

# FusionPower9000

## Product Brief

The Huawei PowerPod FusionPower9000 provides a decoupled and flexible power supply and distribution system solution for medium and large data centers. This solution integrates power supply and distribution units, UPSs, lithium batteries, air conditioners, and fire extinguishing systems into a ultra-high protection 40-foot container. One single container supports a maximum power capacity of 2.4 MVA. It can be quickly deployed outdoors and expanded on demand.

## Application Scenario

- Outdoor integrated power supply and distribution system for medium and large data centers

## Features and Benefits

### Reliable

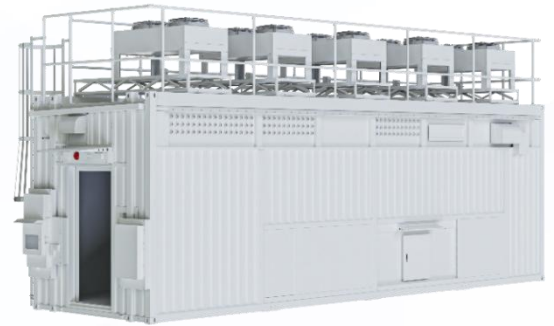
- Architecture: Remote deployment, physical isolation of lithium batteries and IT equipment rooms
- Product: Engineering productization, Zone 3 earthquake resistance, 12-level wind resistance, IP55 protection
- Operations: Passive response → AI-based early warning

### Agile

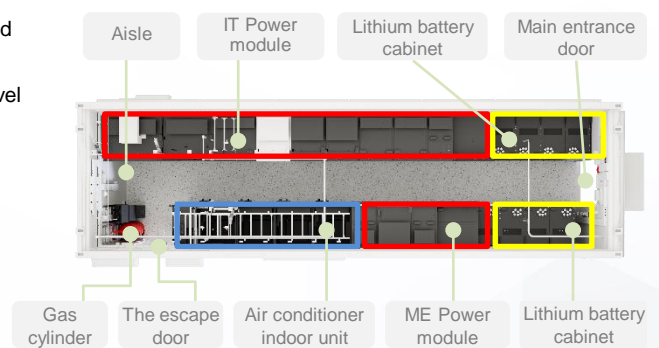
- Prefabricated in the factory with over 90% prefabrication rate, ready for immediate use
- Parallel construction at the factory and site, reducing TTM by 35%
- Decoupled building design, outdoor deployment, one container per power supply, scalable on demand

### Sustainable

- S-ECO mode achieves 98.4% full-link efficiency with 0ms switching
- Online double-conversion mode achieves 96.1% full-link efficiency
- Hot and cold aisle containment for more efficient cooling



Product Appearance



Internal layout (for reference only)

## Technical specifications

Configuration		Configuration 1 IT-only (2.4MVA)	Configuration 2 IT+ME (2.4MVA)	Configuration 3 IT+ME (2.4MVA)	Configuration 4 IT+ME+Grid Output Cabinet (2.4MVA)
	Deployment Site	Outdoor			
	Altitude Range	≤ 4000 m (derating over 1000 m) <sup>①</sup>			
	Number of stack layers	Stacking is not supported (based on the load performance described in the following table)			
	Operating humidity	5% ~ 95%			
	Operating ambient temperature	-20°C ~ +55°C			
	Storage Humidity	5% ~ 95%			
	Storage temperature	- 40°C ~ +70°C			
	Environmental adaptability	More than 3700 meters away from strongly corrosive environments <sup>②</sup>			
	Maintenance channel Illuminance	300Lux			
	Lifecycle of the entire system	10 years <sup>③</sup>			
	Container life	25 years			
Structure Parameters	Carrying capacity	12KN/m <sup>2</sup>			
	Seismic performance of the container	Meets NEBS GR63-ZONE3 seismic requirements			
	Snow load capacity	0.718KN/m <sup>2</sup>			
	Wind resistance	Meets the requirements of level-12 typhoons			
	Transportation weight of the entire system	35t	38t	37.2t	33.5t
	Operating weight of the entire system	46t	48.5t	47.7t	41.5t
	Length x width x height	12192mm×3495mm×4150mm			
	Protection level of the entire system	IP55			
Flooring	No raised floor, installed on the floor				
Electrical Parameters	Input power supply	Three-phase, four-wire + PE, 380V AC/400V AC/415V AC 50/60Hz <sup>④</sup>			
	Main input	Grid: 4000 A/4P D.G.: 4000 A/4P CB-level ATS	Grid: 4000 A/4P D.G.: 4000 A/4P CB-level ATS	Grid: 4000 A/4P D.G.: 4000 A/4P CB-level ATS	Grid: 4000 A/4P D.G.: 4000 A/4P CB-level ATS
	Grid Feeder	/	/	/	ACB 1*1000A/4P MCCB 3*250A/4P + 1*160A/4P
	ME UPS	/	1×600kVA@MAX	1×600kVA@MAX	1×600kVA@MAX
	ME UPS Main Input	/	1250A/3P+N	1250A/3P+N	1250A/3P+N
	ME UPS Test	/	/	/	1000A/4P
	ME Maintenance Bypass + Main Output	/	2*1000A/4P	2*1000A/4P	2*1000A/4P
	ME UPS Feeder	/	MCCB 6*250A+1*160A	MCCB 6*250A+1*160A	MCCB 6*250A+1*160A
	IT UPS	4×600kVA@MAX	3×600kVA@MAX	3×600kVA@MAX	2×600kVA@MAX
	IT UPS Main input + Maintenance bypass	(4000A/3P+N)+ 4000A/4P	(3200A/3P+N)+ 3200A/4P	(3200A/3P+N)+ 3200A/4P	(2500A/3P+N)+ 2000A/4P
	IT UPS test	4000A/4P	3200A/4P	3200A/4P	2000A/4P
	IT UPS main output cabinet	4000A/4P	3200A/4P	3200A/4P	2000A/4P
	IT UPS bus output cabinet	3200A/4P	2500A/4P	3200A/4P	2000A/4P
	IT UPS cable output	MCCB 6*250A+1*160A	MCCB 6*250A+1*160A	/	/

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## Technical specifications

Configuration		Configuration 1 IT-only (2.4MVA)	Configuration 2-1 IT+ME (1.8MVA+0.6MVA)	Configuration 2-2 IT+ME (1.8MVA+0.6MVA)	Configuration 3 IT+ME+Mains Output (1.2MW+0.6MVA+0.6MVA)
Electrical Parameters	Operating temperature	Cold aisle: 20°C ~ 30°C at Full Load			
	Battery parameter	SmartLi 3.0			
	Number of battery cabinets	8	8	7 ~ 8 <sup>⑤</sup>	5 ~ 6 <sup>⑤</sup>
	Power backup time	10min@SOL			
Temperature control Parameters	Cooling Capacity of each Air conditioner	55kw <sup>⑥</sup>			
	Quantity	N+1 or N <sup>⑦</sup>			
	Refrigerant	R410A			
	Air intake channel for UPS and lithium battery cabinet Temperature Range	20°C ~ 30°C at Full Load			
	Air intake channel of the equipment Humidity Range	5% RH ~ 80% RH			
Fire fighting Parameters <sup>⑧</sup>	External enclosure structure Refractory time	Four walls for 120 minutes; Top for 120 minutes; Bottom for 30 minutes			
	Fire doors Refractory time	90min			
	Fire sprinkle system	Fire sprinkler system pipe network is optional in factory			
	Gas fire extinguishing system	Gas-extinguishing system pipe network is prefab in factory by default; Gas cylinders and accessories need to be provided locally.			
	Gas fire extinguishing Alarm system	Need to be provided locally.			
Monitoring Parameters	Environment and Supervision system	Centralized collection and management of the standard ECC			
	Room-level access control System-Security	Standard access control; The main entrance door is equipped with access control, and the IC card reader is used. Door status sensor for the emergency door			
	In-room CCTV system - security	Standard CCTV system; 2 MP semi-dome camera, 7 days storage by default (SD card, 512 KB code stream) <sup>⑨</sup>			
	Temperature and Humidity Detection	Standard configuration: 2 PCS for cold aisle temperature and humidity monitoring			
	Water sensor system	Water leakage detection of dehumidifier and air conditioner, non-locating rope type			
Intelligence Features	Power supply and distribution link Panorama	(Optional) Panoramic display of power supply and distribution links from the mains/diesel generator cable inlet cabinet to the feeder cabinet			
	Intelligent O&M	Full-link temperature detection, AI-based temperature anomaly warning			

### Note:

① When the altitude exceeds 1000 m, the power supply and distribution are derated according to EN/IEC 62040-3. Obtain the cooling power based on the Huawei temperature control component derating parameter table, the overall derating coefficient is the one with the largest derating coefficient.

② Strongly corrosive environments include coastal areas, garbage dumps, heavily polluted chemical plants, etc.

③ The lifecycle refers to the designed life of the power module when it meets the power output and heat dissipation requirements under the designed load. The PAD/APF component could not service 10 years..

④ By default, the nominal capacity and breaker selection are calculated based on the 400 V voltage level. If the voltage of a specific project is low, check whether the current exceeds the specified specification after calculation. Otherwise, derate the nominal capacity.

⑤ When the UPS load is less than 300 kW, only the master cabinet can be configured with 10-minute backup power.

⑥ A080 outdoor unit is used under T1 working condition; A110 outdoor unit is used under T3 working condition.55kw rated condition is Indoor return air 35°C, outdoor air 35°C;

⑦ For configuration 1 or 2 on the T1 working condition, and at the ambient temperature of 45°C, five air conditioners are configured in N+1 mode.For configuration 3 on the T3 working condition, and at the ambient temperature of 55°C, four air conditioners are configured in N+1 mode.

⑧ The fire extinguishing system needs to be provided and installed locally because the fire extinguishing system needs to be accepted locally. Gas fire extinguishing system accessories include: pressure breaker, solenoid valve, high pressure hose, nozzle, etc. The components of the fire alarm system include the fire extinguishing host, alarm bell, audible and visual alarm, gas release indicator, smoke sensor, temperature sensor, stop button, manual alarm, status display box, addressing CM module, and I/O module.

⑨ If the customer requires storage for more than seven days, connect the breaker to the building video storage system for storage capacity expansion.