



Liquid-Cooling Solutions

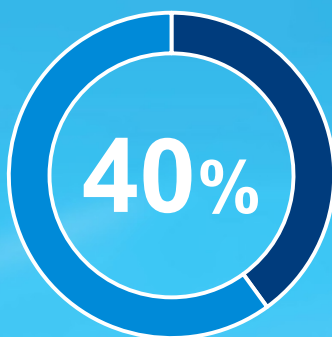
Accelerate Time-to-Deployment with Plug-and-Play
Liquid-Cooled Solutions



✓ 5,000+ Racks Per
Month Capacity

✓ 2000+ Liquid-Cooled
Racks Per Month Capacity

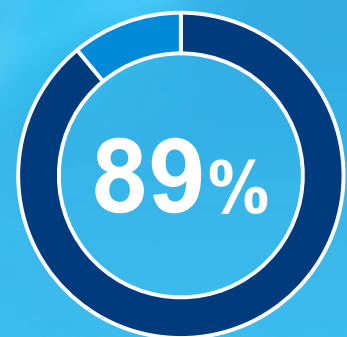
✓ Worldwide
Manufacturing



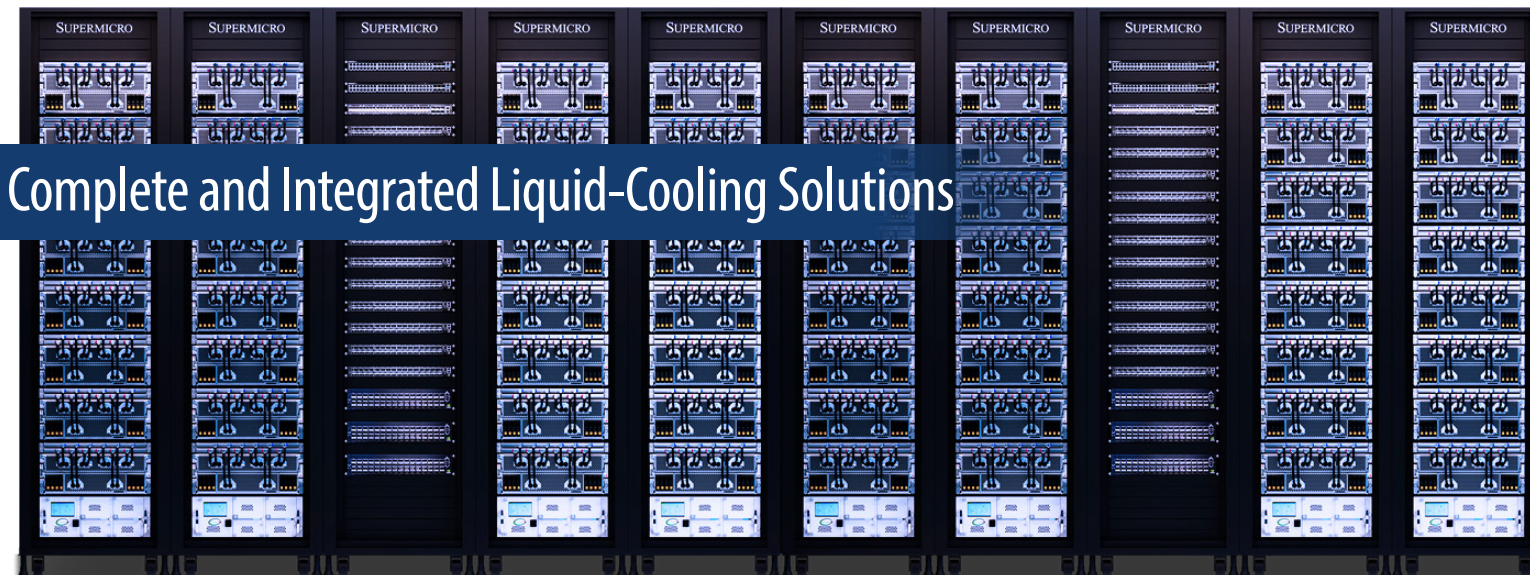
OPEX savings over 5 years
from DLC Optimized Data
Center & DLC GPU Servers*



Reduction in data center
server noise



Reduction in operating costs
through lower power draw at
server



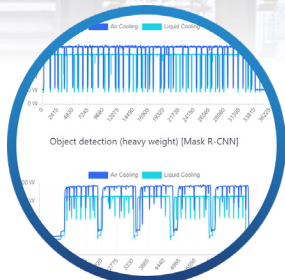
Complete and Integrated Liquid-Cooling Solutions

Make Direct Liquid Cooling Infrastructure easy for customers to deploy and maintain, including the facility-side cooling tower.



Solution Integration

Supermicro's Rack Integration Services leverage application optimized motherboards, chassis, cooling subsystems, networking components, cluster management tools, energy-efficient power supply technologies, and compact enclosures to design and develop customized and enterprise solutions.



Testing and Validation

The Supermicro process involves a rigorous set of test and validation phases that ensure the most optimized and vetted solution for environments where liquid-cooling is required for maximum performance. Supermicro delivers Fully validated and tested solutions at system (L10), rack (L11) and cluster (L12) levels.



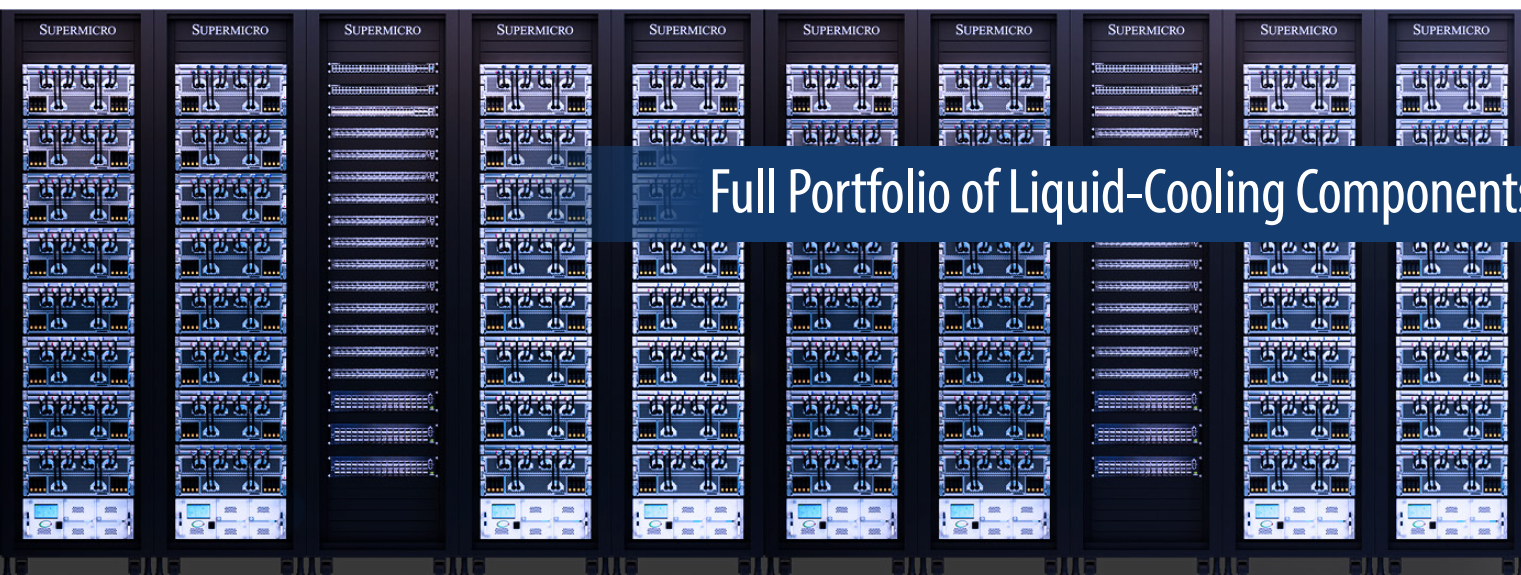
Deployment

Supermicro delivers a complete solution, including servers, racks, networking, liquid-cooling components, and liquid-cooling tower which speeds up time to deployment and results in higher quality of the entire infrastructure. Supermicro offers accelerated lead times based on in-stock inventory with deployment in weeks versus years.



Service Management

The Supermicro SuperCloud Composer's LCCM (Liquid-Cooling Consult Module) is a powerful service that collects vital information on physical assets and sensor data from the CPU/GPU to the CDU to the Cooling Tower, including including pressure, humidity, pump, valve status, and more. CDU data is presented in real-time, enabling operators to monitor operating efficiency of their liquid-cooled environment.



Full Portfolio of Liquid-Cooling Components

The complete rack-scale solution is available directly from Supermicro, reducing lead times and eliminating multiple vendor contact points.



Liquid-Cooled Systems



Coolant Distribution Unit



Coolant Distribution Manifold



Cooling Tower

Features	<ul style="list-style-type: none"> Full portfolio of liquid-cooled systems available across multiple product families and form factors Custom cold plates for wide range of CPUs and GPUs
Product Families with Liquid-Cooling Options	<ul style="list-style-type: none"> AI-Optimized GPU Servers FlexTwin™ SuperBlade® BigTwin® FatTwin® Hyper
Cold Plate Supporting List	<ul style="list-style-type: none"> Latest Intel® Xeon® processors Latest AMD EPYC™ processors Latest NVIDIA GPUs Latest NVIDIA Superchip Latest AMD Instinct™ APUs and GPUs DIMM modules

Features	<ul style="list-style-type: none"> Maximum uptime and redundancy Peak operating 1.002 pPUE
Form Factor	<ul style="list-style-type: none"> 4U Rackmount
Dimension	<ul style="list-style-type: none"> 480mm (W) x 1160.7mm (D) x 177mm (H)
Cooling Capacity	<ul style="list-style-type: none"> 100kW or 250kW Support up to 45°C facility water
Coolant	<ul style="list-style-type: none"> Propylene glycol 25 wt%
Pump	<ul style="list-style-type: none"> 1+1 Redundant, hot-swappable Over 99% uptime
Power	<ul style="list-style-type: none"> 1+1 Redundant, hot-swappable PSUs

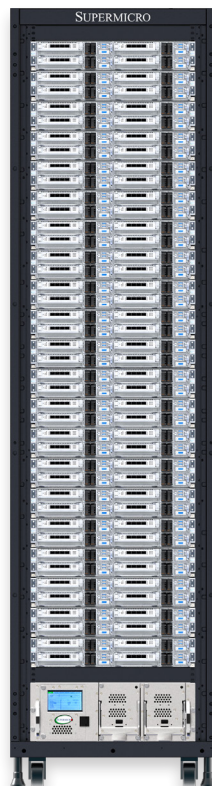
Features	<ul style="list-style-type: none"> Optimized flow distribution
CDM Types	<ul style="list-style-type: none"> Vertical CDM Horizontal CDM
Rack Unit Support	<ul style="list-style-type: none"> Vertical CDM: 42/48/52U Horizontal CDM: 1U
Sensors	<ul style="list-style-type: none"> Liquid level sensor
QDC (Quick Disconnect Coupling)	<ul style="list-style-type: none"> Non-spill design One-handed QDC operation Low liquid flow resistance Color coding

Cooling capacity	<ul style="list-style-type: none"> Available in different sizes with multiple cell configurations up to a maximum of 10MW per unit
Redundancy	<ul style="list-style-type: none"> Each cell can be used separately, enabling cooling tower redundancy
Design	<ul style="list-style-type: none"> Closed-loop design to optimize system reliability
Water Temperature	<ul style="list-style-type: none"> High Temperature Fills (>60°C) – Higher temperature water can be returned to the cooling tower enabling higher efficiency
Power consumption	<ul style="list-style-type: none"> Low power consumption with 6.2kW/MW of cooling

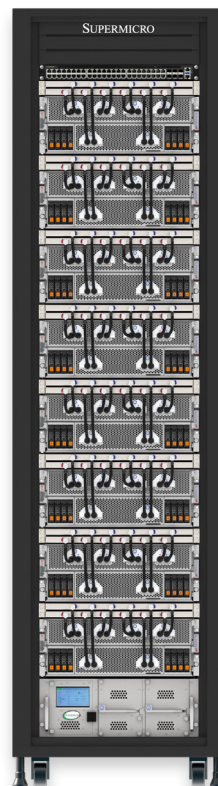
Liquid-Cooled Rack Configurations



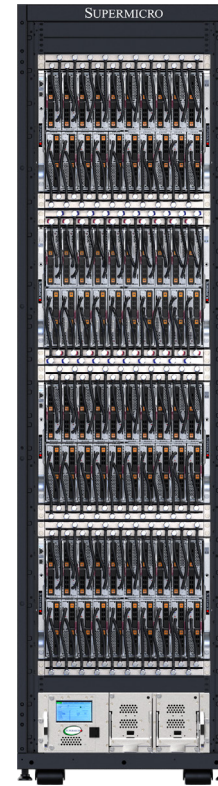
Cloud-Scale Inference Solution



Purpose-Built HPC-at-Scale Solution



GPU Optimized Architecture



Maximum Density Multi-Node Architecture

48U Rack Components

(Note: not all components listed. Configurations may vary)

Product	Qty
1U Server with NVIDIA MGX™ Supership	32
CDU	1
Vertical CDM	1

Product	Qty
FlexTwin™ Server (2U4N)	21
CDU	1
Vertical CDM	1
Switch	1

Product	Qty
4U 8-GPU Server with NVIDIA HGX™ or AMD Instinct™ Architecture	8
CDU	1
Vertical CDM	1
Horizontal CDM	8
Switch	2
In-band & Out-of-band Management Switch	1

Product	Qty
SuperBlade® Enclosure (8U20N)	4
DP SuperBlade® Sled	80
CDU	1
Vertical CDM	1
Horizontal CDM	8
Switch	1

*Additional Liquid-Cooled Rack Configurations Available

www.supermicro.com/liquid-cooling

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