FusionModule500

(Integrated Cooling Solution)

INTRODUCTION

Huawei FusionModule500 is a new-generation edge data center solution, which integrates the UPS, PDU, cooling, monitoring, battery, and fire extinguishing unit(optional) in one cabinet, it can greatly save footpring and build a "One Cabinet One DC" for customers. The core components of the FusionModule500 are pre-tested and pre-installed in the factory, and are plug-and-play on site, enabling rapid deployment of the data center. In addition, with Huawei's edge data center management system, it can realize unified management of multiple sites and significantly improve the O&M efficiency.

APPLICATION SCENARIOS

 Finance, Education, Healthcare, Public Security, SMEs, Retailing & Merchandising, Edge DC, etc.



FEATURES

Simple

- All-in-one design and integrated cooling unit inside, quick deployment within 2 hours
- · Fire fighting unit inside*, no 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

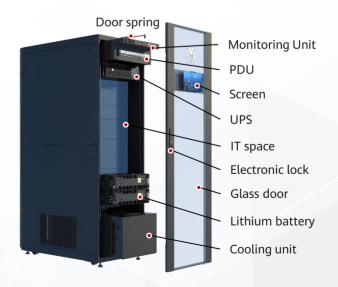
Smart

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

Reliable

- · Highly stable LFP battery cell, no fire risk and more reliable
- · Automatic door opening prevents overheating





FusionModule500 Architecture

SPECIFICATIONS

Power system 220/230/240VAC, 1Ph-N+PE, 50/60Hz	Item	Description	Specification
Installation mode Cable route From the top Humidity and temperature O"C-40°C, 5-95% Altitude O-1000m (when the altitude is greater than 1000m, the capacity is derated) Maximum IT load 3kW Total dimensions 600mm×2000mm×1100mm (W×H×D) Available space Protection level Weight 360kg (@3kW, 1h battery backup) Input 220/230/240VAC, 1Ph+N+PE, 50/60Hz, 63A Output 220WAC Capacity 6kVA Configuration Voltage input range 80-280VAC, 40-70Hz, 1Ph+N+PE Power system Fifciency Up to 96% Battery type Backup time 0.5h-4h* SPD CLASSII/C, In 20kA, Imax 40kA, 8/20us Maintenance bypass Standard rPDU (optional) IEC C13*8 Cooling apacity Front air supply and rear air return Installation Dimensions A38mm×445mm×900mm (H×W×D) Installation Dimensions A38mm×445mm×900mm (H×W×D) Fire Extinguishing module Monitoring system Standard functions Toolog capacity Standard functions Smoke sensor, T&H sensor, intelligent lock, 10-inch PAD, SMS/email alarm*, and local app O&M Standard functions	System features	Power system	220/230/240VAC, 1Ph+N+PE, 50/60Hz
Cable route Humidity and temperature O'C-40°C, 5-95% Humidity and temperature O'C-40°C, 5-95% Altitude O-100m (when the altitude is greater than 1000m, the capacity is derated) Maximum IT load 3kW Total dimensions 600mm × 2000mm × 1100mm (W×H×D) Available space <23U* Protection level IP20 Weight 360kg (@3kW, 1h battery backup) Input 220/230/240VaC, 1Ph+N+PE, 50/60Hz, 63A Output 220VAC Capacity 6kVA Configuration Single UPS Voltage input range 80-280VaC, 40-70Hz, 1Ph+N+PE Power factor 1.0 Efficiency Up to 96% Battery type Lithium battery or Lead-acid battery Backup time 0.5h-4h* SPD CLASSII/C, In 20kA, Imax 40kA, 8/20us Maintenance bypass Standard TPDU (optional) IEC C13*8 Cooling capacity 3.5kW* Cooling mode Direct expansion air-cooled Air supply Front air supply and rear air return Installation Rack-mounted installation Dimensions 438mm × 445mm × 90mm (H×W×D) Installation Rack-mounted Gas type and capacity Perfluorohexanone, 1.25kG Dimensions 43.6mm × 442mm × 690mm (H×W×D) 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		Aisle containment	Cold and hot aisle containment
Humidity and temperature 0°C-40°C, 5-95%			
Altitude 0-1000m (when the altitude is greater than 1000m, the capacity is derated) Maximum IT load 3kW Total dimensions 600mm×2000mm×1100mm (W×H×D) Available space 523U* Protection level IP20 Weight 360kg (@3kW, 1h battery backup) Input 220/230/240VAC, 1Ph+N+PE, 50/60Hz, 63A Output 220VAC Capacity 6kVA Configuration Single UPS Voltage input range 80-280VAC, 40-70Hz, 1Ph+N+PE Power factor 1.0 Efficiency Up to 96% Battery type Lithium battery or Lead-acid battery Backup time 0.5h-4h* SPD CLASSI/C, In 20kA, Imax 40kA, 8/20us Maintenance bypass standard rPDU (optional) IEC: C13*8 Cooling capacity 3.5kW* Cooling ande Direct expansion air-cooled Air supply Front air supply and rear air return Installation Rack-mounted installation Dimensions 438mm×445mm×900mm (H×W×D) Fire Extinguishing module Monitoring system Monitoring system Monitoring system Monitoring system Monitoring system Monitoring system At it it does not be a server of a server of a server of multiple branches* Local monitoring 10-inch tablet screen , supporting facial recognition login and keyless door opening 5moke sensor, Talk sensor, intelligent lock, 10-inch PAD, SMS/email alarm*, and local app 0.8M			
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Input 220/230/240VAC, 1Ph+N+PE, 50/60Hz, 63A Output 220VAC Capacity 6kVA Configuration Single UPS Voltage input range 80-280VAC, 40-70Hz, 1Ph+N+PE Power factor 1.0 Efficiency Up to 96% Battery type Lithium battery or Lead-acid battery Backup time 0.5h~4h* SPD CLASSII/C, In 20kA, Imax 40kA, 8/20us Maintenance bypass Standard rPDU (optional) IEC: C13*8 Cooling capacity 3.5kW* Cooling mode Direct expansion air-cooled Air supply Front air supply and rear air return Installation Rack-mounted installation Dimensions 438mm×445mm×900mm (H×W×D) Installation Rack-mounted Gas type and capacity Perfluorohexanone, 1.25kG Dimensions 43.6mm×442mm×690mm (H×W×D) Function Remote web page access and unified management of multiple branches* Local monitoring Standard functions Smoke sensor, T&H sensor, intelligent lock, 10-inch PAD, SMS/email alarm*, and local app 0.8M		Protection level	IP20
Power system Power factor Efficiency Power factor Efficiency Up to 96% Battery type Lithium battery or Lead-acid battery Backup time 0.5h~4h* SPD CLASSII/C, In 20kA, Imax 40kA, 8/20us Maintenance bypass Standard rPDU (optional) IEC: C13*8 Cooling capacity 3.5kW* Cooling mode Direct expansion air-cooled Air supply Front air supply and rear air return Installation Dimensions A38mm × 445mm × 900mm (H × W × D) Fire Extinguishing module Fire Extinguishing module Fire Extinguishing module Fire Local monitoring Fire Local monitoring Function Remote web page access and unified management of multiple branches* Local monitoring Standard functions Smoke sensor, T&H sensor, intelligent lock, 10-inch PAD, SMS/email alarm*, and local app 0&M		Weight	360kg (@3kW, 1h battery backup)
Power system Power factor Efficiency Power factor Efficiency Up to 96% Battery type Lithium battery or Lead-acid battery Backup time 0.5h~4h* SPD CLASSII/C, In 20kA, Imax 40kA, 8/20us Maintenance bypass Standard rPDU (optional) IEC: C13*8 Cooling capacity 3.5kW* Cooling mode Direct expansion air-cooled Air supply Front air supply and rear air return Installation Dimensions A38mm×445mm×900mm (H×W×D) Rack-mounted Fire Extinguishing module Perfluorohexanone, 1.25kG Dimensions 43.6mm×442mm×690mm (H×W×D) Function Remote web page access and unified management of multiple branches* Local monitoring Standard functions Power system Cooling and keyless door opening Standard functions Smoke sensor, T&H sensor, intelligent lock, 10-inch PAD, SMS/email alarm*, and local app 0&M	Power system	Input	220/230/240VAC, 1Ph+N+PE, 50/60Hz, 63A
Power system Configuration Single UPS		Output	220VAC
Power system Power factor Efficiency Battery type Backup time O.5h~4h* SPD CLASSII/C, In 20kA, Imax 40kA, 8/20us Maintenance bypass rPDU (optional) IEC: C13*8 Cooling system Cooling asystem Cooling asystem Fire Extinguishing module Fire Extinguishing module Monitoring system Monitoring system Voltage input range 80~280VAC, 40~70Hz, 1Ph+N+PE 1.0 1.0 Up to 96% Lithium battery or Lead-acid battery Up to 96% Lithium battery or Lead-acid battery Insulation of Lithium battery or Lead-acid battery Disead-acid battery Disead-acid battery Disead-acid battery Disead-acid battery Lithium battery or Lead-acid battery Disead-acid bat		Capacity	6kVA
Power system Power factor Efficiency Battery type Backup time O.5h~4h* SPD CLASSII/C, In 20kA, Imax 40kA, 8/20us Maintenance bypass Standard rPDU (optional) IEC: C13*8 Cooling capacity 3.5kW* Cooling mode Direct expansion air-cooled Air supply Front air supply and rear air return Installation Dimensions 438mm×445mm×900mm (H×W×D) Installation Rack-mounted Gas type and capacity Perfluorohexanone, 1.25kG Dimensions 43.6mm×442mm×690mm (H×W×D) Function Remote web page access and unified management of multiple branches* Local monitoring Standard functions Smoke sensor, T&H sensor, intelligent lock, 10-inch PAD, SMS/email alarm*, and local app O&M		Configuration	Single UPS
Efficiency		Voltage input range	80~280VAC, 40-70Hz, 1Ph+N+PE
Efficiency Up to 96% Battery type Lithium battery or Lead-acid battery Backup time 0.5h~4h* SPD CLASSII/C, In 20kA, Imax 40kA, 8/20us Maintenance bypass Standard rPDU (optional) IEC: C13*8 Cooling capacity 3.5kW* Cooling mode Direct expansion air-cooled Air supply Front air supply and rear air return Installation Rack-mounted installation Dimensions 438mm×445mm×900mm (H×W×D) Installation Rack-mounted Gas type and capacity Perfluorohexanone, 1.25kG Dimensions 43.6mm×442mm×690mm (H×W×D) Function Remote web page access and unified management of multiple branches* Local monitoring Standard functions Smoke sensor, T&H sensor, intelligent lock, 10-inch PAD, SMS/email alarm*, and local app O&M		Power factor	1.0
Backup time 0.5h~4h* SPD CLASSII/C, In 20kA, Imax 40kA, 8/20us Maintenance bypass Standard rPDU (optional) IEC: C13*8 Cooling apacity 3.5kW* Cooling mode Direct expansion air-cooled Air supply Front air supply and rear air return Installation Rack-mounted installation Dimensions 438mm×445mm×900mm (H×W×D) Installation Rack-mounted Fire Extinguishing module Gas type and capacity Perfluorohexanone, 1.25kG Dimensions 43.6mm×442mm×690mm (H×W×D) Function Remote web page access and unified management of multiple branches* Local monitoring System Standard functions Smoke sensor, T&H sensor, intelligent lock, 10-inch PAD, SMS/email alarm*, and local app O&M		Efficiency	Up to 96%
SPD CLASSII/C, In 20kA, Imax 40kA, 8/20us Maintenance bypass Standard rPDU (optional) IEC: C13*8 Cooling capacity 3.5kW* Cooling mode Direct expansion air-cooled Air supply Front air supply and rear air return Installation Rack-mounted installation Dimensions 438mm × 445mm × 900mm (H × W × D) Fire Extinguishing module Gas type and capacity Perfluorohexanone, 1.25kG Dimensions 43.6mm × 442mm × 690mm (H × W × D) Function Remote web page access and unified management of multiple branches* Local monitoring System Monitoring system Standard functions Smoke sensor, T&H sensor, intelligent lock, 10-inch PAD, SMS/email alarm*, and local app O&M		Battery type	Lithium battery or Lead-acid battery
Maintenance bypass Standard rPDU (optional) IEC: C13*8 Cooling capacity 3.5kW* Cooling mode Direct expansion air-cooled Air supply Front air supply and rear air return Installation Rack-mounted installation Dimensions 438mm×445mm×900mm (H×W×D) Installation Rack-mounted Gas type and capacity Perfluorohexanone, 1.25kG Dimensions 43.6mm×442mm×690mm (H×W×D) 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 Smoke sensor, T&H sensor, intelligent lock, 10-inch PAD, SMS/email alarm*, and local app O&M		Backup time	0.5h~4h*
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Cooling system Air supply Installation Rack-mounted installation Dimensions 438mm×445mm×900mm (H×W×D) Installation Rack-mounted Fire Extinguishing module Gas type and capacity Dimensions 43.6mm×442mm×690mm (H×W×D) Function Remote web page access and unified management of multiple branches* Local monitoring Standard functions Local monitoring Standard functions Front air supply and rear air return Rack-mounted Perfluorohexanone, 1.25kG Perfluorohexanone, 1.25kG Dimensions 43.6mm×442mm×690mm (H×W×D) Remote web page access and unified management of multiple branches* Local monitoring Smoke sensor, T&H sensor, intelligent lock, 10-inch PAD, SMS/email alarm*, and local app O&M		Cooling capacity	3.5kW*
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Installation Rack-mounted installation Dimensions 438mm×445mm×900mm (H×W×D) Installation Rack-mounted Gas type and capacity Perfluorohexanone, 1.25kG Dimensions 43.6mm×442mm×690mm (H×W×D) Function Remote web page access and unified management of multiple branches* Local monitoring System Monitoring system Standard functions Smoke sensor, T&H sensor, intelligent lock, 10-inch PAD, SMS/email alarm*, and local app O&M		Air supply	Front air supply and rear air return
Fire Extinguishing module Gas type and capacity Perfluorohexanone, 1.25kG Dimensions 43.6mm × 442mm × 690mm (H × W × D) 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 Smoke sensor, T&H sensor, intelligent lock, 10-inch PAD, SMS/email alarm*, and local app O&M		Installation	Rack-mounted installation
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module Dimensions 43.6mm × 442mm × 690mm (H×W×D) 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 Smoke sensor, T&H sensor, intelligent lock, 10-inch PAD, SMS/email alarm*, and local app O&M	5 5	Installation	Rack-mounted
Dimensions 43.6mm × 442mm × 690mm (H × W × D) 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 Smoke sensor, T&H sensor, intelligent lock, 10-inch PAD, SMS/email alarm*, and local app O&M		Gas type and capacity	Perfluorohexanone, 1.25kG
Local monitoring Monitoring system Standard functions Local monitoring 10-inch tablet screen , supporting facial recognition login and keyless door opening Smoke sensor, T&H sensor, intelligent lock, 10-inch PAD, SMS/email alarm*, and local app O&M		Dimensions	43.6mm × 442mm × 690mm (H × W × D)
Monitoring system Standard functions Smoke sensor, T&H sensor, intelligent lock, 10-inch PAD, SMS/email alarm*, and local app O&M	Monitoring system	Function	Remote web page access and unified management of multiple branches*
Standard functions		Local monitoring	10-inch tablet screen , supporting facial recognition login and keyless door opening
Optional functions Fire extinguishing module, video surveillance, water leakage sensor, and mobile O&M		Standard functions	-
		Optional functions	Fire extinguishing module, video surveillance, water leakage sensor, and mobile O&M*

Remark:

- 1. ICT space = 23U is calculated based on 3kW and 1h backup time without fire extinguish module. The actual available space depends on specific configuration
- 2. FusionModule500 supports up to 4h battery backup, and the actual backup time depends on the number of battery modules.
- 3. The cooling capacity is obtained when the indoor dry bulb temperature is 37°C, the indoor wet bulb temperature is 24°C, 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.
- 6. 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.

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