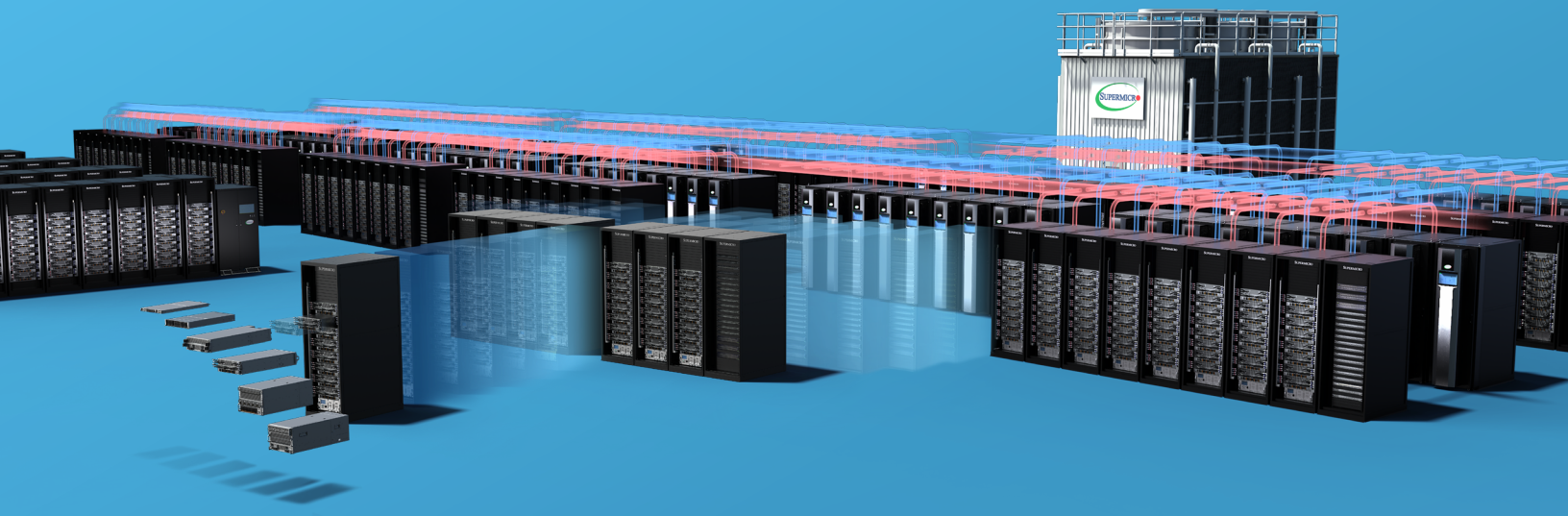
BROCHURE

Data Center Building Block Solutions®



OCTOBER 2025

Supermicro Data Center Building Block Solutions®

Speed up Time-to-Market and Time-to-Online

One-Stop Shop Total Solution with Optimized Quality and Performance

Key DCBBS Components

AI & Compute Systems

Broadest AI, compute, and storage system portfolio with unmatched customization and liquid cooling

In-Rack Solutions

Complete in-rack integration—cooling distribution units & manifolds, hose kits, networking, power shelves and more

In-Row Solutions

Scalable liquid cooling from 200kW Liquid-to-Air Sidecars to 1.8MW In-Row CDUs, plus SuperCluster solutions

Site Infrastructure Solutions

Site-level cooling infrastructure with water and dry cooling towers, power, and optimized cabling

Management Software Suite

End-to-end software delivering unified infrastructure control, deployment automation, developer tools, and more

Services and Onsite Deployment

Comprehensive professional services from data center design and solution validation to on-site deployment and ongoing support

Supermicro DCBBS includes all critical computing, power, cooling infrastructure, software, and services. The modularized building block solution architecture—from system, to rack, to data center—reduces cost and speeds up time-to-online.

Save Power and Cost with Reduced OPEX and CAPEX

Tested and Validated Before Shipping

Featuring the Industry's Widest Selection of System-Level Building Blocks

4U NVIDIA HGX™ B300 DLC-2

4U NVIDIA HGX B200 DLC

4U AMD MI355X DLC

E3.S All-Flash AI Storage

SuperBlade® Multi-Node

8U NVIDIA HGX B300

10U NVIDIA HGX B200

8U AMD MI350X

4U 90-Bay Scale-Out Storage

FlexTwin™ Multi-Node

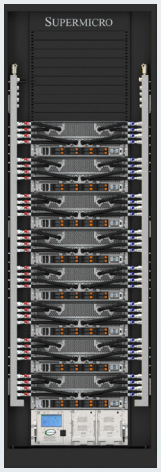
Rack and Cluster-Level Building Blocks

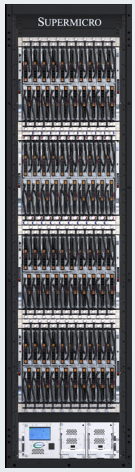
Once systems are defined, they're integrated into rack-level building blocks, the organizational backbone of your cluster. Racks are fully integrated and validated at cluster level with L11 and L12 testing to accelerate time to online and to assure plug-and-play deployment.


Supermicro NVIDIA GB300 NVL72


Liquid-Cooled 4U Supermicro NVIDIA HGX B300 8-GPU Rack

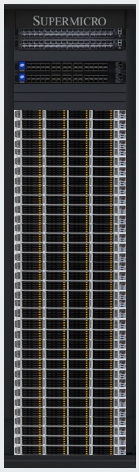

8U Supermicro NVIDIA HGX B300 8-GPU Rack

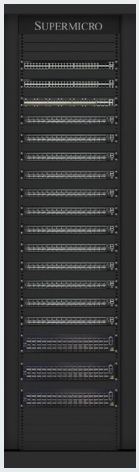

Liquid-Cooled 4U Supermicro NVIDIA HGX B200 8-GPU Rack

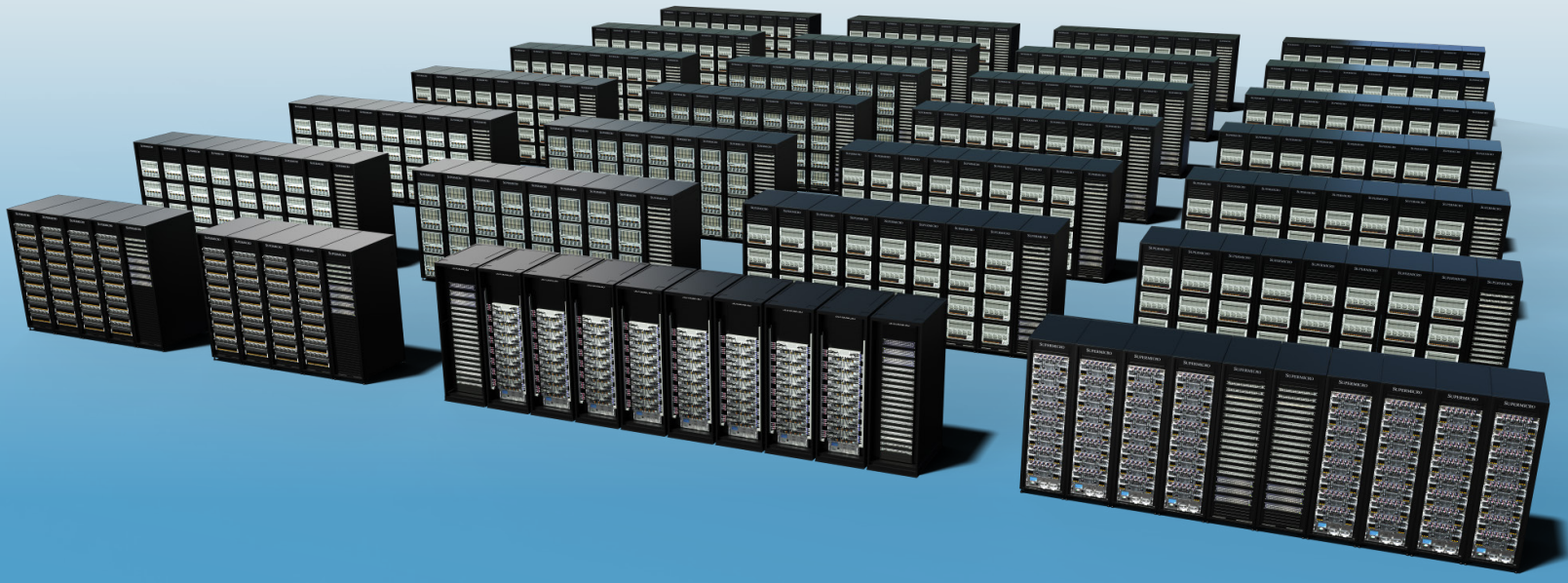

SuperBlade® for AI and HPC with Highest Node Density


FlexTwin™ for Liquid-Cooled HPC at Scale


Object Storage with Supermicro Front and Top-Loading Systems


Petascale All-Flash Systems for High-Performance AI Storage


Networking Rack with Flexible Configurations



To achieve the complex building process of large AI clusters, such as 256 system node clusters, it can be made simpler by dividing it into smaller parts. These "scalable units" consist of groups of systems, interconnected with rail-optimized network topology, that can be further multiplied to achieve the desired cluster size.

AI and Compute Systems

GPU and CPU Systems

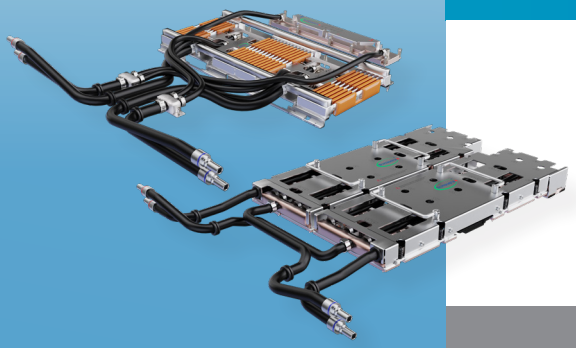
- Broad range of density, efficiency, and scalability-optimized systems
- Latest AI and compute technology from NVIDIA, AMD, and Intel in various form factors designed for diverse workloads

Form Factors	1U to 10U
Cooling Types	Air Cooling, Liquid Cooling

Storage Systems

- Petascale and object storage servers with seamless integration across leading software-defined networking partners
- Maximum throughput and scalability for data-intensive AI workloads

Drive Types	2.5", 3.5", E1.S, E3.S,
Interfaces	NVMe, SAS, SATA



System Building Blocks, Cold Plates

- Direct-to-Chip Liquid Cooling (DLC) cold plates for CPU, GPU, DIMM, VRM, PCIe Switch, PSU, and more
- Allows for heat capture directly from the chip
- Low thermal resistance

CPU Support	Intel Xeon, AMD EPYC
GPU Support	NVIDIA GPUs, AMD GPUs

In-Rack Solutions

In-Rack Coolant Distribution Unit (CDU)

- Supports cooling capacity up to 250 kW
- Features a redundant pump design that ensures uptime
- Includes redundancy control to secure power continuity
- Offers a touch screen and web interface for simplified operation
- Designed for seamless integration with both EIA and OCP rack architectures

Cooling Capacity	Up to 250 kW
Redundancy	EIA: 2N redundant pumps; OCP: N+1 redundant pumps

Cooling Distribution Manifold (CDM)

- CDM distributes coolant to each server in the rack and returns hot coolant to the CDU
- Horizontal and vertical manifold mounting options available
- Integrated in racks for seamless scaling
- DLC-2 vertical CDM saves rack space and increases density

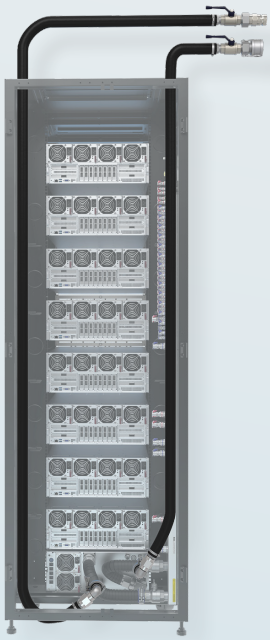
Mounting Types	Vertical, Horizontal

In-Rack Solutions

Rear Door Heat Exchanger (RDHx)

- Supports cooling capacities of 50 kW or 80 kW
- Higher efficiency, intelligent control, and seamless integration with modern AI racks
- Supports quick rack mounting with flexible installation
- High-performance fans for optimal airflow and heat dissipation
- Intelligent anti-condensation system prevents moisture

Cooling Capacity	Up to 80 kW
Redundancy	N+1 Fans



Hose Kit

- Flexible length design to fit different racks and data center placements
- High liquid pressure tolerance with 10-bar
- Ball valves provide excellent sealing which can prevent facility water and coolant evaporation
- Universal camlock for seamless integration with facility piping

Connection Type	1.25" standard CDU

In-Rack Solutions

Power Shelf

- Power solution for systems that require direct current
- Provides up to 33 kW per power shelf
- Available in standard 19″ rack and 21″ (ORv3) rack design

Power Capacity	Up to 33 kW
Form Factor	1U, 19″ or 21″

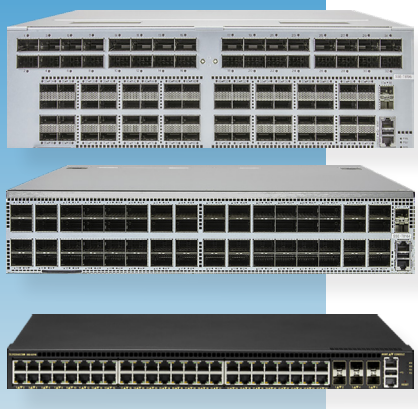
Battery Back-Up Unit (BBU)

- Provides direct current with backup power to ensure safety and continued operation
- Available in standard 19″ rack and 21″ (ORv3) rack design

Power Capacity	Up to 33 kW
Form Factor	2U, 19″ or 21″
Discharge Duration	90 Seconds—33 kW 240 Seconds—24 kW

In-Rack Solutions

Supermicro Networking Switches



- Standard and unique 400G/800G platforms with liquid cooling solutions
- Optimized for AI workloads, high performance storage networks, and enterprise data centers
- Advanced Enterprise SONiC and ONIE support for custom NOS integration
- Open and wide range of validated transceivers and cable options

Standards	Ethernet
Speeds	1 Gb/s to up to 800 Gb/s options

Partner Networking Switches

- Compute fabric InfiniBand switches supporting end-to-end 800 Gb/s
- Compute fabric ethernet switches supporting up to 800 GbE
- Converged network switches for both high-performance storage and in-band management networks

Standards	NVIDIA Spectrum Ethernet NVIDIA Quantum InfiniBand
Speeds	1 Gb/s to up to 800 Gb/s options

In-Row Solutions

Liquid-to-Air Sidecar CDU

- Supports cooling capacity up to 200 kW
- Ensures uptime and enhances system reliability with a redundant pump design and automatic transfer switch
- Easy control through touchscreen and web interface
- Side-mounted CDU for liquid circulation and heat rejection

Cooling Capacity	Up to 200 kW
Redundancy	N+1 redundant pumps

In-Row Coolant Distribution Unit (CDU)

- Supports cooling capacity up to 1.8 MW
- Ensures uptime and enhances system reliability with a redundant pump design and automatic transfer switch
- Provides centralized liquid distribution and flexible row-level deployment
- Easy control through touch screen and web interface

Cooling Capacity	Up to 1.8 MW
Redundancy	N+1 redundant pumps

SuperCluster

- Highly customizable, plug-and-play cluster solutions with multiple racks and integrated networking fabric
- Each system undergoes rigorous L11 or L12 validation testing before shipping, ensuring turnkey deployments

Cooling Types	Air, Liquid Cooling
Compute Network Type	Ethernet or InfiniBand

Site Infrastructure Solutions

Water Cooling Tower

- Supports cooling capacities from 1 MW to 50 MW*
- Adapts to any deployment size with a flexible, modular design
- Maximizes energy efficiency with EC fan design
- Enhances reliability and ensures quieter operation with N+1 submersible pump
- Minimizes risk and maintenance with a closed-loop design

Cooling Capacity	Up to 50 MW or more

Dry Cooler

- Supports cooling capacities from 1 MW to 50 MW*
- Adapts to any deployment size with a flexible, modular design
- Low PUE/WUE cooling solutions tailored for water-constrained regions
- Features adiabatic-assisted air pre-cooling for high-temperature environments
- Minimizes risk and maintenance with a closed-loop design

Cooling Capacity	Up to 50 MW or more

*Note: Higher cooling capacity is possible with adequate site resources.

Site Infrastructure Solutions

Cabling

- Optimized traffic engineering for site scale networking
- Complete cabling design, documentation, and implementation services
- Reduces time-to-online, material costs, and labor while ensuring high-performance data flow

Data Center Generators*

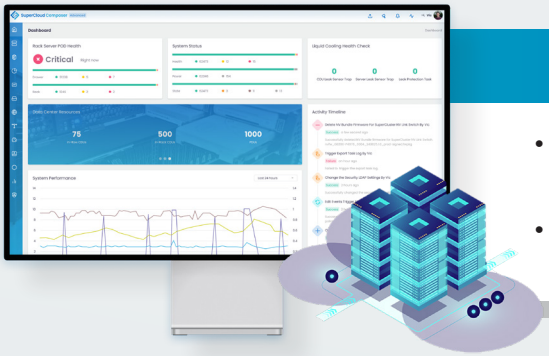
- Standby generators providing fast-start, high step-load acceptance with native paralleling and seamless automatic transfer switch integration
- Build scalable N+1/N+N backup architectures ensuring mission-critical uptime for AI compute environments with unified, predictable operations.

Power Transformer*

- Pad-mount transformers delivering robust, low-impedance power for AI rows and multi-MW blocks
- Configurable for MV primaries and secondaries with smart monitoring and loop-feed options, integrating seamlessly with MV switchgear, UPS/BESS, and prefabricated skids for fast, resilient deployments

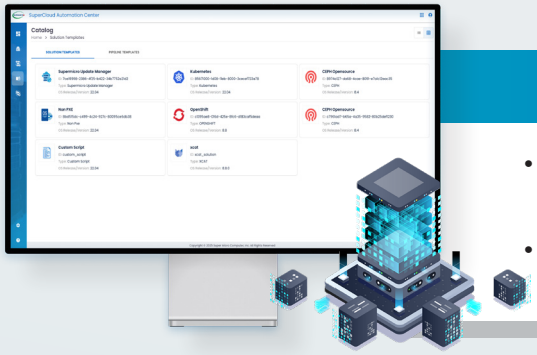
*Note: Available in early 2026

Management Software Suite



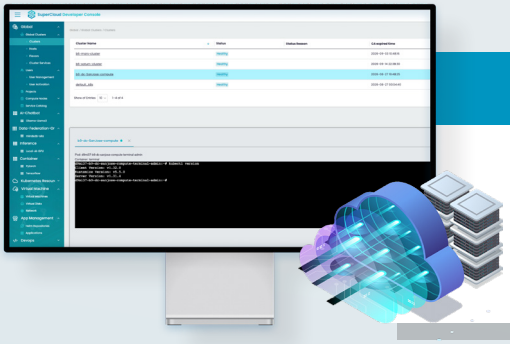
SuperCloud Composer® for DCBBS

- Unified rack-scale and liquid cooling management across servers, networks, PDUs, CDUs, and 3rd-party systems
- Power management, advanced leak detection, protection, and alerts



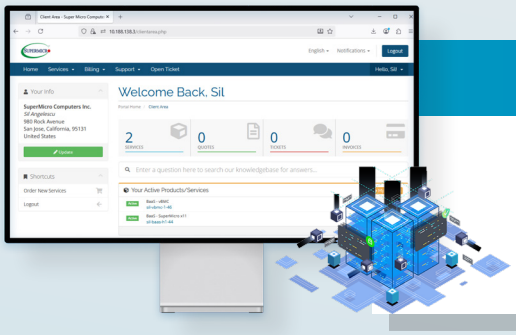
SuperCloud Automation Center

- Pre-built, enterprise-grade automation for data center and edge infrastructure.
- Covers everything from firmware and OS provisioning to Kubernetes and AI workload enablement



SuperCloud Developer Console

- Developer console that brings together GPU as a Service (GPUaaS), Kubernetes, AI pipelines, and data services
- Featuring self-service provisioning, AI-native workflows, and built in observability



SuperCloud Director

- Multi-tenant AI cloud control with integrated bare metal, Ethernet & Infiniband network, and storage management
- Optimizes performance, security and developer agility

Supermicro Services and Support

Planning and Validation

- Carefully planned projects include designs for the data center floorplan, rack layout, port mapping, and more
- Before shipping, Supermicro goes beyond industry standards with testing that includes rack (L11) and cluster-level (L12) validation

Planning	Topology, floorplan, cabling, and more
Validation	Rack (L11) and Cluster (L12)

Onsite Deployment

- End-to-end deployment starts with Supermicro's white-glove delivery service, ensuring the utmost care
- On-site service team members handle racking and stacking, with optional software installation available

Capabilities	Comprehensive, from shipment to online

Onsite Support

- Supermicro ensures a smooth transition after deployment, with full documentation and ongoing support to ensure long-term success
- Global Services provide options for on-site response time as short as 4 hours and parts replacement services

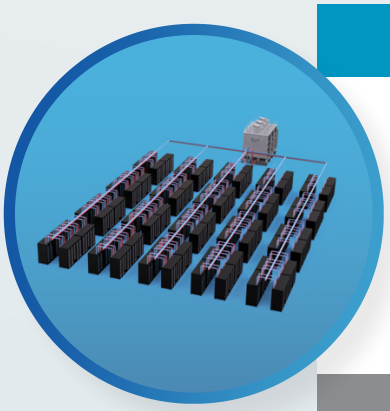
On-Site Response Time	As fast as 4-hours

Supermicro Data Center Solutions and Services

Build Service

- Turn-key solution with architecture design, engineering services, permitting, and full general contracting
- Robust redundancy schemes—including modular blocks and systems, redundant chilled water loops, and piping

Consideration	Real estate, power, water
Inclusion	Mechanical, Electrical, Plumbing, Building infrastructure



Retrofit Service

- Take your existing air-cooled facilities and upgrade to our next generation Direct Liquid Cooling (DLC-2)
- Provides the highest efficiency, density, and energy savings

Qualification	Air to Liquid Cooling (DLC-2)

Data Center Fit-Out Service

- Turn-key solution for building high-performance data center environments
- Designed to meet the demands of modern compute, storage, and networking infrastructures

Consideration	Real estate, power, water

Better

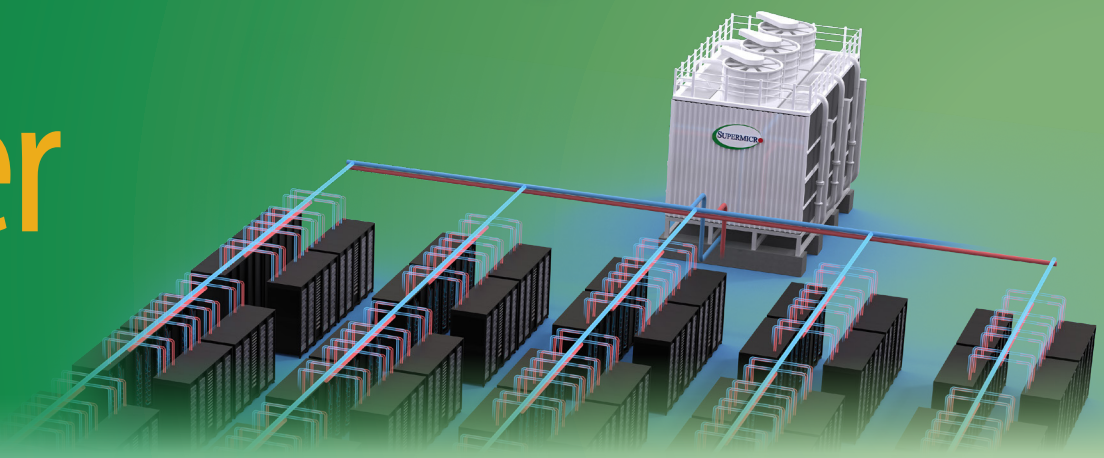
Better Performance Per Watt and Per Dollar

Faster

First-to-Market Innovation with the Highest Performance Server Designs

Greener

Reduced Environmental Impact and Lower TCO



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