

Prefabricated All-in-One Data Center

FusionDC1000A-20ft-ICT-AIO

Introduction

FusionDC1000A is a prefabricated all-in-one solution for outdoor edge DC. The solution integrates power, cooling, monitoring, firefighting, and cabinet systems into an ISO standard 20ft module. All facilities are prefabricated and pretested in the factory, which enable plug&play deployment. It is with strong ability of earthquake/wind/dust/water-proof and support long-term outdoor running.

Application Scenarios

- 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

- All facilities are preinstalled into one ISO standard module & pretested in the factory
- One data center is built per module enable plug-and-play deployment in just one day
- Modular design enable quick and standard deployment of entire network

Green

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

Smart

- The intelligent system provide centralized and digital management of facilities and intelligent O&M and facilitate unattended operations

Reliable

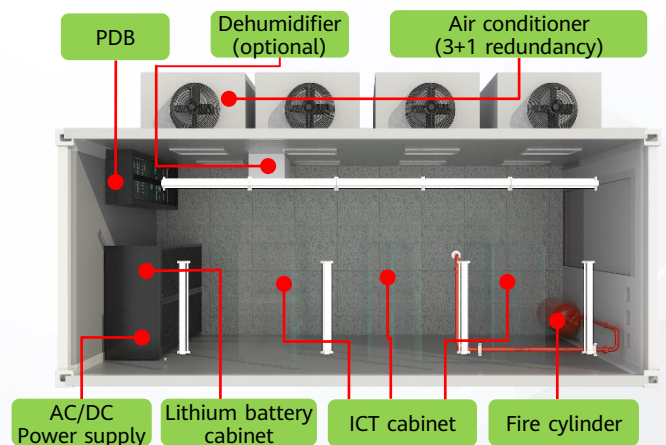
- Its enclosure is with lifespan of 25 years and IP55 protection
- It can resistGR-63-CORE Zone3 earthquakes & Beaufort scale 12 winds



FusionDC1000A-20ft-ICT-AIO



FusionDC1000A-20ft-ICT-AIO Site



FusionDC1000A-20ft-ICT-AIO Layout

SPECIFICATIONS

| Configuration ^① | | 380V-IT 8kW + CT:10kW N+X configuration | 380V-IT 8kW+CT:10kW 2N configuration | 380V-CT 24kW N+X configuration | 380V-CT 24kW 2N configuration |
|----------------------------|---|--|--|--|---|
| Entire system parameters | Deployment Site | Outdoor, awning, warehouse | | | |
| | Altitude range | Maximum altitude: 3000m (Power derating occurs when altitude ≥1000m) ^② | | | |
| | Humidity range | 5%-95% RH | | | |
| | Operating temperature | -20°C-+55°C(Power derating occurs when the temperature is higher than 35°C) ^② | | | |
| | Storage temperature | -40°C - +70°C ^③ | | | |
| | Storage humidity | 5%-95% RH | | | |
| | Power density | Total power: IT ≤ 8 kW, CT ≤ 10 kW | | Total power: CT ≤ 24 kW | |
| | Number of cabinets (no cabinets provided) | N63 cabinet: 15 Pcs or N66 cabinet: 6 Pcs or N68 cabinet: 4 Pcs | N63 cabinet: 11 Pcs or N66 cabinet: 4 Pcs or N68 cabinet: 4 Pcs | N63 cabinet: 15 Pcs or N66 cabinet: 6 Pcs or N68 cabinet: 4 Pcs | N63 cabinet: 11 Pcs or N66 cabinet: 4 Pcs or N68 cabinet: 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) | | | |
| | Available space for cabinet installation | 9 m ² | 8 m ² | 9 m ² | 8 m ² |
| | Environment corrosion requirements | Class A/B environment(standard configuration) ^④ | | | |
| | Waterproof & dustproof | IP55 | | | |
| | Anti-seismic | GR-63-CORE Zone3 (the module structure) | | | |
| | Anti-wind | Wind speed 32.7 m/s | | | |
| | Anti-salt fog | Meets the 1440-hour salt spray test requirements | | | |
| Module 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 | ≤ 36 kW (36 kW in actual configuration, rectifiers: 9 × 4 kW/unit) | | ≤ 36 kW (36 kW in actual configuration, rectifiers: 9 × 4 kW/unit) | |
| | Input channels | 2 | | | |
| | Input current | 250A | | | |
| | DC power output (Available) | BLVD: 63A×6 LLVD: 63A×2 LLVD Fuse: 500A×2 Battery: 500A×3 | BLVD: 63A×12 LLVD: 63A×4 LLVD Fuse: 500A×4 Battery Fuse: 500A×6 | BLVD: 63A×6 LLVD: 125A×2, 63A×2 LLVD Fuse: 500A×2 Battery Fuse: 500A×3 | BLVD: 63A×12 LLVD: 125A×2, 63A×2 LLVD Fuse: 500A×4 Battery Fuse: 500A×6 |
| | AC subrack output (Available) | 16A×12 | 16A×24 | / | / |
| | DC subrack output (Available) | BLVD: 16A×1 LLVD: 16A×4, 32A×2, 63A×4 | BLVD: 16A×3, 32A×4 LLVD: 16A×8, 32A×4, 63A×8 | BLVD: 16A×1 LLVD: 16A×4, 32A×2, 63A×4 | BLVD: 16A×3, 32A×4 LLVD: 16A×8, 32A×4, 63A×8 |
| | Total input surge protection | In=30kA(8/20μs), I _{max} =60kA(8/20μs) | | | |
| | Battery specifications | BoostLi-150Ah × 15 | BoostLi-100Ah × 22 | BoostLi-150Ah × 15 | BoostLi-100Ah × 22 |
| | Backup time | 4 hours (at initial state) | | | |

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|-------------------------------------|--|---|--|---|----------------------------------|
| Cooling Parameters | Cooling capacity | 13.5 kW/unit(3+1 redundancy) ^⑥ | | 13.5 kW/unit(2+1 redundancy) ^⑥ | |
| | Unit dimensions (W×D×H) | 1160 × 655 × 2200 mm | | | |
| | Compressor | DC variable frequency | | | |
| | Refrigerant | R134A | | | |
| | Fan | EC Fan | | | |
| | 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 | | | |
| | Video surveillance | Support | | | |
| | Video storage | SD card (7 days video storage) | | | |
| Fire extinguishing parameters | Automatic gas fire extinguishing system | Support | | | |
| | Gas | FK5112 | | | |
| Structure parameters | Dimensions(W×D×H) | 2438 × 6058 × 2896 mm | | | |
| | Internal dimensions (W×D×H) | 2212 × 5690 × 2592 mm | | | |
| | Weight | Preinstalled weight before delivery ≤ 7.5 T, maximum load-bearing capacity ≤ 10 T | | | |
| | Cable routing mode | Cables can be routed in from the bottom or end | | | |
| | Aisle dimensions | Long aisle: ≥ 700 mm; maintenance aisle: ≥ 600 mm | | | |

Remark:

- ① 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/C4;
- ⑤ The module can also be installed on a concrete platform. Four 300 mm high steel bases are configured at the bottom of the module;
- ⑥ The return air temperature of cabinets in ICT scenarios is considered as 27°C, and the return air temperature of the cabinets is considered as 32 °C in CT scenario.