control range	20% - 80% RH		
	Thermal insulation performance	Total heat transfer coefficient≤0.59 W/(m ² ×K)		
Monitoring parameters	Container access control	IC card access control (standard configuration); Three-in-one access control (customized configuration)		
	Video surveillance	Huawei high-definition IP camera		
	Video storage	SD card (7 days video storage); VCN (optional)		
	Local display in the container	Customized configuration(PAD)		
	Mobile O&M	Customized configuration		
	E-mail	Customized configuration		
	SMS alarm	Customized configuration		
Fire extinguishing parameters	Automatic gas fire extinguishing system	CE Version		
	Very early smoke detection	Customized configuration(ASD)		
	Gas	HFC-227ea		
Structure parameters	Dimensions(H×W×D)	2896mm×2438mm×6058mm		
	Internal dimensions(H×W×D)	2592mm×2212mm×5690mm		
	Weight	Preinstalled weight before delivery ≤ 7.5T, maximum load-bearing capacity ≤ 10T		
	Integrated cabling	Customized configuration		
	Entrance room	Customized configuration		
	Cable routing mode	Cables can be routed in from the bottom or end		
	Aisle dimensions	Long aisle: ≥ 700 mm; maintenance aisle: ≥ 600 mm		

Remark:

①Two sets of DC power supplies are configured in 2N mode, and one set of DC power supply is configured in N+X mode.

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

③The storage temperature range of the lithium battery is from 0°C to +40°C;

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/C4;

⑤The container can also be installed on a concrete platform. Four 300 mm high steel bases are configured at the bottom of the container;

⑥An additional inverter is needed which will reduce the backup time of the main devices.

FusionDC1000B

Medium Size Prefabricated MoudularData Center

Introduction

The FusionDC 1000B is a small- and medium-sized prefabricated modular infrastructure solution that supports flexible configuration and online capacity expansion for ICT convergence scenarios. The overall solution consists of device modules, power modules, and auxiliary modules (optional). The module type, quantity, and layout can be flexibly configured to meet different requirements for ICT device deployment. All modules are prefabricated in the factory to minimize onsite workload and implement quick deployment.



Outdoor application

Application Scenarios

- Small- and medium-sized government and enterprise data centers
- Carrier-owned data center
- Small- and medium-sized IDC

Features & Value

Simple

- Pre-integration and pre-test of devices in the factory, reducing the TTM by 50%+
- Modular design, on-demand deployment, and online capacity expansion.

Green

- Hot aisle containment design, cold and hot aisle isolation, improving cooling efficiency.
- Green onsite construction, no dust and noise on the construction site.

Smart

- The unique iCooling technology to dynamically link the Indoor and outdoor units for self-optimization.
- Precise resource status identification and tenant information management to maximize the value of data center resources.

Reliable

- GR 63-Zone3 shockproof, which equivalent McN9 intensity earthquake resistance.
- Huawei iPower technology implements full-link monitoring of power supply and distribution to ensure automatic fault diagnosis and reporting.

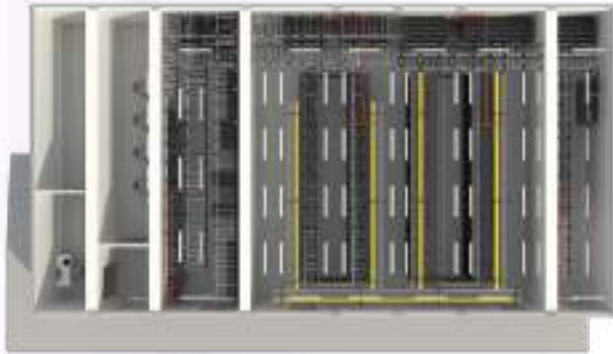


shed application

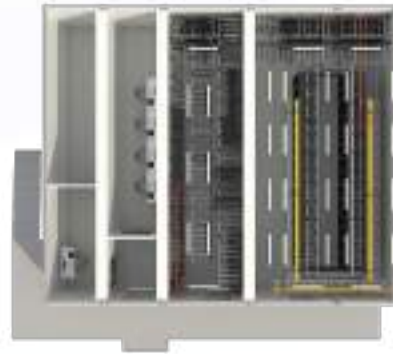


Warehouse application

Equipment Module



ICT Scenario Layout



CT Scenario Layout

Category	Item	Parameters
General	Application scenario	Outdoor, shed, and warehouse
	Installation type	Floor-mounted installation
	Altitude Range	≤4000m (derating above 1000m)
	Number of stacking layers	≤ 3 floors (4 to 5 floors customized for building)
	Working humidity	5% RH ~ 95% RH
	Operating temperature	-20°C+55°C-40° C~+45° C (an electric heating belt is installed at the bottom if the temperature is lower than -5° C)
	Environment adaptability	A/B/C type environment ^①
Structure	Module dimensions (HxWxD)	Wide pre-fab. module: 3600 mm x 3495 mm x 12192 mm; Standard pre-fab. module: 3600 mm x 2438 mm x 12192 mm
	Raised floor	No
Load	Anti- seismic	GR 63-Zone3
	Windproof	Wind speed ≤130km/h
Power	Power mode	380/400/415V 50/60Hz; three phase and four wire +PE
	Power configuration	IT module: 200kVA-UPS, 2N; CT module: TP482000B DC power supply (dual parallel system), 2N
	Smart Bus Configuration	IT module: Huawei 250A bus, dual-bus A and B configurations for single-row cabinets CT module: 4 x 2000 A DC PDF (TPD48202B)
	Backup power specifications	IT module: Huawei SmartLi -backup power of 15 minutes for one side at full load; CT module: Huawei BoostLi -backup power of 2 hours for one side at full load.
Cooling	Cooling end	Huawei NetCol8000-A055D
	Redundancy	N+1
Monitoring	DCIM	NetEco
	Power and environment monitoring system	Centralized ECC collection
	Access control system	By default, the card reader is configured at the in-room and module levels. The cabinet access control system supports customized password locks. The default storage duration is 30 days.
Fire extinguishing	CCTV	The default storage duration is 30 days.
	Fire extinguishing system	Automatic gas fire extinguishing, CE version, non-addressable ^②
	Gas	HFC227-ea
	Fire resistance time to the external sheathing structure (structural wall)	90 minutes is configured ; 120 minutes for customization (with fireproof panels and rock wool panels installed inside)
	Fire resistance time of the fireproof door	90min
ASD	support customized	

① Type C environments are between 500 m to 3700 m away from strong corrosive environments (such as the seaside, garbage piled up, and heavily polluted chemical plants).

② The fire extinguishing system can be selected and addressed. The fire extinguishing system can be removed.

Power module parameters



IT module



CT module

Category	Item	Parameters	
		IT equipment module	CT equipment module
General	Total Capacity	≤150kW	
	Average power per cabinet	6kW (25x6kW+Monitoring cabinet) 5.5kW (27x5.5kW+Monitoring cabinet)	6.25kW (24x6.25kW+End of suite)
	Maximum power per cabinet	10kW	
	600mm wide cabinet	26(Main aisle width≤ 1.5m); 28(Main aisle width≤ 0.9m) ^①	
Structure	Module dimensions (H x W x D)	Wide pre-fab. module: 3600 mm x 3495 mm x 12192 mm Standard pre-fab. module: 3600 mm x 2438 mm x 12192 mm	
	Box assembly	ICT scenarios: 2pcs-3495mm+2pcs-2438mm; CT scenario: 2pcs-3495mm	
	Raised floor	No	
	Power mode	380/400/415V 50/60Hz; three phase and four wire +PE	
Power	Power configuration	200kVA-UPS, 2N	TP482000B DC power supply(dual parallel system), 2N
	Average power per cabinet	6 kW (25 x 6 kW + monitoring cabinet) 5.5 kW (27 x 5.5 kW + monitoring cabinet)	6.25 kW (24 x 6.25 kW + PDF)
	Backup power specifications	Huawei SmartLi –backup power of 15 minutes for one side at full load.	Huawei BoostLi –backup power of 2 hours for one side at full load.
	Cooling end	Huawei NetCol8000-A055D	
Cooling	Redundancy	3+1	
	Cooling capacity	55kW@35°C/35°C	
	Aisle containment	Hot aisle containment	
	Continuous cooling	15min@full load	
	Temperature control range of the cold aisle	18~27°C	
	Humidity control range of the cold aisle	20%~80% RH	
Monitoring	DCIM	NetEco	
	Power and environment monitoring system	Centralized ECC collection	
	Access control system	By default, the card reader is configured at the in-room and module levels. The cabinet access control system supports customized password locks.	
	CCTV	The default storage duration is 30 days.	
Fire extinguishing	Fire extinguishing system	Automatic gas fire extinguishing, CE version, non-addressable ^②	
	Gas	HFC227-ea	
	Fire resistance time of the external protective structure (structure wall)	90 minutes is configured ; 120 minutes for customization (with fireproof panels and rock wool panels installed inside)	
	Fire resistance time of the fireproof door	90min	
	ASD	support customized	

① By default, only IT cabinets are provided. The depth of a CT cabinet ranges from 600 mm to 1200 mm.

② The fire extinguishing system can be selected and addressed. The fire extinguishing system can be removed.

Power module parameters



IT power module



CT power module

Category	Item	Parameters		
		IT power module	CT power module	
General	Capacity	≤200kW		
Structure	Length×Width×Height (mm)	12192×2438×3600	12192×3495×3600	
	Raised floor	No		
Power	Power mode	380/400/415V 50/60Hz; three phase and four wire +PE		
	Input voltage range	380/400/415V±15%, but the 415V power supply can only reach +10%.		
	Input power factor	0.99		
	Power configuration	200kVA-UPS, 2N	TP482000B DC power supply(dual parallel system), 2N	
	Battery Specifications		SmartLi, 512 V, 80 Ah, 2 PCS	BoostLi-48 V-100 Ah-16 PCS (8 PCS for route A and 8 PCS for route B)
		Backup time	SmartLi-512 V-40 Ah-1 PCS	SmartLi-512 V-40 Ah-1 PCS
	Rated charge voltage of batteries	544 V DC	53.5 V DC	
	Charge current of batteries	≤ 1C, 0.5C by default	Maximum: 1 C	
	Maximum discharge current of batteries	480 A continuous discharge (6C)	100 A/100 A @ 35°C	
	Efficiency	96%	97%	
Cooling	Cooling end	Huawei NetCol8000-A055D		
	Redundancy	1+1		
	Cooling capacity	38kW@24@/35°C		
	Inlet temperature range	20~30°C		
	Humidity range	Noncondensing		
Monitoring	Power and environment monitoring system	Centralized ECC collection		
	Access control system	By default, the card reader is configured at the in-room levels.		
	CCTV	The default storage duration is 30 days.		
Fire extinguishing	Fire extinguishing system	Automatic gas fire extinguishing, CE version, non-addressable ^①		
	Gas	HFC227-ea		
	Fire resistance time of the external protective structure (structure wall)	90 minutes is configured ;		
	Fire resistance time of the fireproof door	120 minutes for customization (with fireproof panels and rock wool panels installed inside)		
	ASD	90min		
	ASD	support customized		

① Type C environments are at least 500 m away from strong corrosive environments (such as the seaside, garbage piled up, and heavily polluted chemical plants).

② The fire extinguishing system can be selected and addressed. The fire extinguishing system can be removed.

③ Supports customized cabinet-level access control.

FusionDC1000C

Medium and Large Prefabricated Modular Data Center

Introduction

FusionDC1000C is a new and prefabricated modular data center that adopts the modular design [LEGO assembly, pre-integrated and pre-tested in factories, to minimize onsite workload, supports fast deploy, online upgrade and capacity expansion.

The solution is classified into five types based on functions: equipment module, MEP module (cooling), power module, hydraulic module and auxiliary module.

The prefabricated modular data center is configured with the data center infrastructure management (DCIM) system. In addition, the AI technologies (iCooling, iPower, and iManager) are used to improve the TCO and cash flow of the customer throughout the data center life cycle, helping the customer achieve business success.

Application Scenarios

- Public cloud, large colocation data centers, and ultra-large Internet service data centers.
- Medium- and large-sized data centers of enterprises or governments.
- AI computing and HPC.

Features & Value

Simple

- Pre-integration and pre-test of devices in the factory, synchronous basic civil work and module factory production, reducing TTM by 50%^①.
- Modularized components, modularized functions, and PODs^②, ondemand deployment, and phased capacity expansion.
- Less onsite workload and simple project management.

Green

- Indirect evaporative cooling maximizes the use of natural cooling sources and reduces the PUE.
- Optional smart fanwall cooling technology and high-temperature chilled water reduce power consumption by 3%.
- Green building, no dust and noise on the construction site, and less construction waste.

Smart

- AI-based intelligent optimization continuously reduces data center energy consumption.
- Use smart sensors and big data analysis to precisely manage available resources and tenant information, maximizing the value of data center resources.

Reliable

- The prefabricated data center complies with the TIA 942 standard.
- Huawei iPower technology implements full-link monitoring of power supply and distribution and core components fault prediction to ensure uninterrupted operation.

①. China: 1000 cabinets, 18 months for traditional civil engineering, 6 months for prefabricated modular data centers; Middle East: 600 cabinets, 24 months for traditional civil construction, 9 months for prefabricated modular data centers

②. POD: point of delivery



Reference Layout 1



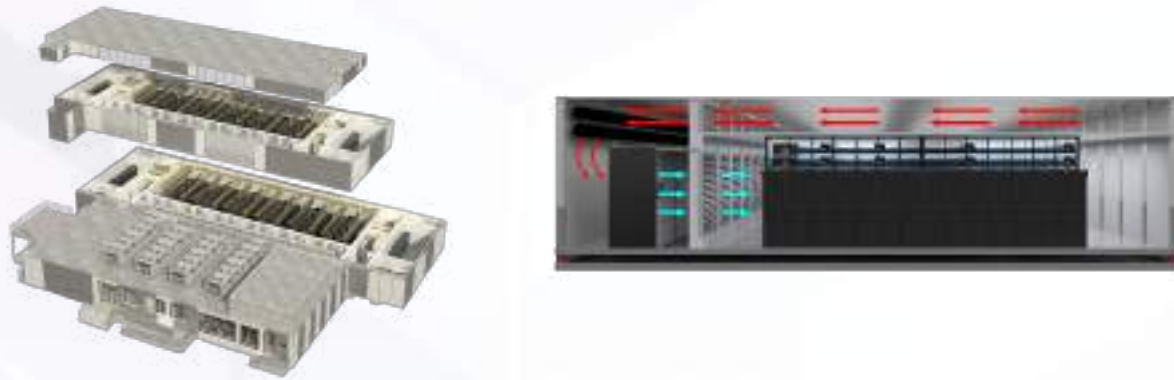
Reference Layout 3



Reference Layout 2

Typical Reference Design

Based on customer requirements and the granularity of power distribution and cooling, we can match various combinations. The following uses the FusionDC1000C IT load of 4 MW as an example to describe the reference design.

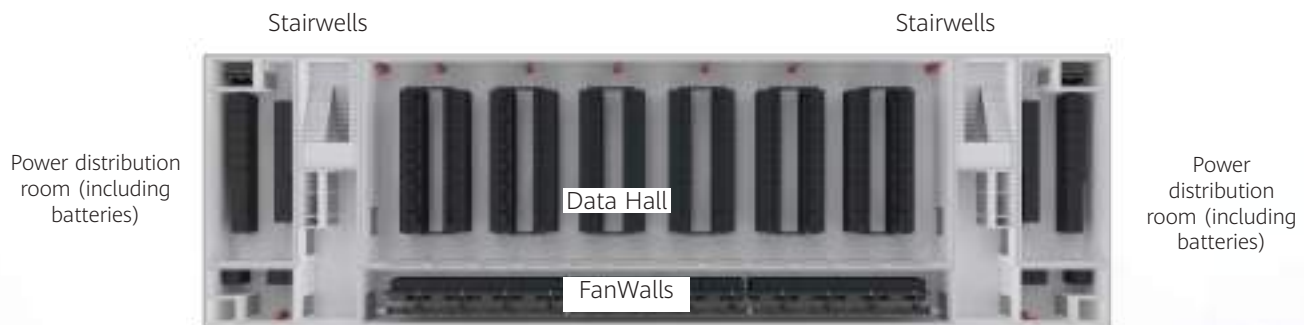


Reference design for the Smart Fanwall cooling scenario

Introduction: 2 layers, 336 racks, maximum IT power load of 1920 kW per layer (including 6 IT micro-modules, 28 racks per micro-module, 320 kW load, and maximum of 15 kW/R)

Highlights: The power supply and distribution devices and IT devices are deployed at the same layer, "one layer, one DC". The Smart Busway is adopted to support power density expansion. Adopts Fanwall, no raised floor, and high space utilization in vertical.

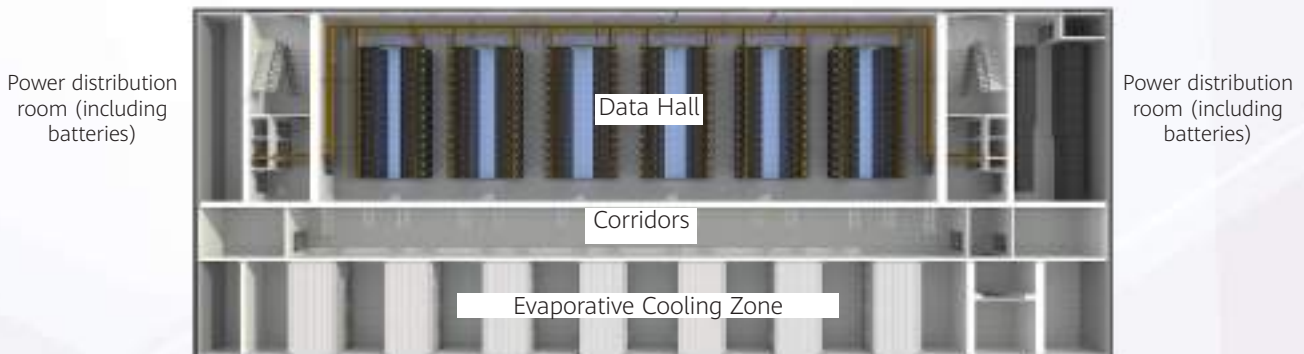
Typical Reference Design Layout



Reference design layout 1

(FanWall Cooling solution)

Symmetric design on both sides, 6 IT micro-modules, 28 cabinets, and each module



Reference design layout 2

(indirect evaporative cooling scenario)

Main parameters of the reference design(POD)

Category	Item	FanWall Cooling solution	Indirect evaporative cooling scenario
General	Altitude	Altitude≤4000m ^①	
	Environment adaptability	Class A/B/C environment: Class C environment is 500m~3700m away from strong corrosive environments (such as seaside, garbage pileup, and heavily polluted chemical plants) ^② .	Class A/B/C environment: Class B environment is at least 3,700m away from strong corrosive environments (such as seaside, garbage pileup, and heavily polluted chemical plants) ^② .
	Operating temperature	-5~+55°C, -40~+45°C(if the temperature is lower than -5°C, perform external wall insulation)	-40~+45°C(if the temperature is lower than -5°C, perform external wall insulation)
	Working humidity	5%RH~95%RH	
	Tier Level	TIER III, 2N	
	Stack Layers	≤5 layers	
	Prefab module life	25-year standard, 50-year customization for specific environments ^③	
	Total IT capacity	≤2016kW@336R/layer	≤1344kW@336R/layer
	Average power per cabinet	≤12kW(Up to 15 kW per cabinet)	≤8kW(Up to 15 kW per cabinet)
	W x D x H	600mm×1200mm×2000mm/2200mm ^④	
load design	live load	Power supply area: 15 kN/m ² ; equipment area: 12 kN/m ² ; corridors and public areas: 5 kN/m ² ; ceilings: 2.4 kN/m ² ; rooftops: 0.75 kN/m ²	
	Seismic load	Ss≤0.67 S1≤0.2; Soil typesD Design category≤D	
	Other payloads	Wind load ≤ 1,000 mph	
	load combination	ASCE7-10, EN1990, GB 50009	
Electrical	Power System	380/400/415V 50/60Hz 3P+N+PE	
	UPS	2×1200kVA	2×1600kVA
	Backup time	SmartLi 10 minutes@full load	
Temperature control	Cooling redundancy	N+1, 10 minutes continuous cooling @ full load	
	Temperature and humidity range of the IT device area	18-27°C; 20%RH~80%RH	
	heat transfer coefficient of envelope	Total heat transfer coefficient ≤0.3 W/(m ² *K)	
Monitoring	DCIM Configuration	iManager NetEco	
	Optional Features	Work order management, energy efficiency management, temperature map, mobile app O&M, asset capacity management, iCooling, and third-party southbound access	
	Northbound access	SNMP NBI, WebService NBI, CTCC C NBI, and FTP NBI	
	Power and environment monitoring system	Yes, collected by the ECC	
	In-room access control system - security	Yes, three-in-one card reader, third-party security platform	
	Modular Access Control System - Operation	Yes, three-in-one card reader, managed by the ECC800	
	CCTV	Including room-level and module-level, and the default storage duration is 90 days.	
	Hydrogen detection	Optional	
	Water immersion system	Yes, addressable	
	Intelligent lighting	Optional	
	SMS alarm	Optional	
Fire protection	Fire extinguishing system	Including gas fire extinguishing in equipment areas, water spray in non-equipment areas, non-addressable (customized addressing type)	
	Fire resistance time of bearing beam and column	120 minutes	
	Fire resistance time of the external protective structure	Standard: the external wall 90 minutes and the internal wall 60 minutes customizable: 120 minutes (By adding a fireproof board)	
	Fire resistance time of the fire door	90 minutes	
	Fire Extinguishing Agent and Detector	HFC227-ea, equipped with ASD	

① The power supply and distribution capability derating is according to EN/IEC 62040-3 when the altitude exceeds 1000m. For details about the cooling parameters, see Huawei smart cooling product data sheet. The overall derating is the one with the larger derating coefficient.

② For the definition of class 2A/B/C environments refer to Huawei enterprise standards. The corresponding ISO9223/12944 environment classification is C1/C2/C3/C4.

③ According to ISO12944-2/ISO12944-1, the equivalent service life of a 1440-hour salt spray test in a C4-High environment is 25 years. 50 years in the C3 environment and 40 years in the C4/C5 environment (A third-party certification report can be provided.)

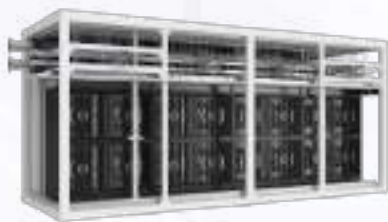
④ Cabinets are not defaulted, only showing the dimension limitation.

Introduction to Core Modules



Power Module

- 380/400/415V 50/60Hz; 3P, four-wire+PE, UPS: 2*1,200 kW, input power factor 0.99
- SmartLi-512V-80Ah, Backup 10min@ full load
- Dimensions (mm): 12,192 (40ft) (L) * (2*2,438) (W)*4,150(H)
- Busbar connection
- 10min@ full load under continuous refrigeration



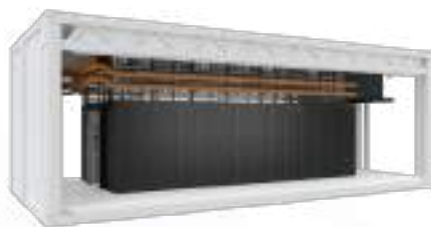
**MEP Module
(intelligent wind wall)**

- 3* FusionCol8000-C210 (210kW/unit), total cooling capacity of 630 kW
- Dimensions(mm): 9,827 (L)*3,495 (W)*4,150 (H)
- Inlet/return water temperatures: 20°C/28°C
- Cold aisle temperature control: 24°C / 36°C
- 10min continuous cooling@full load



**MEP Module
(indirect evaporative cooling)**

- 1* FusionCol8000-E240 (240kW/unit), air volume: 55,000 m3/h; supplementary cooling capacity : 10%~55%
- Supply air temperature (°C)/Humidity (%): 25°C/50%
- Return air temperature (°C)/Humidity (%): 38°C/25%
- Dimensions: 6,058(L)*2,438(W)*4,150(H)
- Net weight/Gross weight: 11000kg/11500kg



IT Equipment Module

- 28 IT cabinets ^①: 336 kW (a single cabinet supports a maximum of 15 kW)
- Dimensions (mm): 12,192 (40 ft)(L)*3495/2438 (W)*4,150(H)
- Support cabinet dimensions (mm): 600(W)*1,200(D)- 2,000/2,200(H)
- With aisle containment
- 250A/400A busway, A/B dual power supply for each row
- 2 pcs 3P/32A rPDUs for each cabinet
- No raised floor, floor-mounted

^① Only the device installation space is provided by default.

Design Specifications

Item	Standards compliance of the Chinese version
System Design	GB 50174-2017 Code for design of data centers
Structural System	GB 50068-2018 Unified standard for reliability design of building structures; GB 50223-2008 Standard for classification of seismic protection of building constructions; GB 50009-2012 Load code for the design of building structures; GB 50011-2010 Code for seismic design of buildings; GB 50017-2014 Standard for design of steel structures
Fire extinguishing system	GB 50016-2014 Code for fire protection design of buildings; CECS 200-2006 Technical code for fire safety of steel structure in buildings; GB50116-2013 Code for design of automatic fire alarm system; GB50370-2005 Code for design of gas fire extinguishing systems
Power supply and distribution system	GB50052-2009 Code for design of electric power supply systems; GB50054-2011 Code for design of low voltage electrical installations; GB50034-2013 Standard for lighting design of buildings; GB50217-2018 Standard for design of cable of electric power engineering; JGJ16-2016 Code for electrical design of civil buildings; GB50057-2010 Design code for protection of Structures against lightning; GB 50343-2012 Technical code for protection of building electronic information system against lightning.
HVAC system	GB50019-2003 Code for design of heating ventilation and air conditioning; GB50015-2009 Code for design of building water supply and drainage.
Monitoring System	GB50395-2007 Code of design for video monitoring system; GB50348-2018 Technical Code for Engineering of Security & Protection System.

2

Data Center Smart Power Solutions Modular Design, Beyond Reliability





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UPS2000-A Series
(1-3kVA)



UPS2000-G Series
(1-20kVA)



UPS5000-E Series(30-
800kVA)



UPS5000-S Series
(50-800kVA)



UPS5000-S Series
(50-800kVA)



SmartLi

UPS2000-A

(1-3kVA)

Introduction

UPS2000-A series with a capacity ranging from 1kVA to 3kVA is an online double conversion power system that delivers continuous, high-quality AC Power. It is a perfect power protection solution for small power scenarios.

Scenarios

- Small- and medium-sized enterprises, large enterprise branches, and bank outlets
- Network, communication system, automatic control system AC power supply
- AC Power Supply for Precision Instruments
- Large supermarket, home, office, and other AC power supply scenarios

Features

Reliable

- Wide input voltage range to minimize battery use
- Online double conversion power system provides continuous, high-quality AC Power

Efficient

- Efficiency up to 90%, reduce energy consumption, green and energy-saving
- Ultra small volume, compared to the traditional UPS system to save space

Simple

- LCD screen supports real-time monitoring and convenient operation
- Built-in battery, easy to use
- Enables quick and easy configuration of the UPS
- NetEco network manager, supporting centralized management to all the UPSs



UPS2000-A-1K/2K/3K

Specifications

Rated capacity (kVA/kW)		1kVA/0.8kW	2kVA/1.6kW	3kVA/2.4kW	
Input: Output		1-in: 1-out			
Mains Input	Input Wiring	L+N+PE			
	Rated Voltage	220/230/240VAC			
	Input Voltage Range	110-300VAC			
	Input Frequency Range	40-70Hz			
	Input Power Factor	0.99			
Bypass Input	Input Rated Voltage	220/230/240VAC			
	Input Voltage Range	174-264VAC			
	Input Frequency Range	47-53Hz / 57-63Hz			
Battery	Battery Voltage	Standard	24VDC	48VDC	72VDC
		Long Backup	36VDC	72VDC	96VDC
	Backup Time	Standard	>5 minutes @ 80% load		
		Long Backup	Depending on the capacity of external batteries		
Output	Output Wiring	L+N+PE			
	Output Connections	3 X IEC C13	4 X IEC C13	4 X IEC C13 + 1 X IEC C19	
	Rated Voltage	220/230/240VAC ±1%			
	Output Frequency	Tracking the bypass input (Normal mode); 50/60Hz ± 0.05%			
	Output Power Factor	0.8			
	Waveform	Sinewave, THDv< 3%			
	System Efficiency	88%	89%	90%	
	Overload Capacity	≤110% overload for 10 minutes; ≤130% overload for 1 minute; ≤150% overload for 3 seconds			
Environment	Operating Temperature	0 to 40°C			
	Storage Temperature	-40 to +70°C (battery: -20 to +40°C)			
	Relative Humidity	0%-95% RH (no condensation)			
	Operating Altitude	0-1000m. Above 1000m, derating rate based on EN/IEC 62040-3			
	Audible Noise	<50dB			
Others	D x W x H (mm)	Standard	282 x 145 x 220	397 x 145 x 220	421 x 190 x 318
		Long Backup	282 x 145 x 220	397 x 145 x 220	397 x 145 x 220
	Weight (kg)	Standard	9.9	17.3	26.7
		Long Backup	4.8	7.6	8.2
	Certifications	EN/IEC 62040-1; EN/IEC 62040-2; EN/IEC 62040-3; CE; CB; RoHS, REACH, WEEE, etc.			
	Communications	USB&RS232 (optional RS485/Dry contact/SNMP)			

UPS2000-G

(1-3kVA)

Introduction

UPS2000-G series with a capacity ranging from 1kVA to 3kVA is an online double conversion power system that delivers continuous, high-quality AC Power. It's really a perfect power protection solution for small power scenarios. It supports tower and rack installation.



UPS2000-G-1K/2K/3K

Scenarios

- Small-sized data centers such as small- and medium-sized enterprises, large enterprise branches, and bank outlets
- Network, communication system, and automatic control system AC power supply
- AC Power Supply for Precision Instruments

Features

Reliable

- Wide input voltage range to minimize battery use
- Online double conversion power system provides continuous, high- quality AC Power

Efficient

- Efficiency up to 90%, reduce energy consumption, green and energy- saving
- Ultra small volume, compared to the traditional UPS system to save space

Simple

- LCD screen supports real-time monitoring and convenient operation
- Built-in battery, easy to use
- Enables quick and easy configuration of the UPS
- NetEco network manager, supporting centralized management to all the UPSs

Specifications

Rated capacity (kVA/kW)		1kVA/0.8kW	2kVA/1.6kW	3kVA/2.4kW	
Input: Output		1-in: 1-out			
Mains Input	Input Wiring	L+N+PE			
	Rated Voltage	200/208/220/230/240VAC			
	Input Voltage Range	110-300VAC			
	Input Frequency Range	40-70Hz			
	Input Power Factor	0.99			
Bypass Input	Input Rated Voltage	200/208/220/230/240VAC			
	Input Frequency Range	50/60±3Hz			
Battery	Battery Voltage	Standard	24VDC	48VDC	72VDC
		Long Backup	36VDC	72VDC	96VDC
Output	Output Wiring	L+N+PE			
	Output Connections	4 X IEC C13	6 X IEC C13	6 X IEC C13 + 1 X IEC C19	
	Rated Voltage	200/208/220/230/240VAC ±1%			
	Output Frequency	Tracking the bypass input (Normal mode); 50/60Hz ± 0.05%			
	Output Power Factor	0.8			
	Waveform	Sinewave, THDv< 3%			
	System Efficiency	88%	89%	90%	
Environment	Operating Temperature	0 to 40°C			
	Storage Temperature	-40 to +70°C (battery: -20 to +40°C)			
	Relative Humidity	0%-95% RH (no condensation)			
	Operating Altitude	0-1000m. Above 1000m, derating rate based on EN/IEC 62040-3			
	Audible Noise	<50dB			
Others	D x W x H (mm)	Standard	88 × 438 × 310	88 × 438 × 410	88 × 438 × 630
		Long Backup	88 × 438 × 310	88 × 438 × 410	88 × 438 × 410
	Weight (kg)	Standard	11.1	18.8	28.9
		Long Backup	6.0	8.7	9.3
	Certifications	EN/IEC 62040-1; EN/IEC 62040-2; EN/IEC 62040-3; CE; CB; RoHS, REACH, WEEE, etc.			
	Communications	USB&RS232(optional RS485/Dry contact/SNMP)			

UPS2000-G

(6-20kVA)

Introduction

UPS2000-G series with a capacity ranging from 6kVA to 20kVA is an online double conversion power system that delivers continuous, high-quality AC power. It is rack/tower convertible and 95% high efficiency helps it get ECA energy saving certification from United Kingdom government and the world's first batch of "Energy Star" certification. It's really a perfect power protection solution for small power scenarios.

Scenarios

- Small and medium-sized enterprises, large enterprise branch offices, bank branches and other small data centers
- Networks, communications systems, automatic control systems and other precision equipment

Features

Reliable

- 5kA lightning protection design, reducing lightning-related failure rate
- Key component failure pre-alarm including fans, batteries, bus capacitors to remind customers to maintain before failure occurs
- Ultra-wide voltage input range to extend battery service life by effectively reducing times of switchover to battery mode

Efficient

- High efficiency at online mode to reduce power loss of UPS and air conditioner: up to 95% for 15/20kVA, 94.5% for 10kVA, 94% for 6kVA

Simple

- Rack/tower convertible, suitable for different installation scenarios
- High expandability design: up to four units can be connected in parallel to achieve higher capacity or reliability
- NetEco network manager, supporting centralized management to all the UPSs



UPS2000-G-6K/10K



UPS2000-G-15K/20K

Specifications

Rated Capacity(kVA/kW)		6/5.4	10/9	15/13.5	20/18
Input: Output		1-in: 1-out	1-in: 1-out or 3-in: 1-out	1-in: 1-out, 3-in: 1-out or 3-in: 3-out	
Mains Input	Input Wiring	L+N+PE		L+N+PE /3Ph+N+PE	
	Rated Voltage	L-N: 220/230/240V AC			
	Input Voltage Range	L-N: 80-280V AC			
	Input Frequency Range	40-70Hz			
	Input Power Factor	0.99			
Bypass Input	Rated Voltage	L-N: 220/230/240V AC			
	Frequency	50/60 ± 6Hz			
Battery	Rated Average	192-240V DC, 16-20 section adjustable, default 20		384-480V DC, 32-40 section adjustable, default 40	
	Long Backup				
Output	Output Wiring	L+N+PE		L+N+PE /3Ph+N+PE	
	Output Sockets	2 × C13 (10A)	-		
	Rated Voltage	220/230/240V AC ±1%		L-N: 220/230/240V AC ±1%	
	Rated Frequency	Tracking the bypass input (Normal mode); 50/60 Hz±0.05% (Battery mode)			
	Output Power Factor	0.9			
	Waveform	Sine wave, THDv<2%			
	Efficiency	94%	94.5%	95%	
Environment	Operating Temperature	0-40°C			
	Storage Temperature	-40 to 70°C			
	Relative Humidity	0%-95% (No condensing)			
	Operating Altitude	0-1000m. Above 1000m, derating rate based on EN/IEC 62040-3			
	Audible Noise	< 55dB		< 58dB	
Others	H × W × D (mm)	86 × 430 × 615		130 × 430 × 757	
	Weight	14kg	16kg	32kg	
	Certifications	EN/IEC 62040-1; EN/IEC 62040-2; EN/IEC 62040-3; CE; CB; RoHS, REACH, WEEE, etc			
	Communications	USB(optional RS485/Dry contact/SNMP)			

UPS5000-E

(30-120kVA)-FM

Introduction

Based on the online double conversion technology, FusionPower Series UPS5000-E-(30-120kVA) can provide reliable, pure and uninterrupted power for critical ICT equipment. The modularized architecture helps improve the availability and reduce the engineering cost significantly.

Scenarios

- Small & medium data center, large enterprise regional datacenter
- Central offices, dispatch center, control center, etc.

Features

Reliable

- Hot swappable power module, bypass module and control module simplify maintenance and expansion in 5 minutes

Green

- Compact design, saving the footprint by 50%
- 96% system efficiency, high efficiency at light-load

Smart

- iPower pre-warnings for key components by AI method

Reliable

- Redundant architecture eliminates single point of failure
- 138-485Vac ultra-wide input voltage range, suitable for the worst power grid



30kVA Power Module @ 2U



UPS5000-E-120K-FM

Specifications

Model		UPS5000-E-(30-120kVA)-FM			
Rated Capacity (kVA/kW)		30kVA/30kW	60kVA/60kW	90kVA/90kW	120kVA/120kW
Number of Power Modules		1	2	3	4
Mains Input	Input Wiring	3Ph+N+PE			
	Rated Voltage	380/400/415Vac			
	Voltage Range	138-485Vac (305-485Vac for 100% load; 138-305Vac for 40%-100% load)			
	Input Frequency	40-70Hz			
	Total Harmonic Distortion	THDi<3% for linear load			
	Input Power Factor	0.99			
Bypass Input	Input Wiring	3Ph+N+PE			
	Rated Voltage	380/400/415Vac			
	Input Frequency	50/60 ± 6Hz			
Battery	Rated Voltage	360-528Vdc (VRLA, the number of batteries can be selected from 30 to 44; 40 batteries in default) 51 2Vdc (Li-ion battery, Huawei SmartLi)			
Output	Output Wiring	3Ph+N+PE			
	Voltage	380/400/415Vac±1%			
	Frequency	Tracking the bypass input (Normal mode); 50/60Hz±0.05% (Battery mode)			
	Waveform	Sine wave (THDv<1% for linear load)			
	Output Power Factor	1			
	Overload Capacity	Inverter: 105%<load≤110% for 60 mins, then transfer to bypass mode; 110%<load≤125% for 10 mins, then transfer to bypass mode; 125%<load≤150% for 1 min, then transfer to bypass mode; load>150% for 200ms, then transfer to bypass mode;			
	Efficiency	Up to 96%			
	Expandability	4			
Environment	Operating Temperature	0-40°C			
	Storage Temperature	-40 to 70°C			
	Relative Humidity	0%-95% (No condensing)			
	Operating Altitude	0-1000m. Above 1000m, derating rate based on EN/IEC 62040-3			
Others	Height×Width×Depth (mm)	2000 × 600 × 850			
	Weight	250kg	270kg	290kg	310kg
	Certifications	EN/IEC 62040-1; EN/IEC 62040-2; EN/IEC 62040-3; CE; CB; RoHS, REACH, WEEE, etc.			
	Communication	Dry contacts, RS485, FE; Support SNMP, Modbus.			

Remark: For important systems that are related to important economic interests or public security, such as civil aviation management center, financial clearing center, and trading center, the Tier IV or Tier III power supply level specified in T1942 must be used. That is, two UPSs form dual-bus power supply or the UPS and mains form dual-bus power supply.

UPS5000-E

(50-800kVA)

Introduction

FusionPower Series UPS5000-E-(50-800kVA) is an advanced modular UPS based on Huawei's extensive experience in digital technology and power electronics. Benefiting from high performance DSP and high speed communication technology, the UPS5000-E system achieves leading expandability and availability. Its high efficiency, high availability match the requirements of cloud data center perfectly.

Scenarios

- Data centers in headquarter or disaster recovery data centers
- Internet data centers
- Large cloud computing data centers
- Critical power supply

Features

Simple

- Hot swappable power module, bypass module and control module simplify maintenance and expansion in 5 minutes
- Top busway prefabricated design, reducing on-site installation time by 60%

Green

- 1 MW, 1 rack, saving the footprint by 50%
- Online mode: 97% system efficiency, high efficiency at light-load
- Smart online mode: 99% system efficiency, saving 140,000\$ in lifetime
- Smart online mode active filtering, optimal power quality

Smart

- iPower pre-warnings for key components by AI method
- Source share of main and battery achieves intelligent peak shaving, eliminating the reconstruction of grid.

Reliable

- Redundant architecture eliminates single point of failure
- Smart online mode: non-interruptible mode transferring.
- AI temperature prediction, eliminate the over temperature risk in light load



Specifications

Model		UPS5000-E-200K	UPS5000-E-300K	UPS5000-E-400K	UPS5000-E-500K	UPS5000-E-600K	UPS5000-E-800K
Rated Capacity (kVA/kW)		50-200	50-300	50-400	50-500	50-600	50-800
Number of Power Modules		1-4	1-6	1-8	1-10	1-12	1-16
Display Unit	LCD Touchscreen	7 Inch LCD shows the status of system by line diagram.					
	Operation LED	There are status indicator on power modules, bypass module and monitor module.					
	Load Rate Display	load rate; Using percentage, remaining backup time for battery					
Environment	Operating Temperature	0-40°C					
	Storage Temperature	-40 to 70°C					
	Relative Humidity	0%-95% (No condensing)					
	Protection Class	IP20 (IP21 components is optional)					
	Operating Altitude	0-1000m. Above 1000m, derating rate based on EN/IEC 62040-3					
	Audible Noise	66-75dB					
Standard Features	Soft Start	Support, Configurable 0.5 to 120s					
	Cold Start	Support start without mains input					
	Communication Card	SNMP Card, Dry contact card					
	Emergency Stop (EPO)	Provide dry contact card for remote EPO switch					
Optional components	Battery Protection Box	PDU8000 series battery protection box, Controls the connection between battery strings and the UPS					
	Top air-flow cabinet	Used for top air exhaust and allows the UPS to be installed against a wall.					
	Ant seismic kit	Reinforces the cabinet to meet 9 degree seismic fortification intensity					
	IP21 component	Prevents water from dropping into the cabinet, protecting the cabinet to IP21.					
	Backfeed Protection Card	Detects mains and bypass backfeed and provides protection.					
	Dry Contact Extended Card	Provides extra five relay dry contact outputs and five signal input ports					
	Ambient Temperature and Humidity Sensor	Monitors the ambient temperature and humidity					
	Others	Height × Width × Depth (mm)	2000 × 600 × 850		2000 × 1200 × 850		2000 × 1400 × 850
Weight (kg)		285~390	275~450	465~710	515~830	705~1090	1075~1540
Certifications		EN/IEC 62040-1; EN/IEC 62040-2; EN/IEC 62040-3; CE; CB; RoHS, REACH, WEEE, EAC,RCM etc.					
Communications		Dry contacts, RS485, SNMP					
Mains input		Mains input current(A)	355	533	711	889	1066
	Recommend cable size (mm2) L1/L2/L3/N	2× (4×95)	2× (4×120)	2× (4×185)	3× (4×150)	3× (4×185)	4× (4×240)
	Recommended Circuit Breaker	400A/3P	630A/3P	800A/3P	1000A/3P	1250A/3P	1600A/3P
	Bypass input	Bypass input current(A)	304	456	608	760	912
Recommend cable size (mm2) L1/L2/L3/N		2× (4×95)	2× (4×120)	2× (4×185)	3× (4×150)	3× (4×185)	4× (4×240)
Recommended Circuit Breaker		400A/3P	630A/3P	630A/3P	800A/3P	1000A/3P	1250A/3P
Output		Output current(A)	304	456	608	760	912
	Recommend cable size (mm2) U/V/W/N	2× (4×95)	2× (4×120)	2× (4×185)	3× (4×150)	3× (4×185)	4× (4×240)
	Recommended Circuit Breaker	400A/3P	630A/3P	630A/3P	800A/3P	1000A/3P	1250A/3P
	PE	Recommend cable size (mm ²)	95	150	240	240	240
Maintenance Space		Front: 800mm, rear:500mm					

Remark:

1# UPS5000-E- 200K-SM(standard version, without main input and output switches) cloud support cable connection from both top and bottom of the UPS. UPS5000-E- 200K-FM(Full version, contains the mains, bypass and output switches) cloud support cable connection from top of the UPS, The bottom cable entry cabinet is optional.

UPS5000-E- 300K-SM only support bottom cable connection, UPS5000-E- 300K-SMT only support top cable connection.

2# UPS5000-E standard version only support less than 4 UPS working parallel.

UPS5000-S

(50-800kVA)

Introduction

UPS5000-S Series (50-800kVA) is an advanced modular UPS based on Huawei's extensive experience in digital technology and power electronics. Benefiting from high performance DSP and high speed communication technology, the UPS5000-S system achieves leading expandability and availability. Its high efficiency, high availability match the requirements of cloud data center perfectly.

Scenarios

- Data centers in headquarter or disaster recovery data centers
- Internet data centers
- Large cloud computing data centers

Features

Simple

- Hot swappable power module, bypass module and control module simplify maintenance and expansion in 5 minutes

Green

- Compact design, saving the footprint by 50%
- 97% system efficiency, high efficiency at light-load

Smart

- iPower pre-warnings for key components by AI method

Reliable

- Redundant architecture eliminates single point of failure
- 138-485Vac ultra-wide input voltage range, suitable for the worst power grid



Power Module: 50kVA/3U



UPS5000-S-200kVA



UPS5000-S-200/300kVA



UPS5000-S-400/500kVA



UPS5000-S-600kVA



UPS5000-S-800kVA

Specifications

Model		UPS5000-S-200K	UPS5000-S-300K	UPS5000-S-400K	UPS5000-S-500K	UPS5000-S-600K	UPS5000-S-800K
Rated Capacity (kVA/kW)		50-200	50-300	50-400	50-500	50-600	50-800
Number of Power Modules		1-4	1-6	1-8	1-10	1-12	1-16
Mains Input	Input Wiring	3Ph+N+PE					
	Rated Voltage	380/400/415Vac					
	Voltage Range	138-485Vac (305-485Vac for 100% load; 138-305Vac for 40%-100% load)					
	Frequency Range	40-70Hz					
	Total Harmonic Distortion	THDi<3% for 100% linear load					
	Input Power Factor	0.99					
Bypass Input	Input Wiring	3Ph+N+PE					
	Rated Voltage	380/400/415Vac					
	Input Frequency	50/60±6Hz					
Battery	Rated Voltage	360-600Vdc (The number of batteries can be selected from 30 to 50; 40 batteries in default)					
Output	Output Wiring	3Ph+N+PE					
	Voltage	380/400/415Vac±1%					
	Frequency	Tracking the bypass input (Normal mode); 50/60Hz±0.1% (Battery mode)					
	Waveform	Sine wave (THDv<1% for linear load)					
	Overload Capacity	Inverter: 110% overload for 60 minutes; 125% overload for 10 minutes; 150% overload for 1 minute					
System	Output Power Factor	1					
	Efficiency	Up to 97.1%					
	Expandability	8					
Environment	Operating Temperature	0-40°C					
	Storage Temperature	-40 to 70°C					
	Relative Humidity	0%-95% (No condensing)					
	Operating Altitude	0-1000m. Above 1000m, derating rate based on EN/IEC 62040-3					
	Audible Noise	66-75dB					
Others	Height×Width×Depth(mm)	2000 × 600 × 850		2000 × 1200 × 850		2000 × 1400 × 850	2000 × 2400 × 850
	Weight	285-390kg	275-450kg	465-710kg	515-830kg	705-1090kg	1075-1540kg
	Certifications	CE, CB, RoHS, REACH, WEEE, TUV etc.					
	Communications	Dry contacts, RS485, FE; Support web, Modbus and SNMP					

Remark: For important systems that are related to important economic interests or public security, such as civil aviation management center, financial clearing center, and trading center, the Tier IV or Tier III power supply level specified in TI942 must be used. That is, two UPSs form dual-bus power supply or the UPS and mains form dual-bus power supply.

UPS5000-A

(30–120kVA)

Introduction

The UPS5000-A (30-120kVA) is an online, double-conversion, and tower/rack convertible UPS that Huawei has launched. It uses the digital signal processing (DSP) technology to output pure and stable sine wave with a voltage of 380/400/415 Vac. With comprehensive reliability assurance measures and other leading technologies, the UPS5000-A (30-120kVA) can provide reliable, economical, intelligent, and convenient solutions to medium power scenarios.

Scenarios

- Small and medium-sized data centers
- Telecom and Internet switch rooms
- Equipment rooms of branch offices in sectors such as finance
- Infrastructures, such as control equipment rooms, wireless systems, etc.

Features

Reliable

- Wide input voltage range to minimize battery use: 485-305 Vac for 100% load; 305-138 Vac for 100%-40% load (derating linearly)
- High output power factor of up to 1 (30/40/80kVA), 30% more load driven than traditional UPS

Efficient

- High efficiency at online mode of up to 95.7%, reducing power consumption of UPS and cooling equipment effectively

Simple

- Rack/tower convertible, suitable for different installation scenarios
- Flexible battery configuration: 30-44 batteries per string allow customers to get the faulty battery out instead of replacing it



UPS5000-A-30/40K



UPS5000-A-60/80/120K

Specifications

Rated Capacity (kVA/kW)		30kVA/30kW	40kVA/40kW	60kVA/54kW	80kVA/80kW	120kVA/108kW
Mains Input	Input Wiring	3Ph+N+PE				
	Rated Voltage	380/400/415Vac				
	Voltage Range	138 ~ 485Vac				
	Frequency Range	40 ~ 70Hz				
	Total Harmonic Distortion	THDi<3% for 100% linear load				
	Input Power Factor	0.99				
Bypass Input	Input Wiring	3Ph+N+PE				
	Rated Voltage	380/400/415Vac				
	Input Frequency	50/60±6Hz				
Battery	Input Frequency	360-528Vdc (The number of batteries can be selected from 30 to 44; 30/40/80kVA 32 batteries in default, 60/120kVA 40 batteries in default)				
Output	Output Wiring	3Ph+N+PE				
	Rated Voltage	380/400/415Vac±1%				
	Frequency	Tracking the bypass input (Normal mode); 50/60Hz±0.05% (Battery mode)				
	Waveform	Sine wave (THDv<1% for 100% linear load)				
	Waveform	30/40/80kVA: 110% overload for 60 min; 125% overload for 10 min; 150% overload for 1 min 60/120kVA: 110% overload for 60 min; 125% overload for 10 min; 150% overload for 0.5 min				
System	Output Power Factor	30/40/80kVA: 1; 60/120kVA: 0.9				
	Efficiency	Up to 95.7%				
	Expandability	Up to 8 units connected in parallel				
Environment	Operating Temperature	0 ~ 40°C				
	Storage Temperature	-40 ~ 70°C				
	Relative Humidity	0%-95% (No condensing)				
	Operating Altitude	0-1000m. Above 1000m, derating rate based on EN/IEC 62040-3				
	Audible Noise	58 ~ 64dB				
Others	Height×Width×Depth (mm)	500×264×800		1020×440×850		
	Weight	70kg		140kg		170kg
	Certifications	EN/IEC 62040-1; EN/IEC 62040-2; EN/IEC 62040-3; CE; CB; RoHS, REACH, WEEE, etc.				
	Communications	Dry contacts, RS485, SNMP				

Remark: For important systems that are related to important economic interests or public security, such as civil aviation management center, financial clearing center, and trading center, the Tier IV or Tier III power supply level specified in T1942 must be used. That is, two UPSs form dual-bus power supply or the UPS and mains form dual-bus power supply.

UPS5000-A

(400-600kVA)

Introduction

Huawei UPS5000-A (400-600kVA) is an online double conversion UPS which can output pure sine wave with rated voltage of 380/400/415 Vac. UPS5000-A has a high efficiency of up to 96% and high power density; all-digital control allows precise output at any input and load condition. It's suitable to ensure continuous power supply to critical loads in large datacenters.

Scenarios

- Large data centers, server rooms, security systems of finance, telecom and other large enterprises
- Data center of government or public institutions
- Precision instruments

Features

Reliable

- Wide input voltage range to minimize battery use: 485-305 V for 100% load; 305-138 Vac for 100%-40% load (derating linearly)
- Better load adaptability: high output power factor up to 1 and no derating for capacitive or inductive devices with a PF>0.5

Efficient

- High efficiency of up to 96%, reducing power consumption effectively
- High power density, 50% footprint saving

Simple

- Flexible battery configuration: 30-44 batteries per string allow customers to get the faulty battery out instead of replacing it



UPS5000-A-400/500K



UPS5000-A-600K

Specifications

Rated Capacity		400kVA/400kW	500kVA/500kW	600kVA/600kW
Mains Input	ParaInput Wiring	3Ph+N+PE		
	Rated Voltage	380/400/415Vac		
	Voltage Range	138-485Vac		
	Frequency Range	40-70Hz		
	Total Harmonic Distortion	THDi<3% for 100% linear load		
	Input Power Factor	0.99		
Bypass Input	Input Wiring	3Ph+N+PE		
	Rated Voltage	380/400/415Vac		
	Input Frequency	50/60±6Hz		
Battery	Rated Voltage	360-528Vdc (The number of batteries can be selected from 30 to 44; 40 batteries in default)		
Output	Output Wiring	3Ph+N+PE		
	Rated Voltage	380/400/415 Vac±1%		
	Frequency	Tracking the bypass input (Normal mode); 50/60 Hz±0.05% (Battery mode)		
	Waveform	Sine wave (THDv<1% for 100% linear load)		
	Overload Capacity	110% overload for 60 minutes; 125% overload for 10 minutes; 150% overload for 1 minute		
System	Output Power Factor	1		
	Efficiency	96%		
	Expandability	Up to 8 units connected in parallel		
Environment	Operating Temperature	0-40°C		
	Storage Temperature	-40 to 70°C		
	Relative Humidity	0%-95% (No condensing)		
	Operating Altitude	0-1000m. Above 1000m, derating rate based on EN/IEC 62040-3		
	Audible Noise	66-75dB		
Others	Height×Width×Depth (mm)	2000 × 1200 × 850		2000 × 1400 × 850
	Weight	710kg	850kg	1100kg
	CCertifications	EN/IEC 62040-1; EN/IEC 62040-2; EN/IEC 62040-3; CE; CB; RoHS, REACH, WEEE, etc.		
	Communications	Dry contacts, RS485, SNMP		

UPS5000-H

(400-1600kVA)

Introduction

UPS5000-H-1200k-NT is Huawei's large-scale uninterruptible power supply system with advanced 100kVA/3U hot swappable power modules. The system achieves 1 MW, 1 rack, effectively saves footprint and installation time. System efficiency is up to 97%. Intelligent iPower improves system reliability and simplifies operation and maintenance for customers.

Application Scenarios

- Data centers in headquarter or disaster recovery data centers
- Internet data centers
- Large cloud computing data centers

Features

Simple

- Hot swappable power module, bypass module and control module simplify maintenance and expansion in 5 minutes
- Top bus way prefabricated design, reducing on-site installation time by 60%

Green

- 1 MW, 1 rack, saving the footprint by 50%
- Online mode: 97% system efficiency, high efficiency at light-load
- S-ECO mode: 99% system efficiency, saving 140,000\$ in lifetime
- S-ECO mode active filtering, optimal power quality

Smart

- iPower pre-warnings for key components by AI method
- Source share of main and battery achieves intelligent peak shaving, eliminating the reconstruction of grid.

Reliable

- Redundant architecture eliminates single point of failure
- S-ECO mode: non-interruptible mode transferring.



Power Module: 100kVA/3U



UPS5000-H-400/500/600kVA



UPS5000-H-800kVA



UPS5000-H-1200kVA



UPS5000-H-1600kVA

Specifications

Model		UPS5000-H-400/500/600k	UPS5000-H-800k	UPS5000-H-1200k	UPS5000-H-1600k
Capacity	Rack Capacity	400/500/600kVA(380/400/415Vac) 200/250/300kVA(200/208/210Vac)	800kVA	1200kVA	1600kVA
	Module number	2-4/2-5/2-6	2-8	2-12	2-16
Mains Input	Input Wiring	3Ph+N+PE			
	Rated Voltage	200/208/210/380/400/415Vac	380/400/415/480Vac	380/400/415Vac	
	Voltage Range	380/400/415V: 138-485Vac (100% load: 323-485V) 200/208/210V: 139-260Vac (100% load: 170-260V) 480V: 192-528Vac (100% load: 409-528V)			
	Frequency Range	40-70Hz			
	Total Harmonic Distortion	Normal mode: THDi<3% for 100% linear load S-ECO mode: THDi<3% for 100% linear load			
	Input Power Factor	Normal mode: 0.99; S-ECO mode: 0.99			
Bypass Input	Input Wiring	3Ph+N+PE			
	Rated Voltage	200/208/210/380/400/415Vac	380/400/415/480Vac	380/400/415Vac	
	Input Frequency	50/60±6Hz			
Battery	Rated Voltage	200/208/210Vac: 180-600Vdc (The number of VRLA can be selected from 15 to 50; 20 batteries rated, no battery neutral, support odd battery number); 380/400/415/480Vac: 360-600Vdc (The number of VRLA can be selected from 30 to 50; 40 batteries rated, no battery neutral, support odd battery number); 512Vdc(Huawei SmartLi)			
	Maximum charge capacity and current	Single power module: 15%, 30A			
	Battery Category	Huawei SmartLi, VRLA			
	Battery sharing	Support (VRLA)			
	Output Wiring	3Ph+N+PE			
Output	Voltage	200/208/210/380/400/415Vac±1%	380/400/415/480Vac±1%	380/400/415Vac ±1%	
	Frequency	Tracking the bypass input (Normal mode); 50/60Hz±0.25% (Battery mode)			
	THDv	THDv<1% for linear load			
	Overload Capacity	Inverter: 100% < load ≤ 110% for 60 minutes, then transfer to bypass mode; 110% < load ≤ 125% for 10 minutes, then transfer to bypass mode; 125% < load ≤ 150% for 1 minute, then transfer to bypass mode			
System	Output Power Factor	1			
	Efficiency	Normal mode: Up to 97% S-ECO mode: Up to 99%			
	Source share mode	Support main input and battery joint operating			
	Parallel	4	4	3	1
Environment	Operating Temperature	0-40°C			
	Storage Temperature	-40-70°C			
	Relative Humidity	0%-95% (No condensing)			
	Operating Altitude	0-1000m. Above 1000m, derating based on EN/IEC 62040-3			
Others	Weight	580/690/800kg	1300kg	1500kg	1900kg
	Height*Width*Depth(mm)	2000*800*1000	2000*1600*1000	2200*1600*1000	2200*2400*1000
	Standards and certifications	Standards: EN/IEC 62040-1, EN/IEC 62040-2, EN/IEC 62040-3 Certifications: CE; CB; RoHS, REACH, WEEE, etc.			
	Communications ports and protocol	Communications ports: Dry contacts, RS485, FE Communications protocol: Web, Modbus and SNMP			

Note: Tier4 or Tier3 levels specified in TI942 are required, that two UPSs form a dual bus or a UPS and utility form dual bus for important systems related to major economy or public safety, such as civil aviation management centers, financial liquidation centers and trading centers, etc.

FusionPower6000

PowerPod Solution

Introduction

The PowerPOD(FusionPower6000) integrates full-power links from the medium-voltage transformer to the feeder end of the load to provide MW-level integrated power supply, distribution, and backup solutions for large data centers.

Scenarios

Indoor power supply and distribution system of the data center in a large traditional building.

Prefabricated power modules for large prefabricated modular data centers.

Features

Simple

- Prefabricated in factory, TTM ↓ 75%
- Modular component, hot swappable, easy maintenance

Green

- Full-link convergence, Footprint ↓ 30%+ Power link efficiency is up to 95.5% Smart-Safety

Visualized system, easy-to-manage

- AI fault prediction and proactive maintenance
- Key components life prediction, on-line switch setting Sound and image recognition



FusionPower6000-2.4MVA(Indoor)

Specifications

Item		FusionPower6000-2.4MVA(Indoor)	FusionPower6000-2.0MVA(Indoor)	FusionPower6000-1.6MVA(Indoor)	FusionPower6000-1.2MVA(Indoor)
Power supply and distribution	Power input	Three-phase four-wire + PE, 380 V AC/400 V AC/415 V AC, 50 Hz/60 Hz			
	Transformer	2500kVA	2000kVA	1600kVA	1250kVA
	SVG	500kVar	400kVar	300kVar	250kVar
	UPS	UPS5000-H-1200kVA *2PCS	UPS5000-H-1000kVA *2PCS	UPS5000-H-1600kVA *1PCS	UPS5000-H-1200kVA *1PCS
	Branch Feeder	Feeder cabinet (7*400A 3P) 3PCS	Feeder cabinet (7*400A 3P) 3PCS	Feeder cabinet (7*400A 3P) 2PCS	Feeder cabinet (7*400A 3P) 2PCS
Monitoring	Power monitoring system	ECC for centralized management			
Structure	External dimensions (H x W x D)	3002mm×12800mm×1650mm	3002mm×12700mm×1650mm	2475mm×9300mm×1500mm	2475mm×8350mm×1450mm
	Installation mode	<ul style="list-style-type: none"> •Directly install on the ground •Assemble and install on the base onsite 			
Environmental requirements	Operating temperature	0°C ~ +40°C			
	Storage temperature	-40°C+70°C			
	Ambient humidity	≤ 95% RH (non-condensing)			
	Application environment	Class A environment			
	Altitude	0-4000 m. When the altitude is greater than 1000 m, the power is derated according to the industry standard.			

PDU8000

Power Distribution Unit

Introduction

The Precision Power Distribution Cabinet provides power distribution, electrical parameters measurement and risk pre-alarm functions to match the reliable operation of data center.

Application Scenarios

- Large datacenters
- Disasterrecovery Datacenter
- Enterprisedatecenters

Features

Reliable

- A fullrange of type tests, environmental tests and 9 intensityseismic tests to ensure high reliability
- Intelligent risk management,24hours key node temperaturereal-timedetection
- Modular design, standardized production, fully automated testing to ensure product reliability

Simple

- The monitoringmoduleand the outputswitch can be hot-swappable,which is easy to expandand maintain
- 7 inchLCD colortouchscreen,visualintelligentdetection,simplemanagment



Specifications

Items		Precision PDC (Standard)
Parameter	Rated voltage (V)	208/380/400/415
	Rated current (A)	160/250/400/630(optional)
	Rated frequency (Hz)	50/60
	Input switch	MCCB
	Bus architecture	Dual buses or single bus(optional)
	Outputs	Max. 144 1-pole MCBs or 48 3-pole MCBs (optional)
	Rated current of outputs(A)	10/16/20/32/40/63 (optional)
	Ingress Protection	IP20
	Surge protection	level-C SPD (In=20kA)
	Cabling route	from the top
	Maintenance	Front operation and rear maintenance
Monitoring Function	Monitoring function	Monitoring the voltage, current, power, power factor, harmonic etc. of the main circuit Monitoring the current, load ratio, active power, switch status etc. of the branch circuit
	Communication	Modbus ,SNMP
Environment	Operating temperature	-5°C ~ +40°C
	Storage temperature	-40°C ~ +70°C
	Relative Humidity	5%~95% (No condensation)
	Altitude	2000 m, derated when the altitude exceeds 2000 m
Others	Dimensions (WxDxH) (mm)	600×1100×2000, 600×1200×2000, 600×1200×2200
	Installation	Floor-mounted
	Weight	<380kg
	Certification	CCC, CE, TLC

SmartLi

Data Center Smart Li-ion Battery Solution

Introduction

SmartLi is a battery energy storage system developed by Huawei for UPS, which has the features of safety and reliability, long lifespan, space saving and easy maintenance. LFP is the safest cell of Li-ion battery. The unique active current balance control technology supports the mix use of new and old batteries, which reduces Capex. Three-level BMS system realizes intelligent battery management with Huawei UPS and Network management system, which reduces Opex.

Features

Reliable

- Long cycle lifespan, cycle lifetime can be up to 5000 times
- Highly stable LFP cell, no fire after thermal runaway
- Three-level BMS system ensures reliability
- Cabinet-level fire extinguishing, precise and quick fire fighting, non-proliferation

Efficient

- High power density, saving 70% footprint
- Smart BMS system, saving 80% routine O&M costs

Simple

- Active current balance control, supporting new and old battery cabinets mixed using, flexible to expand
- Smart active voltage balance control, Battery strings of different numbers of lithium batteries can be connected in parallel *



SmartLi

Specifications

	Item	Description
Basic Parameters	Product Model	SmartLi-512V-80AH
	Battery Cell Material	LiFePO4
	Nominal Voltage	512Vdc
	Nominal Charging Voltage	544Vdc
	Charging Current	≤ 1C, 0.5C by default
	Rated Max. Discharging Current	500A continuous discharge
	Cycle Life	5000 cycles @ 50% DOD
	Nominal Capacity	80Ah / 40.96kWh (6C); 52kWh(1C)*
	Weight	800kg
	Dimension (W*D*H)	600mm*850mm*2000mm
	Self Discharge	≤5% (0-30°C /3 months)
	Fire protection	Cabinet-level fire protection
	Communication Interface	FE, RS485, Dry contacts
	Protection	Over temperature, over current, short circuit, over charge/discharge,etc.
	Design Life	15 years
Certification	UL1642, UN38.3, IEC62619, IEC62040,RoHs	

	Item	Description
Basic Parameters	IP Protection Level	IP20 according to IEC60529 standard
	Mounting Type	Can be installed against a wall at the rear, Reserve at least 800 mm from the front.
EMC	Surge	IEC61000-4-5
	ESD	IEC61000-4-2
	Radiated electric fields	IEC61000-4-3
	Emission	IEC62040-3
Environment	Storage Temperature	0°C - 40°C
	Transportation Temperature	-40°C to 60°C
	Operating Temperature	0°C - 40°C (20-25°C is recommended)
	Relative Humidity	5% - 95%
	Max. Operating Altitude	0 - 4000m. Derating is required if the altitude exceeds 1000 m*

	Cell	Module	Full Cabinet	Half Cabinet
Configuration	Single cell	20S2P	16 module(2 groups)	8 module(1 group)
Declared Capacity (6C)	> 20Ah	40Ah	80Ah	40Ah
Nominal Voltage	3.2Vdc	64Vdc	512Vdc	512Vdc
Charging Voltage	3.4Vdc	68Vdc	544Vdc	544Vdc
Operation Voltage Range	2.5 - 3.6Vdc	50 - 72Vdc	408 - 544Vdc	408 - 544Vdc
Dimension(W*D*H: mm)	21*100*140	200.5*592*157.5	600*850*2000	600*850*2000
Weight	605g	35kg	800kg	520kg

- If a single module is faulty, remove the faulty module and connect the other modules in series to restart the system.
- The backup time is calculated based on the capacity 52 kWh (1C) and the capacity under different backup time or discharge rates.
52kWh=25.5Ah*40*16*3.2V (The battery cell is 27 Ah. The margin is calculated based on the reserved 25.5 Ah. For details, see the battery cell certification report.)

Back-up Time @SOL (in minutes)

	0-40°C (8+8 can support 200kW/10 min)							
UPS Power	0.5 cabinet	1 cabinet	1.5 cabinet	2 cabinet	2.5 cabinet	3 cabinet	3.5 cabinet	4 cabinet
100kW	10	24	36	48	64	77	90	103
200kW	-	10	18	24	31	37	43	49
300kW	-	-	10	16	20	24	28	32
400kW	-	-	-	10	15	18	21	24
500kW	-	-	-	-	10	15	17	19
550kW	-	-	-	-	-	11	15	17
600kW	-	-	-	-	-	10	13	16
700kW	-	-	-	-	-	-	10	13
800kW	-	-	-	-	-	-	-	10

*The derating coefficient depends on the detailed altitude

0-40°C (8+8 can support 200kW/10 min)								
UPS Power	4.5 cabinet	5 cabinet	5.5 cabinet	6 cabinet	6.5 cabinet	7 cabinet	7.5 cabinet	8 cabinet
100kW	116	129	142	155	168	181	194	207
200kW	55	64	71	77	84	90	97	103
300kW	37	41	45	49	53	57	64	69
400kW	27	30	34	37	40	43	46	49
500kW	22	24	27	29	32	34	37	39
550kW	20	22	24	27	29	31	33	36
600kW	18	20	22	24	26	28	31	33
700kW	15	17	19	21	23	24	26	28
800kW	12	14	16	18	19	21	23	24

0-27°C (8+8 can support 230kW/10 min)								
UPS Power	0.5 cabinet	1 cabinet	1.5 cabinet	2 cabinet	2.5 cabinet	3 cabinet	3.5 cabinet	4 cabinet
100kW	12	24	36	48	64	77	90	103
200kW	-	12	18	24	31	37	43	49
300kW	-	-	12	16	20	24	28	32
400kW	-	-	-	12	15	18	21	24
500kW	-	-	-	-	12	15	17	19
550kW	-	-	-	-	-	13	15	17
600kW	-	-	-	-	-	12	14	16
700kW	-	-	-	-	-	-	12	13
800kW	-	-	-	-	-	-	-	12

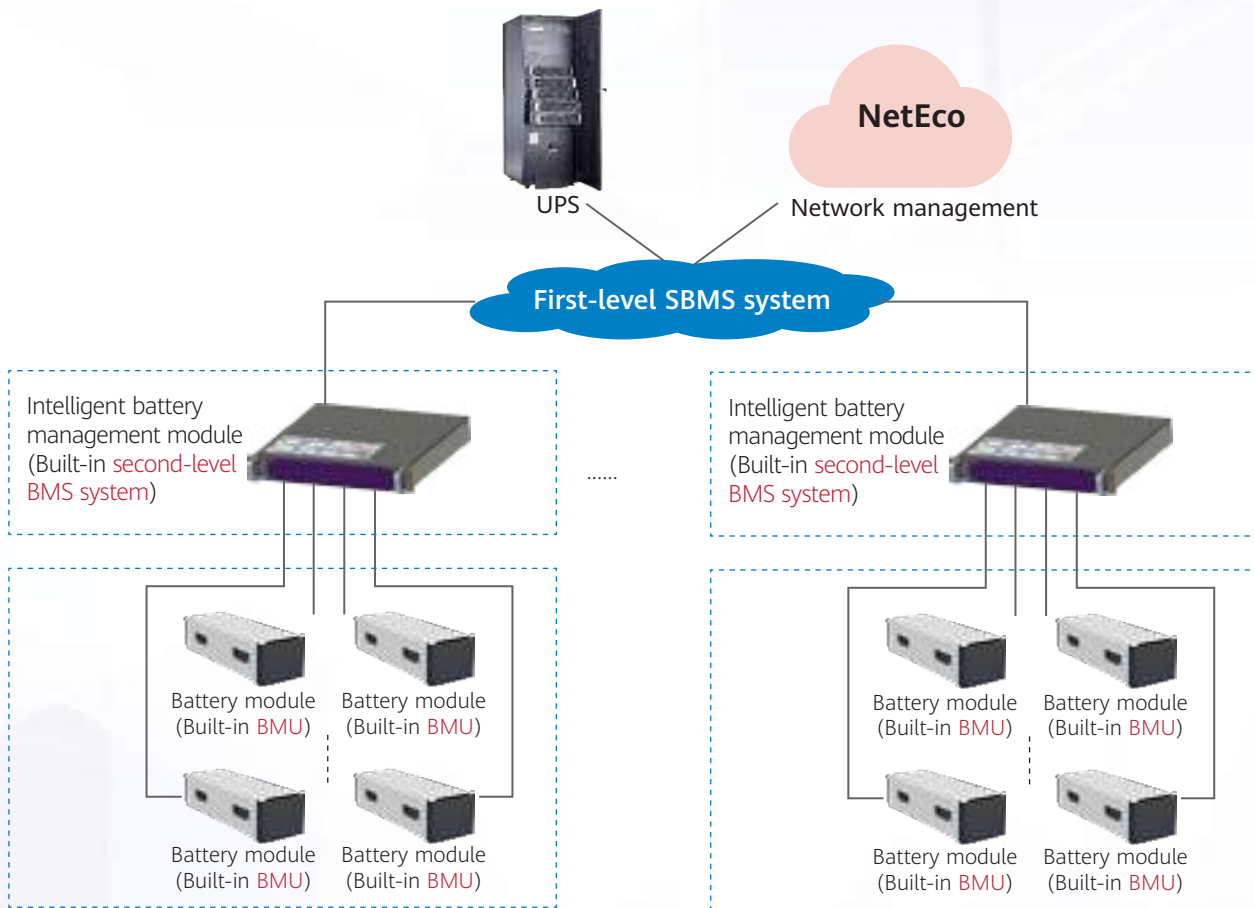
0-40°C (8+8 can support 200kW/10 min)								
UPS Power	4.5 cabinet	5 cabinet	5.5 cabinet	6 cabinet	6.5 cabinet	7 cabinet	7.5 cabinet	8 cabinet
100kW	116	129	142	155	168	181	194	207
200kW	55	64	71	77	84	90	97	103
300kW	37	41	45	49	53	57	64	69
400kW	27	30	34	37	40	43	46	49
500kW	22	24	27	29	32	34	37	39
550kW	20	22	24	27	29	31	33	36
600kW	18	20	22	24	26	28	31	33
700kW	15	17	19	21	23	24	26	28
800kW	13	15	16	18	19	21	23	24

0-27°C (8+8 can support 230kW/10 min)								
UPS Power	0.5 cabinet	1 cabinet	1.5 cabinet	2 cabinet	2.5 cabinet	3 cabinet	3.5 cabinet	4 cabinet
100kW	10	21	32	43	64	68	79	90
200kW	-	10	16	21	31	32	37	43
300kW	-	-	10	14	20	21	25	28
400kW	-	-	-	10	15	16	18	21
500kW	-	-	-	-	12	12	14	17
550kW	-	-	-	-	-	11	13	15
600kW	-	-	-	-	-	10	12	14
700kW	-	-	-	-	-	-	10	12
800kW	-	-	-	-	-	-	-	10

0-27°C (8+8 can support 230kW/10 min)

UPS Power	4.5 cabinet	5 cabinet	5.5 cabinet	6 cabinet	6.5 cabinet	7 cabinet	7.5 cabinet	8 cabinet
100kW	102	113	124	136	147	158	170	181
200kW	48	54	62	68	73	79	85	90
300kW	32	36	39	43	47	50	54	57
400kW	24	27	29	32	35	37	40	43
500kW	19	21	23	26	28	30	32	34
550kW	17	19	21	23	25	27	29	31
600kW	16	17	19	21	23	25	27	28
700kW	13	15	16	18	20	21	23	24
800kW	11	13	14	16	17	18	20	21

Monitoring



Monitoring

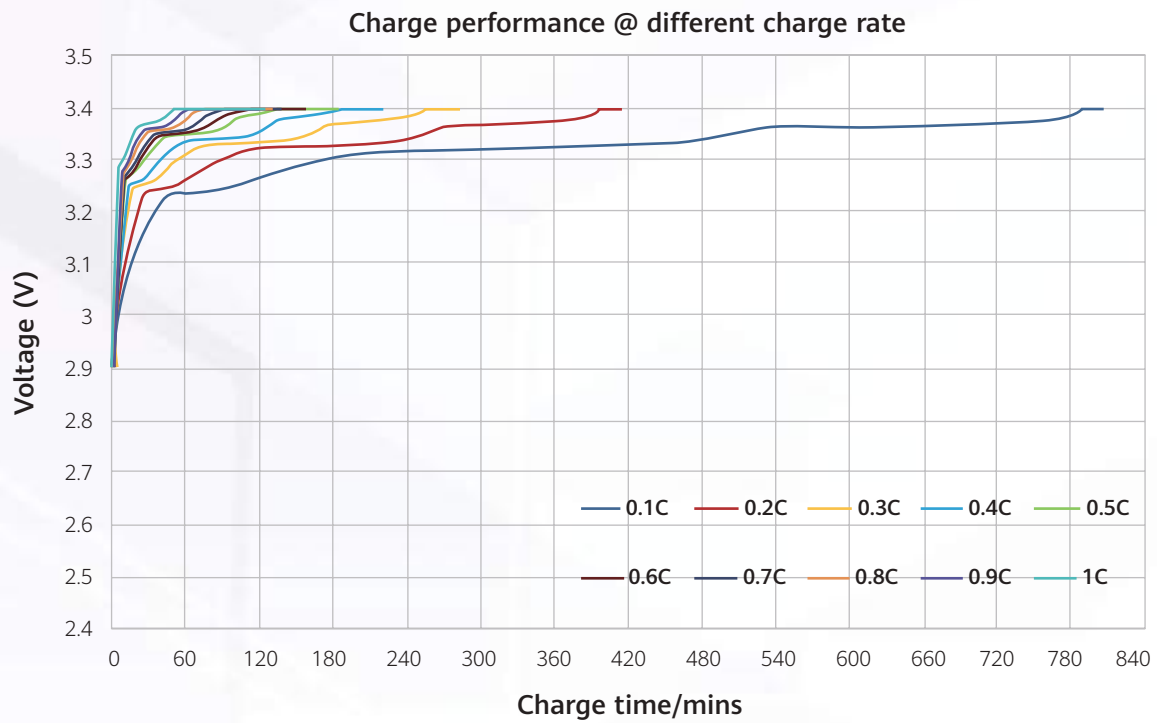
	BMU	BCU	SBCU
Monitored Object	Battery Pack	Battery Rack	System
Function Description	<ul style="list-style-type: none"> Measure the cell voltage, temperature. Electrochemical cell voltage equalization; Communicates with the BMS. Save the battery module fault information 	<ul style="list-style-type: none"> Manages all BMUs Collects statistics on the battery voltage, temperature, SOC, and SOH, and reports the statistics to the SBCU. Detects the charge and discharge currents of battery strings to adjust the parallel current sharing. Protects the hardware and batteries against exceptions, disconnects the loop in a timely manner when an exception occurs, and reports the exception to the SBCU. Save the battery cabinet fault information. 	<ul style="list-style-type: none"> Displays the total voltage, SOC, SOH, current, and temperature of the battery system, and battery information of each battery cabinet. Receives common parameters reported by each BCU and saves local data. Receives alarms and protection events reported by the BCU and saves the events locally. Communicates with the UPS, provides human-machine interaction, communications ports, and permission management for local and remote operations, sets battery management system parameters, and upgrades programs.
Measurement Parameter	Cell voltage	Cabinet Voltage	System Voltage
	Cell temperature	Cabinet Current	System Current
Measurement Precision	0.2% (voltage) 2°C (temperature)	1% (voltage) 2% (> 40A); 3A (< 40A)	1% (voltage) 2% (> 40A); 3A (< 40A)
Display information	Battery module Module Cell Voltage	Battery Cabinet Voltage	Battery System Voltage
	Battery module SOH	Battery Cabinet Current	Battery System Current
	Battery module SOC	Battery Cabinet SOC	Battery System SOC
	Battery module Maximum Cell Voltage	Battery Cabinet SOH	Battery System SOH
	Battery module Minimum Cell Voltage	Battery Cabinet Maximum Cell Voltage	Battery System Maximum Cell Voltage
	Battery module Maximum Cell Temperature	Battery Cabinet Minimum Cell Voltage	Battery System Minimum Cell Voltage
	Battery module Minimum Cell Temperature	Battery Cabinet Maximum Cell Temperature	Battery System Maximum Cell Temperature
		Battery Cabinet Minimum Cell Temperature	Battery System Minimum Cell Temperature
		Discharge Times	Battery Capacity
		Discharge Capacity	Discharge Times
		Discharge Capacity	

Protection Function

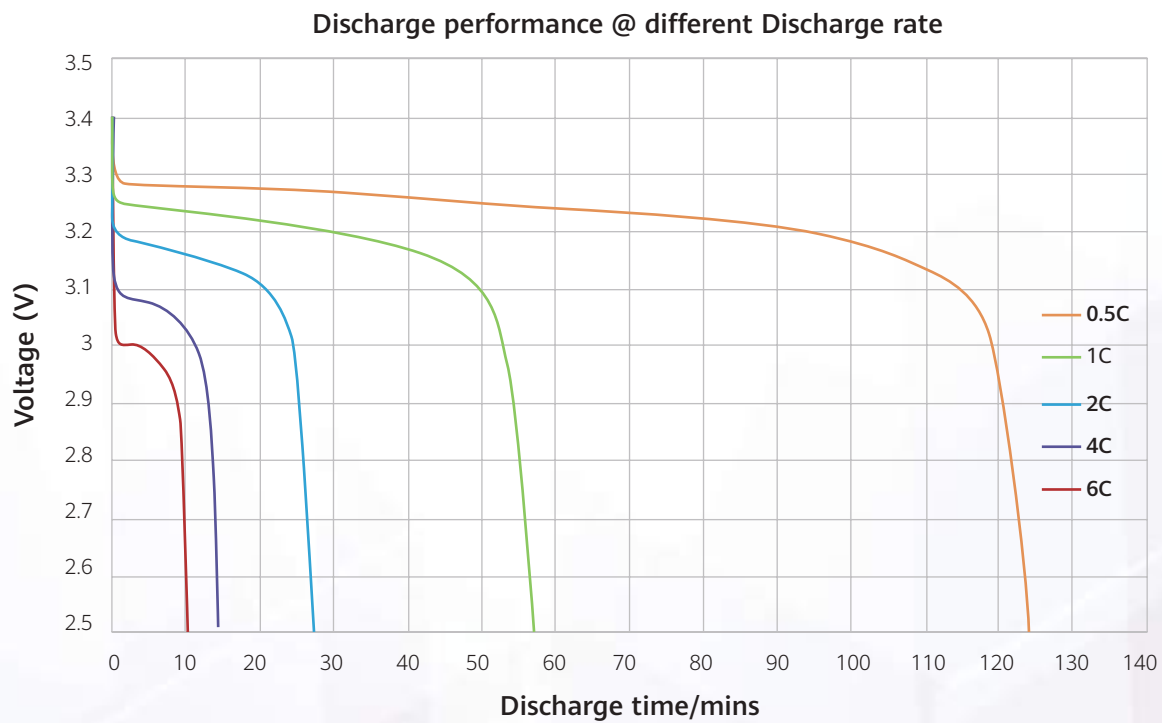
Alarm Type	Alarm Descriptio	Alarm Cause	Alarm Confirmation Time	Solution
Battery charge protection	Low temperature protection under battery charge	The temperature of battery cell is under 0°C .	30s	Trip off battery breaker
	Over temperature protection under battery charge	The temperature of battery cell above 65°C .	10s	
	Over voltage protection of battery cell	The voltage of battery cell is above 3.9V	1s	
	Over voltage protection of battery string.	The voltage of battery string is above 3.625N V	1s	
	Over current protection of battery charge	>200A	20ms	
Battery discharge protection	Low temperature protection under battery discharge	The temperature of battery cell is under 0°C	5s	Trip off battery breaker
	Over temperature protection under battery discharge	The temperature of battery cell above 65°C	30s	
	Low voltage protection of battery cell	The voltage of battery cell is under 2.3V	700ms	
	Low voltage protection of battery string	The voltage of battery string is under 2.55N V	2s	
	Over current protection of battery discharge	>520A	30s	
Battery charge alarm	Low temperature alarm under battery charge	The temperature of battery cell is under 5°C	30s	Alarm
	Over temperature alarm under battery charge	The temperature of battery cell above 55°C	30s	
	Over voltage alarm of battery cell	The voltage of battery cell is above 3.8V	5s	
	Over voltage alarm of battery string.	The voltage of battery string is above 3.55N V	5s	
	Over current alarm of battery charge	>96A	5s	
Battery discharge alarm	Low temperature alarm under battery discharge	The temperature of battery cell is under 5°C	30s	Alarm
	Over temperature alarm under battery discharge	The temperature of battery cell above 60°C	30s	
	Low voltage alarm of battery cell	The voltage of battery cell is under 2.6V	5s	
	Low voltage alarm of battery string.	The voltage of battery string is under 2.8N V	5s	
	Over current alarm of battery discharge	>500A	5s	

* N is the number of battery cell per string

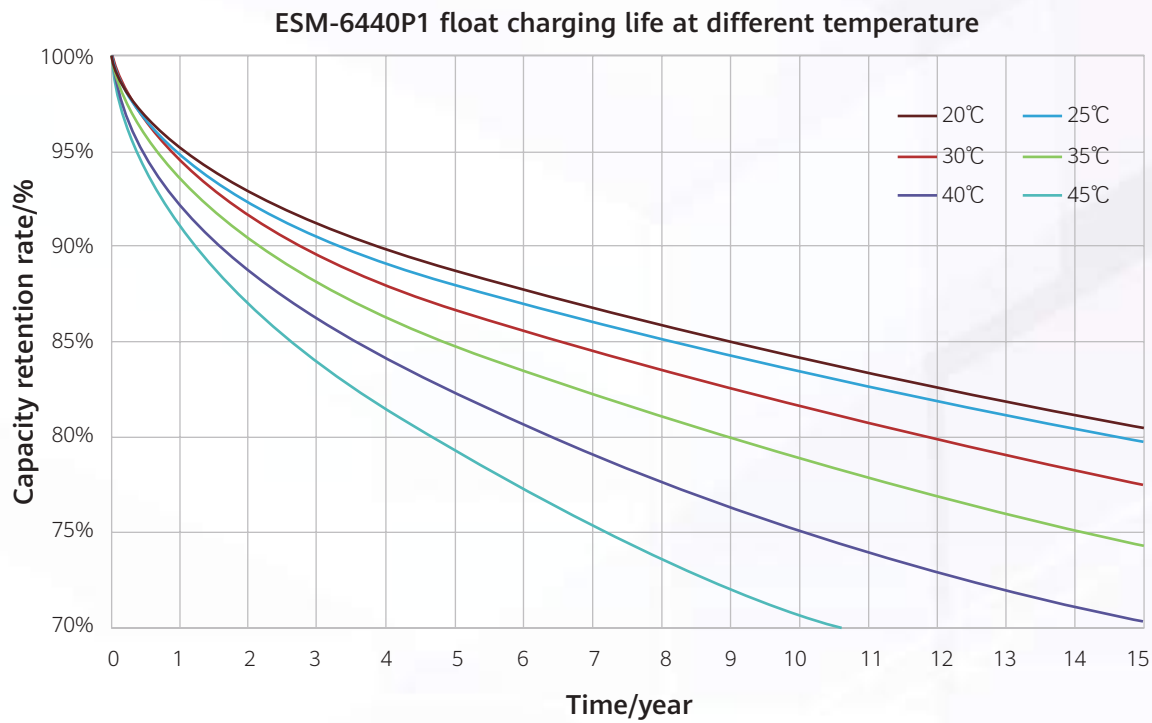
Charge at Different Charging Rate



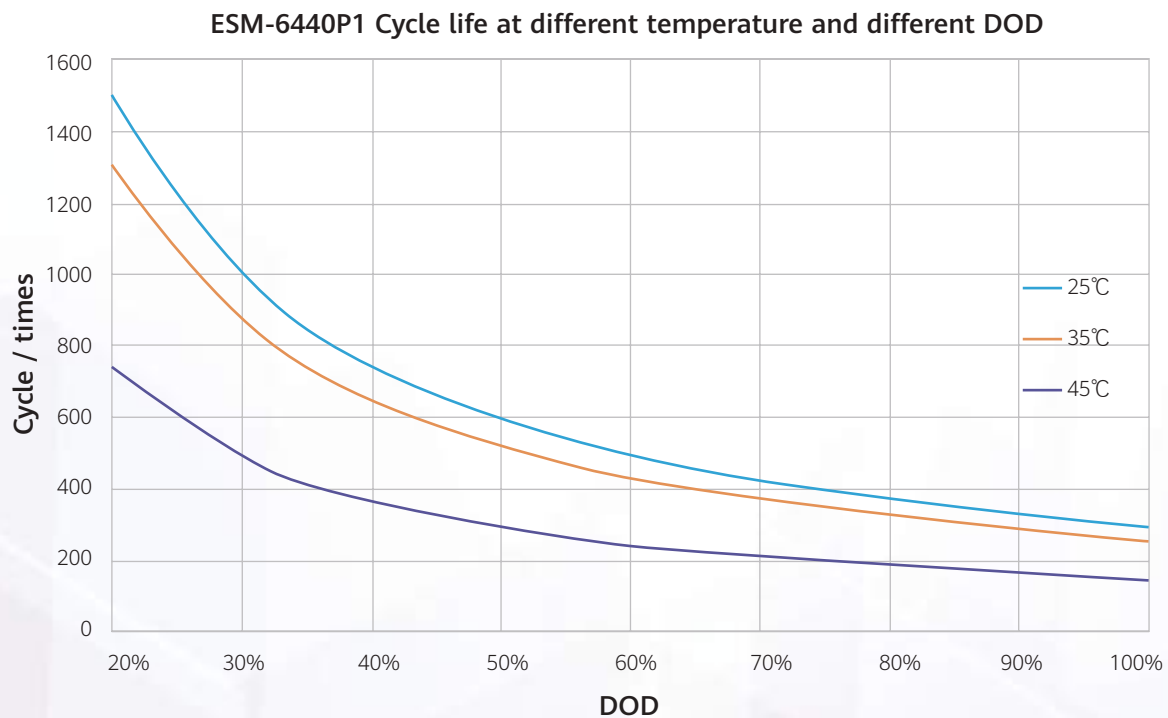
Discharge at Different Discharge Rate



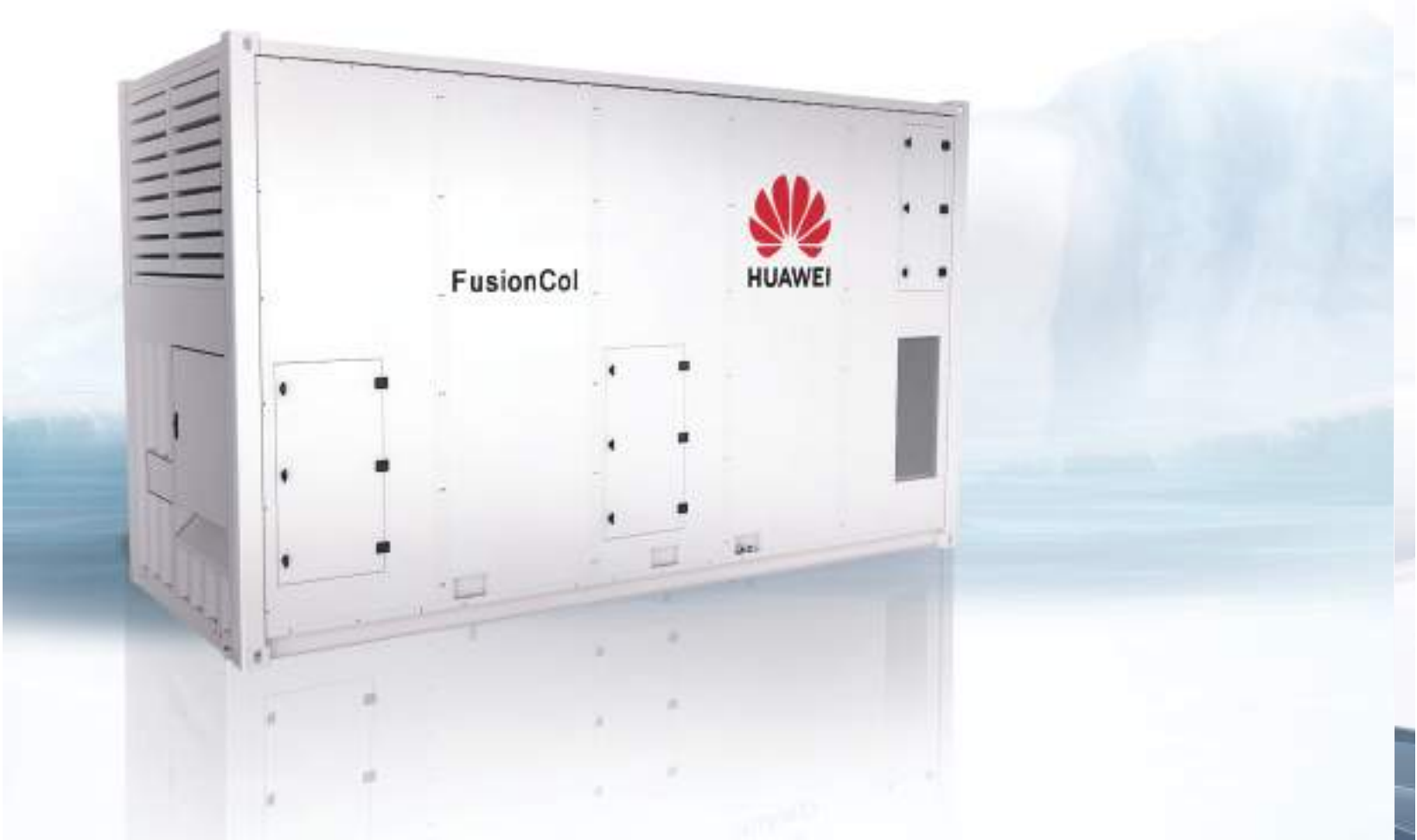
Lifetime at Different Temperature



Cycle Lifetime at Different Temperature and DOD



3 Huawei Energy Powering the Future Data Center Smart Cooling Solutions





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In-row Smart Cooling Product



NetCol5000-A
(25-46kW)



NetCol5000-C
(30-65kW)

In-room Smart Cooling Product



NetCol8000-A013U



NetCol8000-A
(45/60/90/120kW)



NetCol8000-C
(62-190kW)



FusionCol8000-C
(210kW)



Indirect Evaporative
Cooling
FusionCol8000-E
(220/240kW)

A: Air cooled
C: Chilled water
E: Evaporative Cooling

NetCol5000-A

In-row Air Cooled Cooling Product

Introduction

NetCol5000-A is an in-row air cooled smart cooling product, adopts DC inverter and high return air temperature design, matches load requirements intelligently. NetCol5000-A uses unique algorithm construct a precision management and intelligent O&M system, makes an efficient, reliable and simple data center.

Application Scenarios

- Modular data center
- Prefabricated data center
- High power density data center
- Small and medium scale data center

Value & Features

Efficient

- High efficiency DC inverter compressor and EC fan. 20%-100% stepless cooling capacity regulation
- "0" energy consumption by isenthalpic wet-film humidification
- iCooling algorithm intelligently optimizes running parameters, reducing power consumption by up to 8%

Reliable

- Indoor fan can be maintained online and replaced while keeps cooling
- Expansion valve can be shut automatically upon unexpected power outage, eliminating liquid refrigerant return which may damage compressor
- AI algorithm detects the refrigerant content, triggering alarm when the refrigerant is insufficient

Simple

- 7" true color touch screen, displaying cooling capacity and air volume real-time for easy O&M
- Fault self-diagnosis analyzes malfunction reason intelligently, guiding O&M engineer maintain quickly
- Compressor adopts Rotalock connection, no welding required on maintenance



NetCol5000-A050H



IT Equipment 1 2 Smart Cooling

Typical applications



7 inch LCD true color touch screen



EC fan

Technical Specification

	Unit	NetCol5000-A025H	NetCol5000-A035H
Air Flow	-	Horizontal	Horizontal
Total cooling capacity ¹⁾	kW	25.0	35.0
Sensible cooling capacity	kW	25.0	35.0
Air flow	m ³ /h	6,000	6,000
Power Supply Voltage	V/Ph/Hz	380/400/415Vac, 50/60Hz, 3Ph+N+PE 208~220Vac, 50/60Hz, 3Ph+N+PE	380/400/415Vac, 50/60Hz, 3Ph+N+PE
Refrigerant	-	R410A	R410A
Heating capacity	kW	4	4.0
Humidifier capacity	kg/h	1.0	1.5
Dimensions: W*D*H	mm	300*1100*2000	300*1,200*2,000
Net Weight	kg	230 (380~415Vac) 275 (208~220Vac)	230

Notes:

1. Nominal condition: indoor: return air temp. 37°C/RH20%, outdoor: 35°C.
2. Heating and humidification function are optional.

Air-cooled Condenser Technical Specification

	Unit	NetCol500-A040	NetCol500-A060	NetCol500-A080	NetCol500-A0120
Power supply	-	Power supply from indoor unit			
Liquid pipe	in.	5/8	5/8	5/8	5/8
Gas pipe	in.	3/4	7/8	7/8	7/8
Full load current	A	2.5	2.5	2.5	2.5*2
Dimensions: W*D*H	mm	1120×1094×1096	1356×1094×1107	2186×1094×1107	2189×1356×1107
Net Weight	kg	155	130	240	250

Notes: Pipe size in actual project may vary. NetCol500-A120 is a dual-system unit. Two indoor units are used together with one dual-system outdoor unit

NetCol5000-A050H

In-row Air Cooled & Water Cooled Cooling Product

Product Introduction

NetCol5000-A is an in-row air cooled smart cooling product, adopts DC inverter and high return air temperature design, matches load requirements intelligently. NetCol5000-A uses unique algorithm construct a precision management and intelligent O&M system, makes an efficient, reliable and simple data center.

Application Scenarios

- Modular data center
- High power density data center
- Small and medium scale data center
- Especially for high height distance or long refrigerant pipe scenarios

Value & Features

Efficient

Variable frequency design: 10%-100% stepless cooling capacity regulation, higher efficiency

Wet-film humidifier: saves energy by 95%+ compared with electrode humidifier

iCooling algorithm: intelligently optimizes operation status, reduces power consumption by 8%+

Reliable

On-line maintain: Indoor fan can be maintained on-line and replaced without shutdown

EEV shut automatically: Expansion valve will shut automatically after unexpected power cut, eliminate liquid return which may hit compressor

Refrigerant detection: AI algorithm detects the refrigerant content, generating charging prompt when the refrigerant is insufficient

Simple

Intelligent display: 7" true color screen, display cooling capacity, air volume real-time, easy O&M

Fault self-diagnosis: remove irrelevant reason intelligently, guiding O&M engineer maintain quickly

No welding maintain: Compressor and dry filter use Rotalock connection, no welding on maintenance



NetCol5000-A050H



water-cooled module



DC inverter scroll compressor



EC fan

Technical Specification

Indoor Unit Technical Specification

Item	Unit	NetCol5000-A050H
Air Discharge Direction	-	Horizontal
Total cooling capacity ¹	kW	46
Sensible cooling capacity	kW	46
Air Volume	m ³ /h	9,000
Power Supply Voltage	-	380/400/415Vac, 50/60Hz, 3Ph+N+PE 440/480Vac, 60Hz, 3Ph+PE
Refrigerant	-	R410A
Heating Capacity ²	kW	6
Humidifier Capacity ²	kg/h	3
Full Load Current	A	46
Dimensions: W*D*H	mm	600×1,200×2,000
Net Weight	kg	305

1. Air-cooled nominal condition: indoor: return air temp. 37°C/RH20%, outdoor: 35°C.
2. Water-cooled nominal condition: indoor: return air temp. 37°C/RH20%, supply water: 30°C, return water: 35°C
3. Heating and humidification function are optional.

Outdoor Air-cooled Condenser Technical Specification

Item	Unit	NetCol500-A060	NetCol500-A080	NetCol500-A0120
Power supply	V/Ph/Hz	Power supply from indoor unit		
Quantity of fans	pcs	1	2	2
Liquid pipe	in	Diameter 5/8 in		
Gas pipe	in	Diameter 7/8 in		
Dimensions: W*D*H	mm	1356×1094×1107	2186×1094×1107	2189×1356×1107
Net Weight	kg	130	240	250

Notes: actual pipe size may vary

Outdoor Water-cooled Module Technical Specification

Item	Unit	NetCol500-W055
Power supply	-	220-240Vac, 50/60Hz, 1Ph+N+PE
Refrigerant Pipe	in	Gas pipe: 7/8; Liquid pipe: 5/8
Water Pipe	-	Inlet/outlet: G1-1/2 internal screw
Full Load Current	A	0.15
Dimensions: W*D*H	mm	1510*262*530
Net Weight	kg	60

Notes: Pipe size in actual project may vary. NetCol500-A120 is a dual-system unit. Two indoor units are used together with one dual-system outdoor unit

NetCol5000-C

In-row Chilled Water Cooling Product

Introduction

NetCol5000-C is in-row cooling unit combined with chiller, pump and piping system to build a complete cooling system. It is configured with EC fan and installed between the IT racks, closely coupled with heat source for medium to high density DC. NetCol5000-C is an efficient, reliable and simple cooling product, helping to build the next generation green data center.

Application Scenarios

- Medium-large switch room
- Industry control room
- Computer room and prefabricated DC
- Standard test room and calibration center

Value & Features

Efficient

- High efficiency DC power module: Efficiency is up to 93%, unit's total rated power input is only 1.0 kW.
- High efficiency wet-film humidifier: isenthalpic humidification, saving up to 95% of energy compared with electrode humidifier.
- High efficiency heat exchanger: CFD simulation and field synergy improves heat transfer efficiency by 10%.

Reliable

- Dual power sources: automatically switches to backup power source in case of power failure.
- Multi. EC fans: Mutual backup to ensures air flow rate in case of single fan failure. Continuous cooling output during fan maintenance.

Simple

- Malfunction self-diagnosis: analyze malfunction reason intelligently, guiding O&M engineer maintain quickly
- 7-inch LCD colored touch screen features innovative one-touch interface switch and provides temperature & humidity curves display of the last 30 days, bringing an excellent usage experience.



NetCol5000-C



IT Equipment 1 2 Smart Cooling

Typical applications



7 inch LCD true color touch screen



EC fan

Technical Specification

NetCol5000-C Technical Specification

Unit model	Unit	NetCol5000-C030H	NetCol5000-C032H
Air Discharge Direction	-	Horizontal	Horizontal
Total Cooling Capacity ¹⁾	kW	30.0	32.0
Sensible Cooling Capacity	kW	30.0	32.0
Air Flow Rate	m ³ /h	5,000	5,000
Power Supply	V/Ph/Hz	220-240/1/50(60)	220-240/1/50(60)
Water Flow Rate	l/s	1.5	1.6
Dimension: W × D × H	mm	300×1200×2000	300×1200×2200
Net Weight	kg	166	176

Unit Model	Unit	NetCol5000-C065H
Air Discharge Direction	-	Horizontal
Total Cooling Capacity ¹⁾	kW	65.0
Sensible Cooling Capacity	kW	65.0
Air Flow Rate	m ³ /h	10,000
Power Supply	V/Ph/Hz	220-240/1/50(60)
Water Flow Rate	l/s	3.2
Dimension: W × D × H	mm	600×1200×2000
Net Weight	kg	200

1. Cooling capacity condition: Return air dry bulb temperature 37°C/RH24%, inlet/outlet water temperature 10°C/15°C

NetCol8000-A

In-room Air Cooled Cooling Product

Introduction

NetCol8000-A is in-room air cooled smart cooling product, composed of indoor and outdoor unit, it adopts all-variable-frequency design, supports upflow and downflow to meets the cooling requirements for different computer rooms. It is usually deployed around the computer room, and supply the efficient, reliable and simple cooling solution for middle-small sized low power density computer room, helps to build next generation green data center.



NetCol8000-A

Application Scenarios

- Medium and small exchange room and data room
- Computer room and data center
- High-tech environment and lab
- UPS and battery room

Value & Features

Efficient

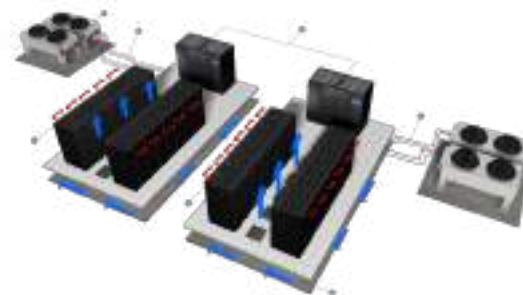
- All-variable-frequency design: Inverter compressor, EC fan and electronic expansion valve, saving 30% energy compared with fixed-frequency system
- iCooling algorithm: intelligently optimize operation, AEER can be increased by 8%+
- Wet-film humidifier: Without heating water, "0" power consumption for humidification

Reliable

- Refrigerant detection: AI algorithm detects the refrigerant content, generating charging prompt when the refrigerant is insufficient
- Stable operation: Reliable the dehumidification at minimum 10% load, eliminate condensation risk

Simple

- Intelligent display: Display key parameters real-time, promptly knows the unit running status
- Fault self-diagnosis: Intelligently locate the malfunction, guiding O&M engineer maintain quickly
- Fast installation for fan: No need for auxiliary tools, saving fan installation time 70%+



Typical Application



Inverter Compressor



7" Color Screen

Technical Specification

Indoor Unit Technical Specification

Unit Model	Unit	NetCol8000-A045D/U	NetCol8000-A060D/U	NetCol8000-A090D	NetCol8000-A120D
Air Discharge Direction	-	D: Downflow; U: Upflow			
Total Cooling Capacity	kW	45.0	60.0	90.0	120.0
Sensible Cooling Capacity	kW	45.0	60.0	90.0	120.0
Air Volume	m ³ /h	11,250	12,500	22,500	25,000
Power Supply	V/Ph/Hz	380/400/415/3Ph/50/60Hz			
Heating Capacity	kW	6	6	12	12
Humidifier Capacity	kg/h	4.5	6	10	10
Full Load Current	A	36(40)	41(45)	72(80)	82(90)
Dimension: W×D×H	mm	900*900*2000	1100*1000*2000	1800*1000*2000	2200*1000*2000
Net Weight	kg	355	480	643	850

1. Nominal condition: indoor return air 35°C/26%RH, outdoor 35°C.
2. The current data in brackets are applicable to the indoor unit with electric heater & humidifier (Optional).
3. NetCol8000-A045 and NetCol8000-A060 is a single-system unit. NetCol8000-A090 and NetCol8000-A120 is a dual-system unit.

Outdoor Condenser Technical Specification

Unit Model	Unit	NetCol500-A060	NetCol500-A080	NetCol500-A110	NetCol500-A120
Power Supply	V/Ph/Hz	Power supply from indoor unit			
Liquid Pipe Diameter	in	5/8	5/8	5/8	5/8
Gas pipe diameter	in	7/8	7/8	7/8	7/8
Full Load Current	A	2.5	4.5	7.0	5.0
Dimension:W×D×H	mm	1356×1094×1107	2186×1094×1107	2250×1100×1769	2189×1356×1107
NetWeight	kg	130	240	366	250

1. NetCol500-A060, NetCol500-A080 and NetCol500-A110 are single-system units. NetCol500-A120 is a dual-system unit.
2. A single-system indoor unit is used with a single-system outdoor unit; two single-system indoor units are used together with a dual-system outdoor unit; a dual-system indoor unit is used with two single system outdoor units; a dual-system indoor unit is used with a dual-system outdoor unit.

NetCol8000-A013U

In-room Air Cooled Cooling Product

Introduction

NetCol8000-A013U is composed of indoor and outdoor unit. Indoor unit is configured with scroll compressor, large surface evaporator, EC fan, wet-film humidifier and electric heater. The cooling capacity is 13kW, and it is commonly deployed around the equipment room. NetCol8000-A013U is an efficient, reliable and simple solution, which helps to build next generation green data center.

Application Scenarios

- Data center power distribution room
- Small computer room
- Communication room

Value & Features

Efficient

- Full DC variable frequency design, cooling capacity stepless regulation, high efficiency at partial load
- Wet-film humidifier, save energy 95%+ compared with electrode humidifier

Reliable

- 6kV surge protection level, greatly reduces the risk of lightning strike
- Works stably at extremely ambient temperature, with less cooling capacity derating

Simple

- The unit is delivered with refrigerant for 30m long pipes, fast install on-site
- The connectors of indoor and outdoor unit adopt welding-free design, easy to install and maintain



Indoor Unit



Outdoor Unit

Technical Specification

Indoor Unit Technical Specification

Unit Model	Unit	NetCol8000-A013U
AirDischarge Direction	-	Upflow
Total Cooling Capacity ¹	kW	13.0
Sensible Cooling Capacity	kW	11.7
AirVolume	m ³ /h	3600
Power Supply Voltage	V/Ph/Hz	380-415/3/50(60)
Refrigerant	-	R410A
Heating Capacity ²	kW	4.0
Humidifier Capacity ²	kg/h	3.0
Dimension:W×D×H	mm	800×664×1886
NetWeight ²	kg	141 (153)

1. Nominal cooling condition: Return air dry bulb temperature 24°C/RH50%, outdoor temperature 35°C.
2. The heating and humidification functions are optional.
3. The data in bracket is suitable for the unit with heater and humidifier.

Outdoor Condenser Technical Specification

Model	Unit	NetCol500-A022
Power Supply	V/Ph/Hz	220-240/1/50(60)
FanQuantity	-	2
Liquid Pipe Diameter	in	3/8 in (outer diameter)
Gas Pipe Diameter	in	3/4 in (outer diameter)
FullLoad Current	A	30
Dimension: W×D×H	mm	903×320×1325
Net Weight	kg	117

Notice: The pipe diameter is only for reference and it may be changed based on the actual configuration. If the pipe length is longer than 60m, please contact Huawei system engineer.

NetCol8000-C

In-room Chilled Water Cooling Product

Introduction

NetCol8000-C is the in-room chilled water smart cooling product developed by Huawei. A complete cooling system can be built by combining NetCol8000-C, chillers, water pumps and pipes. The cooling capacity ranges from 62 kW to 190 kW. The efficient, reliable and simple NetCol8000-C helps to build next generation green data center.

Application Scenarios

- Medium-large switch room
- Industry control room
- Computer room and prefabricated DC
- Standard test room and calibration center

Value & Features

Efficient

- **High efficiency wet-film humidifier:** Isenthalpic humidification, saving up to 95% of energy compared to electrode humidifier.
- **Pressure difference control:** Save 10%+ energy compared to EC fan with supply and return air control.

Reliable

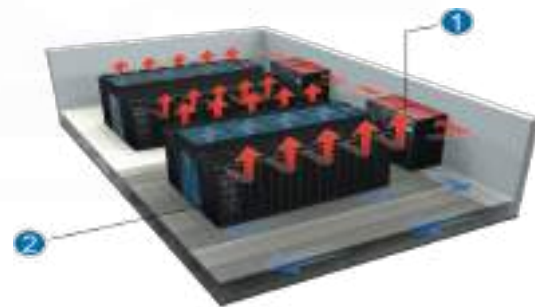
- **Dual power sources:** Dual auto-switch power supply with independent dual 6kV surge protection and power detection. Continuous cooling power switch.
- **On-line maintenance:** Hot swappable for control module and auxiliary power module.

Simple

- **Malfunction self-diagnosis:** Analyze malfunction reason intelligently, guiding O&M engineer maintain quickly.
- **7-inch LCD colored touch screen** features innovative one-touch interface switch and provides temperature & humidity curves display of the last 30 days, bringing an excellent usage experience.



NetCol8000-C



1. PAC
2. DC equipment



Hot swappable control module

Technical Specification

Model	Unit	NetCol8000-C070D	NetCol8000-C130D	NetCol8000-C190D
Air direction	-	Down flow		
Total cooling capacity	kW	63.2	126.4	189.6
Sensible cooling capacity	kW	51.4	102.8	154.2
Air flow	m ³ /h	13,500	27,000	40,500
Power supply	V/Ph/Hz	380-415/3/50, 380-415/3/60		
Water flow	l/s	3.02	6.03	9.05
Dimensions:W*D*H	mm	900*1000*2000	1800*1000*2000	2700*1000*2000
Net weight	kg	300	500	690

Model	Unit	NetCol8000-C070U	NetCol8000-C130U	NetCol8000-C190U
Air direction	-	Up flow		
Total cooling capacity	kW	61.9	123.8	185.7
Sensible cooling capacity	kW	50.3	100.6	150.9
Air flow	m ³ /h	13,200	26,400	39,600
Power supply	V/Ph/Hz	380-415/3/50, 380-415/3/60		
Water flow	l/s	2.95	5.91	8.86
Water pressure drop	kPa	60.5	82.6	92.7
Dimensions:W*D*H	mm	900*1000*2000	1800*1000*2000	2700*1000*2000
Net weight	kg	294	546	786

Note:

1. Cooling capacity condition: Return air dry bulb temperature 24°C/RH50%, inlet/outlet water temperature 7°C/12°C, ESP: 20Pa

FusionCol8000-C

In-room Chilled Water Cooling Product (Fanwall)

Introduction

FusionCol8000-C is the in-room chilled water smart cooling product developed by Huawei. A complete cooling system can be built by combining FusionCol8000-C, chillers, water pumps and pipes. FusionCol8000-C is an efficient, reliable and simple cooling product, helping to build the next generation green data center.

Application Scenarios

- Medium-large switch room
- Industry control room
- Computer room and prefabricated DC
- Standard test room and calibration center

Value & Features

Efficient

- High chilled water temperature up to 20 °C for lower PUE.
- iCooling@AI, PUE<1.45@middle East, annual saving 88k\$
- High efficiency wet-film humidifier: Isenthalpic humidification, saving up to 95% of energy compared to electrode humidifier.

Reliable

- Enhanced fan reliability by separating motor and driver.
- Dual power sources: Dual auto-switch power supply with independent dual 6kV surge protection and power detection. Continuous cooling during power switch.
- On-line maintenance: Hot swappable for control module and auxiliary power module.

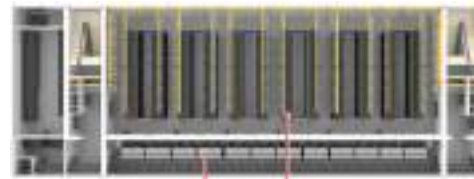
Simple

- Horizontal air flow. No need for raised floor.
- Malfunction self-diagnosis: Analyze malfunction reason intelligently, guiding O&M engineer maintain quickly.
- 7-inch LCD colored touch screen features innovative one-touch interface switch and provides temperature & humidity curves display of the last 30 days, bringing an excellent usage experience.

*Model: 6.5kW/R, 4MW, 50% load rate, 0.1 USD/(kW-h), 2N UPS



NetCol8000-C



1. PAC
2. DC equipment

Typical Application Scenario



7 inch LCD true color touch screen



Hot swappable controller and power module

Technical Specification

NetCol8000-C Technical Specification

Model	Unit	FusionCol8000-C210H
Air Flow direction	-	Horizontal
Total cooling capacity ¹	kW	210.0
Sensible cooling capacity	kW	210.0
Air flow	m ³ /h	53,000 (up to 57,000)
Quantity of Fan	PCs	4
Air Filter Class	-	G4
Power Supply	V/Ph/Hz	380-415/3/50, 380-415/3/60
Humidification Capacity (Optional)	kg/h	10.0
Dimensions:W*D*H	mm	2350×1100×2450
Net weight	kg	1000

1. Cooling capacity condition: return air dry bulb temperature 36 °C/24% RH, inlet/outlet water temperature 20 °C/28 °C.

NetCol8000-E

Indirect Evaporative Cooling

Introduction

FusionCol is indirect evaporative cooling product launched by Huawei. Indirect evaporative cooling technology can extend the natural cooling time significantly, reduce the energy consumption of whole data center. Built in DX supplemental cooling system and can support continuous cooling. Container body structure, components are prefabricated and integrated in the factory. Box transportation support rapid installation. Efficient, reliable and simple solution helps customer to build a green data center.

Scenarios

- ISP, IDC, EDC

Features

Efficient

- Extend free cooling time, maximize the use of natural cold sources
- Intelligent recommendation of water-saving & power-saving mode
- Match IT load changes in real time, control air supply accurately
- High efficiency heat exchanger, $pPUE \leq 0.07^*$
- High efficiency EC fan, 30%-100% stepless adjustment

Reliable

- Redundant design of components, failure of components will not affect the operation of the whole machine
- Support dual power input
- Modular system design, faulted module isolation

Simple

- Container body design, factory pre-installation and pre-test, support fast delivery, 50%TTM reduction
- Supports automatic fault diagnosis and easy O&M

*Cooling Model:Location: London IT load:12MW Load ratio:50%



External



Internal

Technical Specification


Type		NetCol8000-E220
Power specifications		380-415V/3PH/50/60Hz
Total capacity /Sensible capacity(kW)		220/220
Air Flow	(m ³ /h)	55,000
Added refrigerant (kW)	Model	DX
	Percentage	10%-50%
Temperature & Humidity	Supply Temp/Relative Humidity	25°C/50%
	Return Temp/Relative Humidity	38°C/25%
Filter(EN779)	Indoor	G4
	Outdoor	G2
Dimension (LxWxH)	Equipment(mmxmmxmm)	6058x2438x3600
	Air duct (optional)	5810x2020x800
Weight	Net weight/Running weight (without air duct) (kg)	Enhanced type:5,750/6,300
Altitude		Range: 0-4000m, not derated below 1000 m
Communication		FE, RS485
Certification		CE/ Eurovent/ RoHS/ REACH/ WEEE

(Note: Cooling capacity: Indoor dry temp 38°C, air supply dry temp 25°C; Outdoor dry temp 35°C,Wet temp 25°C)

4

Digital Maintenance and Intelligent Data Center Infrastructure Management System



 redot winner 2020



CONTENT

4

Digital Maintenance and
Intelligent Operation

Data Center
Infrastructure
Management System

97 iManager NetEco6000

iManager NetEco6000

Data Center Infrastructure Management System

Introduction

The NetEco6000 is a next-generation data center infrastructure management system developed and continuously evolved by Huawei. It is dedicated to providing an innovative and leading intelligent O&M solution for data centers to maximize the efficiency and value of data centers.



Application Scenarios

- Micro/Small-sized data center, medium- and large-sized data center, outdoor prefabricated data center

Value & Design Concept

Digital Visualization

Digital visualization for intelligent, for the ultimate experience and operation insight.

AutonAomous Maintenance

Digital and intelligent O&M, improve O&M quality and efficiency, and save O&M costs by 35%.

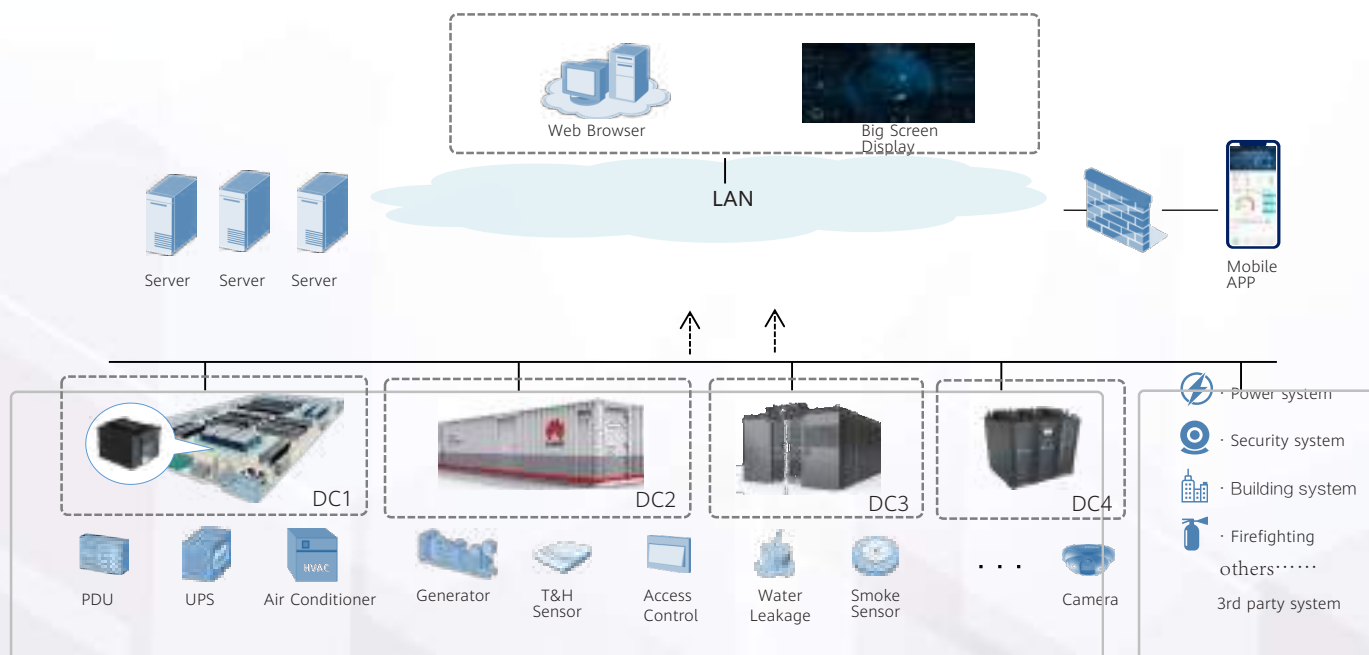
Intelligent Operation

Asset life cycle management, intelligent capacity planning, and increase resource utilization by 20%.

AI PUE Optimization

iCooling@AI solution enable energy efficiency optimization, reducing PUE by 8%-15%

System Architecture



Product Features

Basic Parameters:

Category	Description	Note
Deployment Mode	Single server, cluster server, or VM(FusionSphere or FusionCompute)	
Operating System / Database	EulerOS / GaussDB, Huawei-developed.	
Management Capability	≥3 million monitoring points (about 30,000 cabinets), supporting capacity expansion.	
Number of Online Users	≤100	
Data Storage	Default 1 year, maximum support 3 years.	

Basic Parameters:

Category	License	Features	Note
Basic Features	NA	Device Monitoring, Big Screen Display, Alarm Management, Power Link Visualization, Cooling Link Visualization, Report Management, Energy Efficiency Analysis and Fault Analysis.	
Platform Interface	Northbound Interface	Device/ System Integration.	
	Southbound Interface		
Optional Features	Temperature Nephogram	Temperature Map	Choose one of three.
	3D View-Lite	3D View-Lite	
	3D View-Pro	3D View-Pro	
	3D View-BIM	3D View-BIM	
	Dashboard Report	Big Data Dashboard and Report Analysis.	
	Basic Maintenance	Personnel and Shift Management, Electronic Inspection, App O&M, O&M Process Management, Knowledge Library and O&M Process Management	Choose one of two.
	Digital Maintenance	Personnel and Shift Management, Electronic Inspection, App O&M, O&M Process Management, Knowledge Library, O&M Process Management, Conserve, Repair Management, Routine Drill, Entry and Exit Registration and Supplier Management.	
	AI Inspection of Power Facility	AI Automatic Inspection of Power Facility	
	AI Inspection of Cooling Facility	AI Automatic Inspection of AHU	
	AI Robot Inspection	AI Robot Inspection	
	AI Predictive Maintenance of Circuit Breaker	Breaker Health Prediction and Circuit Breaker Setting Analysis.	
	AI Predictive Maintenance of Power Facility	Temperature Prediction	
	AI Predictive Maintenance of Energy Storage	Lithium Battery Health Prediction	
Intelligent Operation	Asset management, Capacity Management, Tenant management, Warehouse Management and Automatic detection of U space.		
Cooling Optimization	AI PUE Optimization.		

Digital Visualization Module:

License	Feature	Description	Advantages	Specifications
NA- Basic Features	Device Monitoring	Real-time monitoring of data center infrastructure.	Topology of the power and cooling system.	<ul style="list-style-type: none"> Monitor data center infrastructure in real time, such as power equipment, cooling equipment, sensors, etc. Can centrally manage multiple data centers.
	Big Screen Display	Display the KPI on the splicing LCD.	Professional customized big screen	<ul style="list-style-type: none"> You can flexibly display the alarm, energy efficiency, capacity and O&M dashboards on the big screen Support custom development of big screen.
	Alarm Management	Viewing and Handling Alarms.	Alarm masking rules that support multiple conditions.	<ul style="list-style-type: none"> Supports alarm browsing, query, masking, redefinition and threshold setting. Notification methods include SMS, phone, email and WeChat. Supports the expert experience library to record alarm handling experience and suggestions.
	Power Link Visualization	Displays the operating status of the power system.	Accurately locate problems and reduce repair time.	<ul style="list-style-type: none"> Automatically generate power links, which can be customized and show power flow. You can click the device or alarm icon on the link to quickly jump to view.
	Cooling Link Visualization	Displays the operating status of the cooling system.	Shortens the emergency handling duration and improves reliability.	<ul style="list-style-type: none"> The flow direction can be displayed on the link, which can be defined. You can click the device or alarm icon on the link to quickly jump to view.
	Report Management	Statistics and analysis of platform data.	Supports report customization and create scheduled report tasks.	<ul style="list-style-type: none"> Built-in report templates, such as asset reports, capacity reports, energy consumption reports, etc. The content, logo, etc. of the report can be customized. Reports can be sent to designated users regularly.
	Energy Efficiency Analysis	Statistical analysis of data center energy efficiency indicators.	The calculation method of energy efficiency indicators can be customized, and different levels of PUE calculations are also provided.	<ul style="list-style-type: none"> Support different levels of PUE and historical curve analysis such as data center, room and smart module. The threshold and reference value of PUE can be set, and an alarm is generated when PUE is too high. Electricity cost calculation supports multistep electricity price. Identify abnormal cPUE and energy consumption.

Autonomous Maintenance Module:

Autonomous Maintenance Module:

License	Feature	Description	Advantages	Specifications
Basic Maintenance & Digital Maintenance	Personnel and Shift Management	Personnel management and shift management.	Distribute O&M tasks automatically based on duty.	<ul style="list-style-type: none"> You can configure the basic information, shifts and groups of O&M personnel. Provide the duty information on the shift calendar. Provide duty plan and handover plan etc. Provide statistics and analysis of abnormal shifts.
	Electronic Inspection	Electronic and mobile routine inspection of equipment rooms.	Provide inspection templates, share expert experience, and reduce inspection skill requirements.	<ul style="list-style-type: none"> You can plan inspection tasks and create inspection templates, such as inspection content, sequence, methods, reference values, and notes. Receive tasks on the APP and obtain details through QR codes or NFC. Inspection reports can be generated.
	App O&M	Remote access through mobile phones.	APP permission control, support offline data cache.	<ul style="list-style-type: none"> View alarms, PUE, device parameters, etc. Supports viewing and processing O&M tasks. Supports asset entry, binding and inventory, etc.
	Knowledge Library	Share O&M experience, technical cases, etc.	Expert review to ensure the quality of knowledge cases.	<ul style="list-style-type: none"> You can share the O&M experience, operation manuals and technical documents into it. You can comment, share and collect the cases.
	O&M Process Management	Provide O&M process management according to ITIL	O&M process can be customized.	<ul style="list-style-type: none"> Including problems, incidents, changes and other processes, which supports the creation, approval, processing and tracking of work orders. Support status statistics and trend analysis of processes such as problems, events, and changes. You can define process nodes and approvers, etc.
Digital Maintenance	Conserve	Routine conservation of equipment.	Conservation statistics and conservation calendar.	<ul style="list-style-type: none"> Conserve tasks can be created, processed, and Tracked. Guidance can be created to avoid human error. Provide maintenance statistics and calendar.
	Repair Management	Track and handle the repair process.	Operation instructions for repair to avoid manual errors.	<ul style="list-style-type: none"> Repair tasks can be created, approved and urged. Track the status of repair orders throughout the process, such as regularly pushing repair status.
	Routine Drill	Drilling of various emergencies	The template for emergency drills can be customized.	<ul style="list-style-type: none"> Supports emergency drill planning, start tasks regularly and remind users, and track task status throughout. Provide trend statistics of emergency drill tasks.

License	Feature	Description	Advantages	Specifications
Digital Maintenance	Entry and Exit Registration	Record the entry and exit of personnel and goods.	Strict control of personnel and goods.	<ul style="list-style-type: none"> Supports entry and exit registration of basic personnel information, carrying goods, visiting areas and carriers. You can query historical records.
	Supplier Management	Supplier basic information and evaluation management.	You can customize the evaluation rules, content and tasks, etc.	<ul style="list-style-type: none"> Manage basic supplier information and categories. Supplier evaluation content and rules can be customized. Support the creation and scoring statistics of supplier evaluation tasks.
AI Inspection of Power Facility	AI Inspection of Power Facility	Automatic inspection of power facilities through sound and image detection.	AI-based sound detection, image detection, and abnormal noise detection.	<ul style="list-style-type: none"> Use AI technologies such as audio and image detection to remotely inspect power facilities, including transformers, UPSs, feeder cabinets, batteries, and diesel generators. View the inspection process and records in 3D mode. Automatically generate reports, prompt risks, provide expert diagnosis suggestions, and generate work orders for TOP problems.
AI Inspection of Cooling Facility	AI Inspection of Cooling Facility	Automatic inspection of AHU facilities through sound and image detection.	AI-based sound detection, image detection, and abnormal noise detection.	<ul style="list-style-type: none"> Remote intelligent inspection of AHU facilities using AI technologies such as audio and image detection. View the inspection process and records in 3D mode. Automatically generate reports, prompt risks, provide expert diagnosis suggestions, and generate work orders for TOP problems.
AI Robot Inspection	AI Robot Inspection	Intelligent inspection of service equipment rooms using AI robots.	AI-powered robots, replacing traditional manual inspection.	<ul style="list-style-type: none"> Allows users to set the automatic inspection period and route for AI robots. Supports Infrared detection, temperature & humidity detection, recording, indicator status identification, switch identification, etc. Remotely control AI robots to specified areas or raise and lower it's camera. Allows users to set voice broadcast and customer visit guidance tasks for AI robots. Automatically generates inspection reports and allows users to view inspection recordings.

License	Feature	Description	Advantages	Specifications
AI Predictive Maintenance of Circuit Breaker	Breaker Health Prediction and Circuit Breaker Setting Analysis.	Online analysis of circuit breaker setting values and health prediction using AI technologies.	AI technology is used to replace manual experience, improving the service life of circuit breakers and power supply reliability.	<ul style="list-style-type: none"> Analyzes the setting values of circuit breakers' parameters, including the current, breaking capability, and breaking delay, and supports root cause analysis of the setting values. Predicting the health change trend and maintenance time of circuit breakers. Generates circuit breaker setting reports and health prediction reports.
AI Predictive Maintenance of Power Facility	Temperature Prediction	Predict the contact temperature of power facilities using AI technologies.	AI-based dynamic load prediction to identify risks in advance and prevent accidents.	<ul style="list-style-type: none"> Preset temperature curve model, which supports AI deep learning. The system provides fault early warning and alarm analysis by detecting real-time temperature, current and other parameters of the power distribution cabinet in the power module.
AI Predictive Maintenance of Energy Storage	Lithium Battery Health Prediction	Predicting the health of lithium batteries using AI technologies.	Accurate prediction based on AI and deep battery charge and discharge.	<ul style="list-style-type: none"> Accurate prediction of lithium battery capacity and backup time. Viewing battery charging and discharging records.

Autonomous Maintenance Module:

License	Feature	Description	Advantages	Specifications
Intelligent Operation	Asset Management	Manage on-rack and inventory assets.	Built-in IT equipment model library to manage the life cycle status of assets.	<ul style="list-style-type: none"> Provide life cycle management of assets, from storage, allocation, migration, maintenance to retirement. Allow users to customize asset attributes, such as model, department, maintenance information, etc. Provide asset library, built-in IT device information of TOP N manufacturers in the past three years
	Capacity Management	Statistical analysis of data center capacity resource usage.	Automatically identify U space, intelligent capacity planning.	<ul style="list-style-type: none"> Provide historical curve analysis, dashboard and capacity report of SPCN capacity usage. You can connect IT device, such as power connection and network connection. You can quickly find the best installation location, customer affiliation and business area. Supports interconnection with the ITSM system to obtain service requirement order information.

License	Feature	Description	Advantages	Specifications
Intelligent Operation	Tenant Management	Manage data center tenants and resource leasing.	Customer segment analysis, cabinet resources can be allocated to match co-lo scenario.	<ul style="list-style-type: none"> Support the allocation, pre-allocation and resource statistics of area, cabinet and U-bit resources. Provide statistical analysis of rental rates and trends. Analyze the rental preferences of VIP customers and customer groups. Identifying tenants whose electricity consumption exceeds the limit and listing detailed records Identifies tenants whose leases expire or whose resource usage is high, facilitating precision marketing.
	Warehouse Management	Manage the equipment, spare parts, consumables, and tools.	Manage assets in the warehouse and ensure the full lifecycle mgmt of assets.	<ul style="list-style-type: none"> Asset inbound, outbound, and use processes. Support real-time statistics of inventory quantity, and give a prompt for spare parts and consumables with insufficient inventory.
	U Space Management	Automatically identify the location of IT device.	U space capacity management accuracy: 100%.	<ul style="list-style-type: none"> Automatically identifies the positions of devices. Automatically collects the available capacity of each cabinet. Real-time and accurate tracking of asset changes.

Autonomous Maintenance Module:

License	Feature	Description	Advantages	Specifications
Cooling Optimization	AI PUE Optimization	Adjust the cooling system through AI to reduce energy consumption.	iCooling technology based on AI algorithm.	<ul style="list-style-type: none"> Dynamically adjust the state of the cooling system to reduce data center energy consumption by 8% to 15%. It is suitable for air-cooled chilled water system, water-cooled chilled water system, AHU, etc., and the system has been pre-integrated with multiple BMS. SLA constraints can be set.



Huawei Digital Power

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HUAWEI TECHNOLOGIES CO., LTD.

Huawei Industrial Base
Bantian Longgang
Shenzhen 518129, P.R. China
Tel: +86-755-28780808
Version No.: M3-040174-20170225-E-3.0

www.huawei.com