NEUROPOWER

Powering Possibilities. Connecting Futures.

Modular Data Center Solution (MDCS)

FlexiRow Series

FlexiRow

To meet the requirements of edge data centers that prioritize low latency, high bandwidth, localization, and real-time computing, Neuropower Malaysia has introduced the FlexiRow Series modular data center solution (MDCS).

As the name implies, this innovative solution encompasses flexible module configurations, ensuring reliable performance, high efficiency, energy savings, and intelligent operation and maintenance capabilities.

The FlexiRow MDCS showcases its prowess through the integration of power supply and distribution, cooling cabinet, fire control, and monitoring systems into a cohesive unit, effectively optimizing space utilization.

Furthermore, it provides support for various IT devices such as servers, KVM (Kernal-based Virtual Machine), routers, and switches, allowing for flexible expansion and configuration to cater to diverse application scenarios.

Combining the advantages of modularity, reliability, efficiency, and intelligence, the FlexiRow Series MDCS by Neuropower addresses the evolving demands of edge data centers.
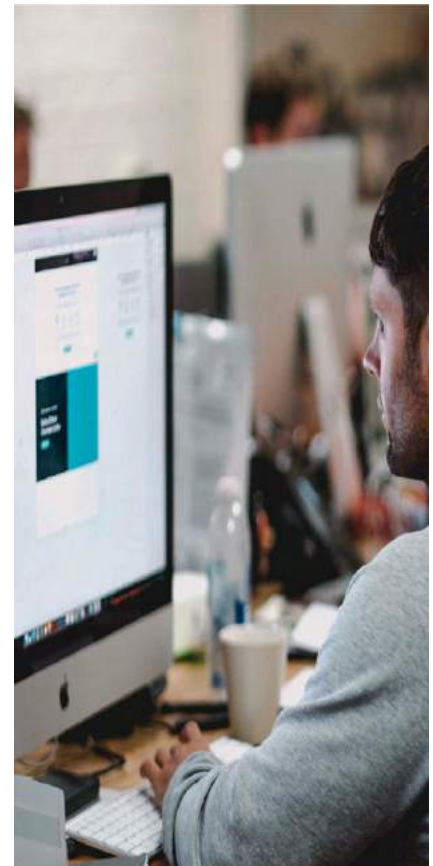
It does not only prioritizes low latency and high bandwidth but also emphasizes localization and real-time computing capabilities, offering a comprehensive and adaptable solution for businesses in need of cutting-edge data center infrastructure.


INTERNET DATA CENTER

GOVERNMENT

ENTERPRISE

FlexiRow Features

Explore the unparalleled potential of FlexiRow modular data center solution with their key attributes of scalability, reliability, and efficiency.

1. Enhanced cooling efficiency and reduced energy consumption

Optimized for high energy efficiency, featuring closed cold and hot channel design and supporting high power density deployment of cabinets, minimizing user space costs.
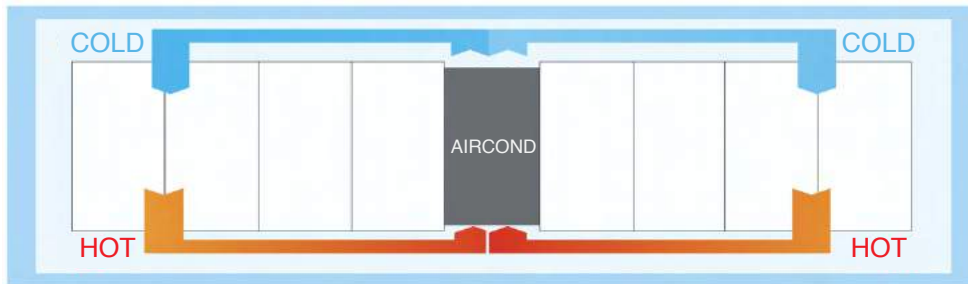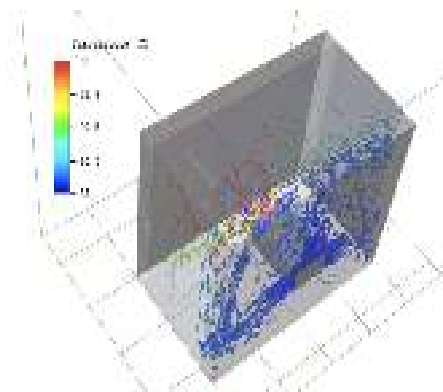

2. Achieve precise temperature control at the U-level with a temperature difference of less than 1°C.

By conducting thermal simulation evaluations using CFD (Computational Fluid Dynamics), the indoor air distribution is finely adjusted to achieve optimal conditions.
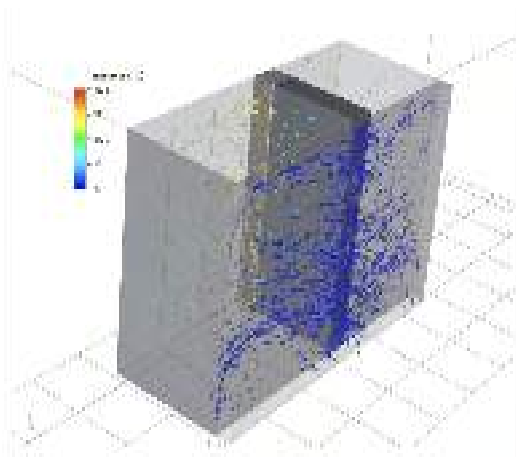
(a) Thermal simulation diagram for air conditioner (row)

(a) Thermal simulation diagram for air conditioner (rack)

3. Attaining a remarkable level of efficiency, the entire system operates with an efficiency rating of up to 96%.

Featuring an in-row air conditioner equipped with EC frequency conversion technology, the modular data center achieves high energy efficiency, enhancing overall system performance. Additionally, the UPS (Uninterruptible Power Supply) operates at an impressive full load efficiency of up to 96%.

4. By leveraging intelligent temperature control technology, the cooling efficiency of the system experiences a notable improvement of 30%.

Incorporating energy-saving technologies such as DC frequency conversion refrigeration, wet film humidification, and fluorine pump, the air conditioner ensures efficient operation and reduced energy consumption.

5. Experience swift delivery with the capability to be online within just 2 days, significantly boosting delivery efficiency by 30%

The modular data center streamlines the process through in-plant assembly and pre-debugging, requiring only the on-site combination of cabinets, while each subsystem equipment can be flexibly and rapidly constructed using modular building blocks.

6. Ensuring safety and reliability, the modular data center effectively minimizes losses and reduces labor costs.

The modular data center incorporates features such as channel high temperature linkage automatic spring doors for emergency heat dissipation, intelligent reliability to minimize losses, a double input structure with dual power supply for enhanced energy efficiency and reliability, and a 10% low load dehumidification capability to eliminate condensation and prevent potential risks.

7. Offering flexible and prefrabricate solutions

The modular data center system encompasses a wide power range of 1-40kVA, supporting both three-phase and single-phase output, and can be configured on-demand, while also offering rack and row air conditioner solutions with a flexible cooling capacity ranging from 4-25kW.

FlexiRow Methods

Learn how the FlexiRow Modular Data Center Solution operates through its monitoring methods:

1. Intelligent Access Control System

The modular data center offers centralized management, combining ease of use with intelligent and reliable operations.

Fingerprint   Password   Card Control   Remote Control

2. Intelligent inspection and smart lighting interaction

The modular data center saves inspection time, reduces labor costs, and features intelligent lighting that seamlessly links with access control and alarm systems, ensuring clear visibility of the overall status.

LOCKED   UNLOCKED   ALARM

3. User friendly app oriented

The modular data center incorporates an intuitive mobile app, enabling centralized management with the ability to view and control operations both locally and remotely. This user-friendly app facilitates easy operation and maintenance of the data center.

4. Efficient and Visual: Precision Distribution in User-Friendly Modular Data Centers
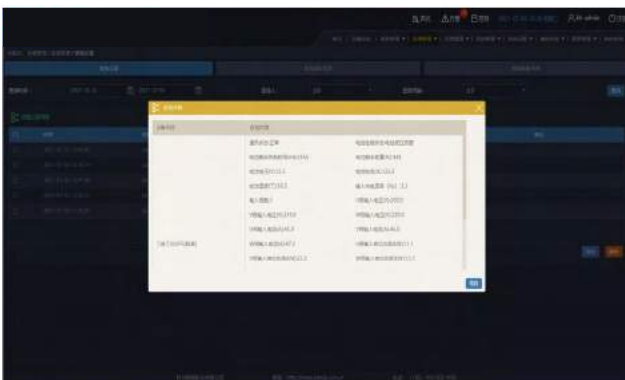
The modular data center boasts precision distribution capabilities and a user-friendly design, accompanied by visualized operation and maintenance information for enhanced efficiency.

Homepage

Intelligent Power Distribution

Automatic Inspection

U capacity

Asset Management

Distribution Capacity

Technical Specifications

	Model	FlexiRow 1+2	FlexiRow 1+4	FlexiRow 2+6	FlexiRow 2+8	FlexiRow 2+10
Specification	Channel Type	Sealed cold and hot channel				
	IT quantity	2	4	6	8	10
	Dimension, W x D x H (mm)	1200 x 1400 x 2000	2400 x 1400 x 2000	3600 x 1400 x 2000	4800 x 1400 x 2000	6600 x 1400 x 2000
Power Distribution Module	Capacity (kVA)	10		20		40
	Mains Input	Single input		Single or dual input optional, ATS optional for double		
	Input	1P+N+PE		3P+N+PE		
	Air Conditioning Power Distribution	40A/1P*3				40A/3P*3
	IT Power Distribution Branch	Mains power supply + UPS power supply				
	IT Power Distribution Branch 1 (Main)	32A/1P*5		32A/1P*8		32A/1P*12
	IT Power Distribution Branch 2 (UPS)	32A/1P*5		32A/1P*8		32A/1P*12
	Installation Height (U)	3		6		9
	Lighting Protection Grade	Class C, in 20kVA				
PDU	Installation	Vertical Installation				
	Rated input (A)	16/32				
UPS	Capacity (kVA)	10	10	20	20	40
	Rated input voltage (VAC)	220/230/240		380/400/415		
	Input Voltage Range (VAC)	80 ~ 275		80 ~ 280		
	DC Input (Vdc)	192 (192 ~ 240 optional)		±192 (±144 ~ ± 240 optional)		
	Output Power Factor	0.9				
	Output Voltage (VAC)	220/230/240		380/400/415		
	Efficiency	95%		96%		
	Height (U)	2		3		
	Backup Time (h)	0.5 , 1 or 2				
	Battery Deployment Mode	Battery cabinet (in-line / out-of-line)				Battery cabinet (out-of-line)
Air Conditioner	Quantity (pcs)	1	1	2	2	2
	Cooling capacity / per AC (kW)	3.5	12.5	7.5	12.5	25
	Dimension, W x D x H (mm)	440 x 760 x 217 (5U)	442 x 714 x 440 (10U)	440 x 760 x 350 (8U)	442 x 714 x 440 (10U)	300 x 1400 x 2000 (42U)
	Max airflow rate (m3/h)	800	2200	1500	2200	5000
	Installation	Rack				In-Row
	Air Supply Mode	Frontal air supply in cabinet, rear air return				Frontal air supply, rear air return
Monitor System	Display	10.1 inch TFT capacitive multi touch screen				
	Resolution Radio	1280*800				
	Dimension, W x D x H (mm)	286 x 196 x 50				
	Net Weight (kg)	1.5				
	Certification	CE, FCC				
	Access Method	Support remote WEB interface access, multiple modules support unified NMS monitoring, mobile phone app				
	Local Interface	10 inch touch screen				
	Alarm	SMS alarms, audible and visual alarms, email alarms				
	Standard Configuration	Temperature and humidity sensor, water leakage sensor, smoke sensor				
	Optional Configuration	Door status sensor, video				

● *Product specifications are subject to change without further notice*