

Micro-Modular Data Centers

- *Compact & Modular Design*
- *Highly Scalable*
- *Energy Efficiency - Low PUE*
- *Cost-Effectiveness - Low OPEX*



Micro-Modular Data Centers bring the power of modularity to data center design. Instead of constructing one massive facility upfront, it is prefabricated, standardized modules for compute, power, cooling, and network systems. This means it is highly scalable; each IT module is pre-engineered and factory-tested which reduces on-site complexity and construction risks. Traditional data center builds can take 12 to 24 months, but a modular approach can cut this down to a few months, allowing businesses to respond quickly to changing IT demands or to expand into new markets almost instantly.



SuperX-MDC

The IT module includes:

- 1. B200/B300/GB200/GB300 compute racks*
- 2. Network and storage racks*
- 3. CDU(Coolant Distribution Unit)*
- 4. Flexible DC system*

1. Compute Racks

Compute Racks that runs applications, process data, and provides computing power for workloads. CPUs or GPUs handle data processing, AI training and Analytics.

- 1U with 2x NVIDIA GB300 Grace™ Blackwell Ultra Superchips

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|----------------------|--|
| CPU & GPU | 2x NVIDIA Grace™ Arm® Neoverse V2 CPUs (72-core) 4x NVIDIA Blackwell Ultra Tensor Core GPUs |
| CPU Memory | 960GB LPDDR5X per tray(2x 480GB) |
| GPU Memory | 1,152GB HBM3e per tray (4x 288GB) |
| Networking | 4x NVIDIA NVLink™ Switch 2x NVIDIA Connectx®-8 NICs (1-port 800Gb/s) 1x NVIDIA BlueField®-3 DPUs (400Gb/s) |
| Storage | 8x E1.S NVMe |

- NVIDIA GB300 NVL72 Rack

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|-----------------------|---|
| GPU | 72x NVIDIA Blackwell B200 GPUS |
| CPU | 36x NVIDIA Grace™ Arm® Neoverse V2 CPUs |
| Compute Tray | 18x NVIDIA GB300 Compute Tray |
| Networking | 18x NVIDIA BlueField®-3 DPUs, 72x Connectx®- 8SuperNICs |
| Switch Tray | 9x 5th Gen NVidia NVLink Switches Total NVLink Bandwidth-130TB/s |
| Management | 3X NVIDIA SN2201 Management switches |
| Power Shelf | 6x 1U 33kW (6x 5.5KW PSUS) |
| Rack Dimension | 48U NVIDIA MGX"M Rack WxHxD23.6 x90.4"x 47.2" |



Compute Rack

2. Network and Storage

Network connects all compute, storage, and external systems so data can flow seamlessly. Storage provides persistent data storage for applications, backups, and analytics.



Nvidia
InfiniBand



Storage

3. CDU (Coolant Distribution Unit)

The CDU is a thermal interface between the building's cooling system (chilled water loop) and the server cooling loops (rack manifolds, cold plates).



CDU

4. Flexible DC system

A highly integrated and compact power supply system consists of power distribution cabinet, ultra-efficient rectifier and inverter (380VAC/240/400/800/1000VDC) cabinet, cabinet-level AC/DC distribution units and accessories.

