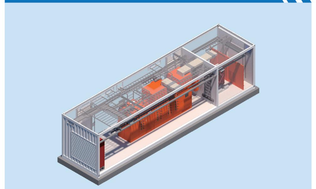
LV Power Module



The LV power module is divided into two compartments, one for the transformer and the other for the LV system.

The LV system integrates LV switchgears, SVG, UPS，busbar, cable tray, air conditioner, ELV system, fire protection system, lighting etc., and is tested in the factory, which greatly improves the assembly efficiency of on-site construction, makes its performance more predictable, and minimizes risks.

The LV power module can meet the reliability level of Uptime Tier 3 or above, and complies with the national fire protection and IT equipment room construction standards. The inside of the enclosure is sprayed with reflective heat-insulating paint and waterproofed. It can withstand extreme ambient temperatures of -40℃ to 60℃, has an earthquake resistance of 8 degrees, and supports the coastal C4 anti-corrosion level.

LV UPS Module

The LV UPS module can separate two physical spaces for A/B LV systems.

This module integrates power panels, UPS and batteries, busbars, cable trays, ELV system, fire protection system, lighting, air conditioner, etc. It is fully prefabricated in the factory and undergoes UPS performance test, burn-in test, waterproof test, and hoisting test, greatly improving on-site construction efficiency.

The LV UPS module can meet the reliability level of Uptime Tier 3 or above, and complies with the national fire protection and computer room construction standards. The interior of the enclosure is sprayed with reflective heat-insulating paint and waterproofed. It can withstand extreme ambient temperatures of -40° C to 60° C, has an earthquake resistance of 8 degrees, and supports the coastal C4 anti-corrosion level.

IT Module

The IT module integrates IT racks, cooling units, fire protection system , ELV system, lighting, etc. into one container.

The IT module supports fast and flexible deployment, and can be expanded to multi-layered data center or a flatpack scenario to meet the needs of small data centers. It can also support multi-layer stacking for large data centers, which is suitable for phased construction and land use scale. In terms of cooling solutions, it is also compatible with chilled water system, fluorine refrigeration system with magnetic levitation compressor, air-cooled DX system and liquid cooling system. The indoor cooling units can be selected from fan wall units, room air conditioner, in-row air conditioner, and cold plate liquid cooling system.

The IT container module can meet the reliability level of Uptime Tier 3 or above, and complies with the national fire protection and computer room construction standards.

Cooling Module

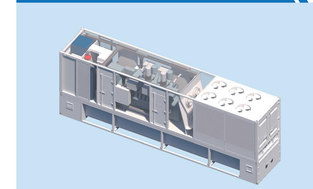
The prefabricated chiller plant serves as a cold source to provide chilled water for data centers, including chiller modules, hydraulic pipeline modules, cooling towers and buffer tanks, etc.

The chiller module includes chiller, water pumps, sand filter, water treatment system, cable trays, fire protection, lighting, HVAC, as well as BA system and BMS system.

All the above equipment and internal pipelines and valves are integrated and installed inside the module, and various tests are carried out in the factory, which can greatly reduce the difficulty of on-site operations and shorten the construction period.

It has the ability to withstand extreme ambient temperatures of -40℃ to 60℃, has an earthquake resistance level of 8 degrees, and supports the coastal C4 anti-corrosion level.

Genset Module

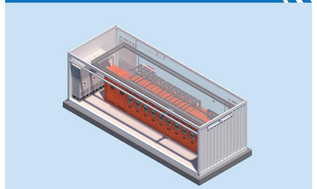


The diesel generator set is integrated with the casing, which contains exhaust system, engine cooling system, the serviceable daily fuel tank, diesel supply system (optional) and other fire fighting equipment (optional).

In order to meet the needs of outdoor installation and have basic wind and rainproof performance, the module container is made of Q235B steel, the bottom plate is 6mm thick, the two ends are flat steel plates, and the sides are corrugated steel plates. The noise level of the enclosed unit is about 85DB(A) at 1 meter. The exhaust duct insulation is wrapped with stainless steel. It has the ability to withstand extreme ambient temperatures of -40℃ to 60℃, has an earthquake resistance level of 8 degrees, and supports the coastal C4 anti-corrosion level.

Under the genset module is the belly tank, the length and width of which are consistent with the genset module, and the height can be customized according to the fuel storage time requirements. The maximum fuel storage capacity of a single belly tank is 24 hours, which can replace the centralized fuel depot to save space. The belly tank corresponds to the generator set one by one to reduce single point failures.

MV Module



The MV module adopts a modular and standardized shell, including MV power cabinets, DC panel cabinet, busway, cable tray, ELV system, fire protection, lighting, HVAC, etc.

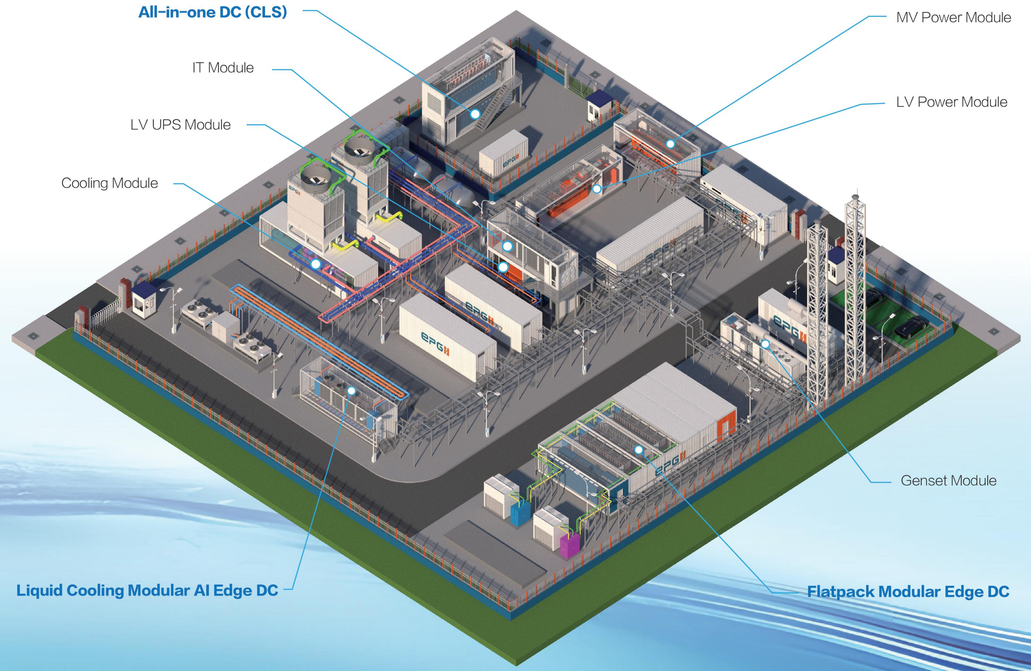
Components are delivered pre-wired and factory inspected, making performance more predictable and minimizing risk.

The MV module can meet the reliability level of Uptime Tier 3 or above, comply with national fire protection and IT equipment room construction standards, and the interior of the container is sprayed with reflective heat insulation coating and waterproof treatment.

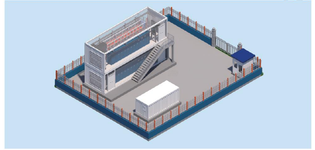
It has the ability to withstand extreme ambient temperatures of -40℃ to 60℃, has an earthquake resistance level of 8 degrees, and supports the coastal C4 anti-corrosion level.

Gaining Competitive Modular DC

EPG' s Pre-engineering and Prefabricated Data Center Solution



All-in-one DC (CLS)



All-in-one DC adopts modular and prefabricated methods, which can be deployed on site more flexibly and easily expanded. Its prefabricated modules enable it to provide customizable and scalable solutions to meet various scenarios (such as cable landing stations).

Rapid deployment Modular DC can be quickly assembled on-site, reducing the time required for construction and deployment compared to traditional on-site "stick" build.

Scalability The modular design allows for easy expansion and upgrades when connectivity needs grow or new submarine cables need to be connected.

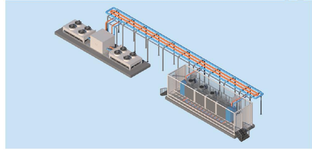
Flexibility The modular nature of these stations enables customization based on specific requirements, such as space constraints or environmental considerations.

Cost efficiency Modular DC can be more cost-effective than building a large fixed sites because they can be deployed gradually based on demand, reducing initial investment costs.

Relocation In some cases, modular cable landing station can be disassembled and relocated to a different location if required, providing additional flexibility.

The modular DC can meet the reliability level of Uptime Tier 3 or above and meet the national fire protection and computer room construction standards. The module integrates the power system, cooling system, ELV system, fire protection system, and supports rapid deployment, can withstand extreme ambient temperatures of -40℃ to 60℃, has an earthquake resistance of 8 degrees, and supports coastal C4 anti-corrosion level.

Liquid Cooling Modular AI Edge DC



Liquid cooling for modular AI edge DC refers to the use of liquid-based cooling solutions to manage the heat generated by GPUs. This modular DC is designed to provide computing power and low-latency processing capabilities close to the data sources or end-users.

Cooling system The liquid cooling system consists of indoor CDUs, secondary room manifold and rack manifolds, outdoor pump station and cooling units. The coolant circulates through these channels to transfer the heat generated by the computing equipment.

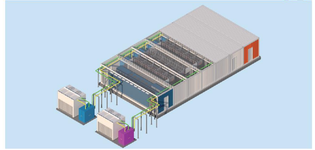
Energy Efficiency Liquid cooling can provide greater energy efficiency than traditional cooling systems. By transferring heat from computing components directly to the liquid coolant, less energy is required for cooling.

Modular Design The modular AI edge DC adopts a modular design that can be quickly deployed and expanded. The liquid cooling system is integrated into the module, providing a compact, independent solution that can be easily deployed and expanded as needed.

Reliability The liquid cooling system adopts a redundant design to ensure high availability and reliability. Redundant pumps and cooling units minimize the risk of system failure and provide continuous cooling capacity.

The liquid cooling edge DC uses cold plate liquid-cooled server racks, which are usually composed of one or more modules and meet Tier 3 or above levels, national fire protection and computer room construction standards.

Flatpack Modular Edge DC



The flatpack modular DC can be shipped quickly and customized according to user requirements with a variety of options..

Flexibility It is scalable through a variety of modules that are purpose-built for distributed and remote infrastructure environments and are suitable for colocation, 5G, retail, enterprise, and industrial applications.

Modular Design It consists of LV power modules and IT modules including power system, cooling units, busbars, cable trays, fire protection system, and cold aisle containment. This feature provides full customization for users who can deploy the infrastructure in aisle, row, or rack configurations.

Cooling system The outdoor cooling source uses a fluorine refrigeration system with magnetic levitation compressor . The indoor cooling units can adapt to various cooling scenarios such as in-row air conditioners, room air conditioners, fan wall units, etc. This fluorine refrigeration system is highly efficient, and the PUE is less than 1.3.

The flatpack modular DC can meet Tier 3 or above levels and meet national fire protection and computer room construction standards. The interior of the enclosure is sprayed with reflective heat-insulating paint and waterproofed. The modules can withstand extreme ambient temperatures of -40° C to 60° C, have an earthquake resistance of 8 degrees, and support coastal C4 anti-corrosion level.

Website QR Code

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DATA CENTER MODULE