

PRODUCT CATALOG

FEBRUARY 2026 v.1



LiquidCool

SOLUTIONS

TOTAL LIQUID IMMERSION with Directed Flow





LiquidCool Solutions **Zero Pressure** Servers

Integrate results!

Designed for deployment in standard 19" racks*, the LCS **ZPS™** offers maximum scalability and high capacity cooling for applications where cooling with liquid is required.

Key Applications

Data Center, Edge, and AI

Key Features

- ◆ 2U and 3U rack servers
- ◆ Intel® and AMD® platforms available
- ◆ Compatible with standard 19" racks*
- ◆ Connects to existing facilities cooling infrastructure
- ◆ 4kW and 6kW cooling capacity
- ◆ Cooled by patented **TOTAL LIQUID IMMERSION with Directed Flow™ (TIDF)**
- ◆ Single-phase dielectric fluid
- ◆ Quiet operation
- ◆ Water is not consumed
- ◆ PUE 1.04*

* SEE CATALOG FOR SERVER RACK REQUIREMENTS





LiquidCool Solutions **Small Scale Solution**

Server room in a rack!

The LCS SSS™ is a self-contained, all in one IT solution that can be quickly deployed to facility locations with or without server room cooling infrastructure. Reliable, quiet, energy-efficient performance.

Key Applications

Edge and Enterprise

Key Features

- ◆ 3-6 LCS ZPS™
- ◆ 24U rack
- ◆ Intel® and AMD® platforms available
- ◆ Cooled by patented TOTAL LIQUID IMMERSION with Directed Flow™ (TIDF)
- ◆ In-rack touch screen system health and control
- ◆ Quiet <55 dBA
- ◆ Stand-alone IT solution or deploy into existing conventional server room environment



LCS MiniNODE™

Liquid cooling performance + sealed protection

The sealed and fluid filled LCS MiniNODE provides higher performance levels when compared to other industrial PCs that are sealed for protection but are limited in performance due to the lack of air flow. The MiniNODE performs reliably in environments with high levels of air particulates such as dirt, dust, salt, and moisture.

Key Applications

Industrial PC, IIoT, Manufacturing

Key Features

- ◆ Mini ITX
- ◆ Intel® and AMD® platforms available
- ◆ (IP67) sealed system protection
- ◆ Water-proof I/O ports and cables
- ◆ 19VDC power brick (external)
- ◆ Quiet
- ◆ Cooled by patented TOTAL LIQUID IMMERSION with Directed Flow™ (TIDF)





LCS ZPS 5310

3U up to 8 NVMe Solid State drives and 4 PCIe 5.0 x16 slots + up to 2 PCIe 5.0 x16 AIOM slots

Key Applications

Virtualization, Software-defined Storage, AI Inference and Machine Learning,
Cloud Computing, Enterprise Server,

Key Features

- ◆ Dual Socket E (LGA-4677) 5th/4th Gen Intel® Xeon® Scalable processors
- ◆ 32 DIMM slots supporting up to 8TB of memory; RDIMMs up to DDR5-5600;
- ◆ Optional PCIe slot configurations up to 8 PCIe 5.0 x8 or 4 PCIe 5.0 x16 slots with support for up to 4 double-width GPU/Accelerator cards;
- ◆ Flexible networking options with up to 2 AIOM networking slots (OCP NIC 3.0 compatible);
- ◆ 8x NVMe drives; Optional 8x NVMe SSDs; 2x internal M.2 NVMe drive slots; RAID support via storage add-on card;



The image is representative of the server model. The actual appearance may vary depending on the configuration.

Form Factor	3U Rackmount
Processor	Dual Socket E (LGA-4677) 5th Gen Intel® Xeon® / 4th Gen Intel® Xeon® Scalable processors Supports Intel Xeon CPU Max Series with high bandwidth memory (HBM) Up to 64C/128T; Up to 320MB Cache per CPU
GPU	Max GPU Count: Up to 4 double-width GPUs Supported GPU: NVIDIA PCIe: RTX A6000 ADA
System Memory	Slot Count: 32 DIMM slots Max Memory (1DPC): Up to 4TB 5600MT/s ECC DDR5 RDIMM Max Memory (2DPC): Up to 8TB 4400MT/s ECC DDR5 RDIMM
Drive Configuration	Default: Total 8 drives 8 NVMe* SSDs *NVMe support may require additional storage controller and/or cables M.2: 2 M.2 NVMe slots (M-key 2280/22110)
Expansion Slots	PCI-Express (PCIe) Configuration: 4 PCIe 5.0 x16 FH/10.5"L double-width slots 2 PCIe 5.0 x16 AIOM slots (OCP 3.0 compatible) CXL Support: Up to 4 CXL 1.1 x16/x8 devices M.2: 2 M.2 NVMe slots (B+M-key 2280/22110)
On-Board Devices	NVMe: NVMe; RAID 0/1/5/10 support(Intel® VROC RAID key required) Chipset: Intel® C741 Network Connectivity: Via AIOM
Input / Output	LAN: 1 RJ45 1 GbE Dedicated BMC LAN port USB: 2 USB 2.0 ports 2 USB 3.0 ports(Header)
Network	UP TO 4 10GbE



System cooling

LiquidCool Solution's patented **TOTAL LIQUID IMMERSION** with Directed Flow™ (TIDF) technology.

How it works - The LCS ZPS chassis is sealed and filled with **single-phase dielectric fluid**. As waste heat is generated a continuous and regulated flow of cool dielectrical fluid is circulated into the server chassis directed first to the components that produce the most heat. The server's waste heat is absorbed by the dielectric fluid and circulated out of the chassis to an external heat exchanger.

For additional heat exchange options and sizing, see the "**Cooling Infrastructure catalog**".

Single-phase dielectric fluid has **zero Global Warming Potential (GWP)** and can be easily pumped to/from the chassis for servicing and reuse.

Power Supply

2x 2600W Redundant Titanium Level (96%)

System BIOS

BIOS Type: AMI 64MB SPI Flash

Management

*SuperCloud Composer®; Supermicro Server Manager (SSM); Supermicro Update Manager (SUM) Supermicro SuperDoctor® 5 (SD5); Super Diagnostics Offline (SDO); Supermicro Thin-Agent Service (TAS); SuperServer Automation Assistant (SAA) New! *(Requires paid subscription with SM)

PC Health Monitoring

CPU: Monitors for CPU Cores, Chipset Voltages, Memory
Temperature: Monitoring for CPU and chassis environment

Dimensions and Weight

3U Chassis Dimensions - 447.7 x 129.29 x 812.8mm (17.63" x 5.09" x 32")
3U Chassis Wet Weight: approximately 35.9kg (79 lbs)
3U Chassis Dry Weight: approximately 19.05kg (42 lbs)

Dielectric fluid capacity

3U Chassis: 24.6L (6.5 Gallons)

Available Color:

ANSI61 GRAY

Environment

Non-operating: -30°C to 60°C (-22°F to 140°F);
Relative Humidity: 8% to 90% (non-condensing)
Operating (ambient air): 0°C to 60°C (32°F to 140°F);
Relative Humidity: not applicable
*Facilities cooling liquid: 10°C to 40°C (50°F to 104°F)
*(Range may vary depending on the coolant specifications and flow rates.)

Motherboard

SuperMicro X13DEM

Chassis

LCSZP3U LiquidCool Solutions Zero Pressure chassis

Product specifications may change without notice



LCS ZPS 5320

3U 8 NVMe drives and 1 PCIe 5.0 x16 slot

Key Applications

Virtualization, Software-defined Storage, AI Inference and Machine Learning,
Cloud Computing, Enterprise Server

Key Features

- ◆ Dual AMD EPYC™ 9004/9005* Series Processors
(*AMD EPYC™ 9005 series drop-in support requires board revision 2.xx)
- ◆ Support up to DDR5 24 DIMM slots (1DPC), speed up to 6400MT/s
- ◆ Optional PCIe slot configurations up to 8 PCIe 5.0 x8 or 4 PCIe 5.0 x16 slots
- ◆ Flexible networking options with 1 AIOM networking slot (OCP NIC 3.0 compatible)
- ◆ 8 NVMe Solid State drives
2 M.2 PCIe 3.0 NVMe slots;



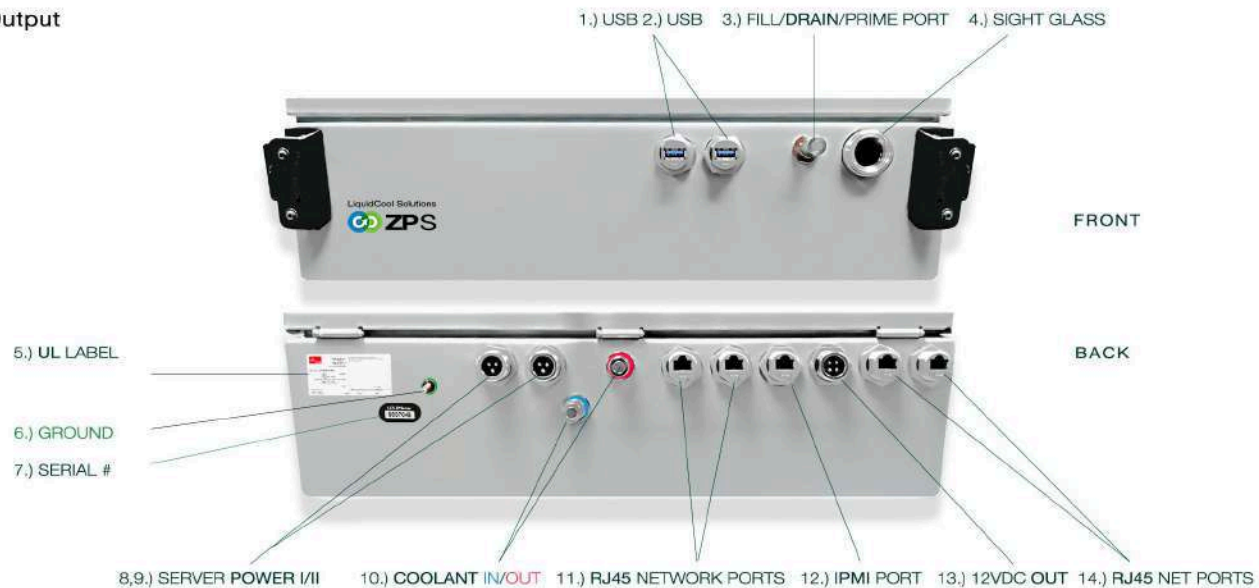
The image is representative of the server model. The actual appearance may vary depending on the configuration.

Form Factor	3U rackmount
Processor	Dual processor(s) AMD EPYC™ 9004/9005 Series Processors (* AMD EPYC™ 9005 Series drop-in support requires board revision 2.x) Up to 320C/640T
GPU	Max GPU Count: Up to 3 double-width GPUs Supported GPU: NVIDIA PCIe: RTX A6000 ADA
System Memory	Slot Count: 24 DIMM slots Max Memory (1DPC): Up to 6TB 4800MT/s ECC DDR5 RDIMM (AMD EPYC™ 9004 Series Processor, MB R1.x/R2.0/R2.01) Max Memory (1DPC): Up to 6TB 6000MT/s ECC DDR5 RDIMM Max Memory (1DPC): Up to 6TB 6400MT/s ECC DDR5 RDIMM
Drive Configuration	Default: Total 8 drives 8 NVMe*/ Solid State drives (*NVMe support may require additional storage controller and/or cables) M.2: 2 M.2 PCIe 3.0 x4 NVMe slots (M-key 2280/22110)
Expansion Slots	Default: additional unlisted options are available 1 PCIe 5.0 x16 AIOM slot (OCP 3.0 compatible) Option A* 1 PCIe 5.0 x16 (in x16) FHFL double-width slot 1 PCIe 5.0 x16 AIOM slot (OCP 3.0 compatible) Option B* 2 PCIe 5.0 x8 (in x16) FHFL slots 1 PCIe 5.0 x16 AIOM slot (OCP 3.0 compatible)
On-Board Devices Chipset:	System on Chip Network Connectivity: Via AIOM
Input / Output	LAN: 1 RJ45 1 GbE Dedicated BMC LAN port USB: 2 USB 3.0 ports
Network	UP TO 4 10GbE

Product specifications may change without notice



Input / Output



System Cooling

LiquidCool Solution's patented **TOTAL LIQUID IMMERSION** with Directed Flow™ (TIDF) technology.

How it works - The LCS ZPS chassis is sealed and filled with **single-phase dielectric fluid**. As waste heat is generated a continuous and regulated flow of cool dielectrical fluid is circulated into the server chassis directed first to the components that produce the most heat. The server's waste heat is absorbed by the dielectric fluid and circulated out of the chassis to an external heat exchanger.

For additional heat exchange options and sizing, see the "[Cooling Infrastructure catalog](#)".

Single-phase dielectric fluid has **zero Global Warming Potential (GWP)** and can be easily pumped to/from the chassis for servicing and reuse.

Power Supply

2x 1600W Redundant (1 + 1) Titanium Level (96%) power supplies

System BIOS

BIOS Type: AMI 32MB SPI Flash EEPROM
BIOS Features: ACPI 6.4 UEFI 2.8

Management

*SuperCloud Composer®; Supermicro Server Manager (SSM); Supermicro Update Manager (SUM); Supermicro SuperDoctor® 5 (SD5); Super Diagnostics Offline (SDO); Supermicro Thin-Agent Service (TAS); SuperServer Automation Assistant (SAA) New! (*paid subscription required)

PC Health Monitoring

System health monitor
Temperature: Monitoring for CPU and chassis environment

Dimensions and Weight

3U Chassis Dimensions - 447.7 x 129.29 x 812.8mm (17.63" x 5.09" x 32")
3U Chassis Wet Weight: approximately 35.9kg (79 lbs)
3U Chassis Dry Weight: approximately 19.05kg (42 lbs)

Dielectric fluid capacity

3U Chassis: 24.6L (6.5 Gallons)

Available Color:

ANSI61 GRAY

Environment

Non-operating: -30°C to 60°C (-22°F to 140°F);
Relative Humidity: 8% to 90% (non-condensing)
Operating (ambient air): 0°C to 60°C (32°F to 140°F);
Relative Humidity: not applicable
*Facilities cooling liquid: 10°C to 40°C (50°F to 104°F)
*(Range may vary depending on the coolant specifications and flow rates.)

Motherboard

SuperMicro H13DSH

Chassis

LCSZP3U LiquidCool Solutions Zero Pressure chassis

Product specifications may change without notice



LCS ZPS 3210

2U with 8 NVMe Solid State drives and 3 PCIe 5.0 x16 + 1 PCIe 5.0 x16 AIOM slot

Key Applications

Virtualization, Software-defined Storage, Cloud Computing, Enterprise Server

Key Features

- ◆ Dual Socket E (LGA-4677) 5th/4th Gen Intel® Xeon® Scalable processors;
- ◆ 32 DIMM slots supporting up to 8TB of memory; RDIMMs up to DDR5-5600;
- ◆ 3 PCIe 5.0 x16 slots
- ◆ Flexible networking options with 1 AIOM networking slot
- ◆ 8 NVMe Solid State drives, 2x internal M.2 NVMe drive slots
- ◆ RAID support via storage add-on card;



The image is representative of the server model. The actual appearance may vary depending on the configuration.

Form Factor	2U Rackmount
Processor	Dual Socket E (LGA-4677) 5th Gen Intel® Xeon® / 4th Gen Intel® Xeon® Scalable processors Supports Intel Xeon CPU Max Series with high bandwidth memory (HBM) Up to 64C/128T; Up to 320MB Cache per CPU
System Memory	Slot Count: 32 DIMM slots Max Memory (1DPC): Up to 4TB 5600MT/s ECC DDR5 RDIMM Max Memory (2DPC): Up to 8TB 4400MT/s ECC DDR5 RDIMM
Drive Configuration	Default: Total 8 drives 8 NVMe*/SSDs (*NVMe support may require additional storage controller and/or cables, M.2: 2 M.2 NVMe slots (M-key 2280/22110)
Expansion Slots	PCI-Express (PCIe) Configuration: Default 1 PCIe 5.0 x16 FHHL slot 2 PCIe 5.0 x16 FH/10.5"L slots 1 PCIe 5.0 x16 AIOM slot (OCP 3.0 compatible) M.2: 2 M.2 NVMe/SATA slots (B+M-key 2280/22110)
On-Board Devices	NVMe: NVMe; RAID 0/1/5/10 support(Intel® VROC RAID key required) Chipset: Intel® C741 Network Connectivity: Via AIOM
Input / Output	LAN: 1 RJ45 1 GbE Dedicated BMC LAN port 2 USB 3.0 port(front)
Network	UP TO 4 10GbE



Input / Output



System Cooling

LiquidCool Solution's patented **TOTAL LIQUID IMMERSION** with Directed Flow™ (TIDF) technology.

How it works - The LCS ZPS chassis is sealed and filled with **single-phase dielectric fluid**. As waste heat is generated a continuous and regulated flow of cool dielectrical fluid is circulated into the server chassis directed first to the components that produce the most heat. The server's waste heat is absorbed by the dielectric fluid and circulated out of the chassis to an external heat exchanger.

For additional heat exchange options and sizing, see the "[Cooling Infrastructure catalog](#)".

Single-phase dielectric fluid has **zero Global Warming Potential (GWP)** and can be easily pumped to/from the chassis for servicing and reuse.

Power Supply

2x 1200W Redundant Titanium Level (96%)

System BIOS

BIOS Type: AMI 64MB SPI Flash

Management

*SuperCloud Composer®; Supermicro Server Manager (SSM); Supermicro Update Manager (SUM) Supermicro SuperDoctor® 5 (SD5); Super Diagnostics Offline (SDO); Supermicro Thin-Agent Service (TAS); SuperServer Automation Assistant (SAA) New! *(Requires paid subscription with SM)

PC Health Monitoring

CPU: Monitors for CPU Cores, Chipset Voltages, Memory
Temperature: Monitoring for CPU and chassis environment

Dimensions and Weight

2U Chassis Dimensions - 447.7 x 84.1 x 812.8mm (17.63" x 3.31" x 32")
2U Chassis Wet Weight: approximately 25.9kg (57 lbs)
2U Chassis Dry Weight: approximately 13.6kg (30 lbs)

Dielectric fluid capacity

2U Chassis: 18.17L (4.8 Gallons)

Available Color

ANSI61 GRAY

Environment

Non-operating: -30°C to 60°C (-22°F to 140°F);
Relative Humidity: 8% to 90% (non-condensing)
Operating (ambient air): 0°C to 60°C (32°F to 140°F);
Relative Humidity: not applicable
*Facilities cooling liquid: 10°C to 40°C (50°F to 104°F)
*(The range may vary depending on the coolant specifications and flow rates.)

Motherboard

SuperMicro X13DEM

Chassis

LCSZP2U LiquidCool Solutions Zero Pressure chassis



LCS ZPS 3220

2U 8 NVMe drives and 3 PCIe 5.0 x16 slots

Key Applications

Virtualization, Software-defined Storage, Cloud Computing, Enterprise Server

Key Features

- Dual AMD EPYC™ 9004/9005* Series Processors
(*AMD EPYC™ 9005 series drop-in support requires board revision 2.xx)
- Support up to 24 DDR5 DIMM slots (1DPC), speed up to 6400MT/s
- 2 PCIe 5.0 x16 FHFL slots, 1 PCIe 5.0 x16 FHHLslot
- Flexible networking options with 1 AIOM slot (OCP NIC 3.0 compatible);
- 8 NVMe Solid State drives, optional: up to 4 additional NVMe drives
2 M.2 PCIe 3.0 NVMe slots;



The image is representative of the server model. The actual appearance may vary depending on the configuration.

Form Factor	2U rackmount
Processor	Dual processor(s) AMD EPYC™ 9004/9005 Series Processors (* AMD EPYC™ 9005 Series drop-in support requires board revision 2.x) Up to 320C/640T
System Memory	Slot Count: 24 DIMM slots Max Memory (1DPC): Up to 6TB 4800MT/s ECC DDR5 RDIMM (AMD EPYC™ 9004 Series Processor, MB R1.x/R2.0/R2.01) Max Memory (1DPC): Up to 6TB 6000MT/s ECC DDR5 RDIMM Max Memory (1DPC): Up to 6TB 6400MT/s ECC DDR5 RDIMM
Drive Configuration	Default: Total 8 drives 8 NVMe* Solid State drives (*NVMe support may require additional storage controller and/or cables) M.2: 2 M.2 PCIe 3.0 x4 NVMe slots (M-key 2280/22110)
Expansion Slots	Default 1 PCIe 5.0 x16 FHHL slot 2 PCIe 5.0 x16 FHFL slots 1 PCIe 5.0 x16 AIOM slot (OCP 3.0 compatible)
On-Board Devices Chipset:	System on Chip Network Connectivity: Via AIOM
Input / Output	LAN: 1 RJ45 1 GbE Dedicated BMC LAN port USB: 2 USB 3.0 ports
Network	UP TO 4 10GbE



Input / Output



System Cooling

LiquidCool Solution's patented **TOTAL LIQUID IMMERSION** with Directed Flow™ (TIDF) technology.

How it works - The LCS ZPS chassis is sealed and filled with **single-phase dielectric fluid**. As waste heat is generated a continuous and regulated flow of cool dielectrical fluid is circulated into the server chassis directed first to the components that produce the most heat. The server's waste heat is absorbed by the dielectric fluid and circulated out of the chassis to an external heat exchanger.

For additional heat exchange options and sizing, see the "[Cooling Infrastructure catalog](#)".

Single-phase dielectric fluid has **zero Global Warming Potential (GWP)** and can be easily pumped to/from the chassis for servicing and reuse.

Power Supply

2x 1200W Redundant (1 + 1) Titanium Level (96%) power supplies

System BIOS

BIOS Type: AMI 32MB SPI Flash EEPROM
BIOS Features: ACPI 6.4 UEFI 2.8

Management

*SuperCloud Composer®; Supermicro Server Manager (SSM); Supermicro Update Manager (SUM); Supermicro SuperDoctor® 5 (SD5); Super Diagnostics Offline (SDO); Supermicro Thin-Agent Service (TAS); SuperServer Automation Assistant (SAA) New! (*paid subscription required)

PC Health Monitoring

System health monitor
Temperature: Monitoring for CPU and chassis environment

Dimensions and Weight

2U Chassis Dimensions - 447.7 x 84.1 x 812.8mm (17.63" x 3.31" x 32")
2U Chassis Wet Weight: approximately 25.9kg (57 lbs)
2U Chassis Dry Weight: approximately 13.6kg (30 lbs)

Dielectric fluid capacity

2U Chassis: 18.17L (4.8 Gallons)

Available Color:

ANSI61 GRAY

Environment

Non-operating: -30°C to 60°C (-22°F to 140°F);
Relative Humidity: 8% to 90% (non-condensing)
Operating (ambient air): 0°C to 60°C (32°F to 140°F);
Relative Humidity: not applicable
*Facilities cooling liquid: 10°C to 40°C (50°F to 104°F)
*(Range may vary depending on the coolant specifications and flow rates.)

Motherboard

SuperMicro H13DSH

Chassis

LCSZP2U LiquidCool Solutions Zero Pressure chassis

Product specifications may change without notice



LCS ZPS 1212

2U with 8 NVMe and 3 PCIe 5.0 slots

Key Applications

Virtualization, Cloud Computing, Data Center Optimized, Database/Storage

Key Features

- ◆ Single Socket E (LGA-4677) 4th/5th Gen Intel® Xeon® Scalable processors. Up to 300W TDP
- ◆ Intel® C741 Chipset
- ◆ 8 DIMMs; Supports 3DS DDR5 RDIMM. Up to 5600 MHz
- ◆ Onboard 1G LAN ports (Intel® i210), 1 dedicated IPMI LAN
- ◆ 10x hybrid Gen5 NVMe



The image is representative of the server model. The actual appearance may vary depending on the configuration.

Form Factor	2U
Processor	Single Socket E (LGA-4677) 5th Gen Intel® Xeon® / 4th Gen Intel® Xeon® Scalable processors Up to 52C/104T; Up to 300MB Cache
System Memory	Slot Count: 8 DIMM slots/8 Channels Max Memory (1DPC): Up to 2TB 5600MT/s ECC DDR5 RDIMM
Drive configuration	8 NVMe* *NVMe support may require additional storage controller and/or cables) M.2: 1 M.2 PCIe 3.0 x2 NVMe slot (M-key 2280/22110)
Expansion Slots	Default 2 PCIe 5.0 x16 FHFL slots 1 PCIe 5.0 x8 (in x16) LP slot
On-Board Devices	NVMe: NVMe; RAID 0/1/5/10 support(Intel® VROC RAID key required) Chipset: Intel® C741 Network Connectivity: 2 RJ45 1GbE with Intel® I210
Input / Output	LAN: 2 RJ45 1 GbE LAN ports 1 RJ45 1 GbE Dedicated BMC LAN port (IPMI shared on LAN port 1) 2 USB 3.2 Gen1 Type-A ports(front) TPM: 1 TPM header
Network	UP TO 4 10GbE

**System Cooling**

LiquidCool Solution's patented **TOTAL LIQUID IMMERSION** with Directed Flow™ (TIDF) technology.

How it works - The LCS ZPS chassis is sealed and filled with single-phase dielectric fluid. As waste heat is generated a continuous and regulated flow of cool dielectrical fluid is circulated into the server chassis directed first to the components that produce the most heat. The server's waste heat is absorbed by the dielectric fluid and circulated out of the chassis to an external heat exchanger.

For additional heat exchange options and sizing, see the "Cooling Infrastructure catalog".

Single-phase dielectric fluid has **zero Global Warming Potential (GWP)** and can be easily pumped to/from the chassis for servicing and reuse.

Power Supply

2x 860W Redundant (1 + 1) Titanium Level (96%) power supplies

System BIOS

BIOS Type: AMI 32MB SPI Flash EEPROM

Management

*SuperCloud Composer®; Supermicro Server Manager (SSM); Supermicro Update Manager (SUM) Supermicro SuperDoctor® 5 (SD5); Super Diagnostics Offline (SDO); Supermicro Thin-Agent Service (TAS); SuperServer Automation Assistant (SAA) New! *(Requires paid subscription with SM)

PC Health Monitoring

CPU: Monitors for CPU Cores, Chipset Voltages, Memory
Temperature: Monitoring for CPU and chassis environment

Dimensions and Weight

2U Chassis Dimensions - 447.7 x 84.1 x 812.8mm (17.63" x 3.31" x 32")
2U Chassis Wet Weight: approximately 25.9kg (57 lbs)
2U Chassis Dry Weight: approximately 13.6kg (30 lbs)

Available Color:

ANSI61 GRAY

Environment

Non-operating: -30°C to 60°C (-22°F to 140°F);
Relative Humidity: 8% to 90% (non-condensing)
Operating (ambient air): 0°C to 60°C (32°F to 140°F);
Relative Humidity: not applicable
*Facilities cooling liquid: 10°C to 40°C (50°F to 104°F)
*(The range may vary depending on the coolant specifications and flow rates.)

Motherboard

SuperMicro X13SEW-F



LCS ZPS 1220

2U 8 NVMe and 3 PCIe 5.0 x16 slots

Key Applications

Virtualization, Data Center Optimized, Firewall Applications, Database/Storage, Edge/Cloud Computing Services

Key Features

- ◆ Single Socket AMD EPYC™ 8004 Series Processor
- ◆ 6 DIMM slots, DDR5-4800MHz memory, support up to 768GB
- ◆ 2 PCIe 5.0 x16 FHFL; 1 PCIe 5.0 x16 LP
- ◆ Single dedicated IPMI LAN, dual 10GbE BaseT LAN ports via Broadcom BCM57416 Controller
- ◆ 8 NVMe drives



The image is representative of the server model. The actual appearance may vary depending on the configuration.

Form Factor	2U
Processor	Single processor(s) AMD EPYC™ 8004 Series Processor Up to 64C/128T
System Memory	Slot Count: 6 DIMM slots Max Memory (1DPC): Up to 768GB 4800MT/s ECC DDR5 RDIMM
Drive Configuration	Default: Total drives 8 8 NVMe* (*NVMe support may require additional optional storage controller and/or cables) M.2: 2 M.2 PCIe 3.0 x4 NVMe slots (M-key 2280/22110)
Expansion Slots	Default 2 PCIe 5.0 x16 FHFL slots 1 PCIe 5.0 x16 LP slot
On-Board Devices	Chipset: System on Chip Network Connectivity: 2 RJ45 10GBASE-T with Broadcom® BCM57416
Input / Output	LAN: 1 RJ45 1 GbE Dedicated BMC LAN port 2 RJ45 10 GBASE-T LAN ports USB: 2 ports(front) TPM: 1 TPM Onboard/port 80
Network	UP TO 4 10GbE



Input / Output



System Cooling

LiquidCool Solution's patented **TOTAL LIQUID IMMERSION** with Directed Flow™ (TIDF) technology.

How it works - The LCS ZPS chassis is sealed and filled with single-phase dielectric fluid. As waste heat is generated a continuous and regulated flow of cool dielectrical fluid is circulated into the server chassis directed first to the components that produce the most heat. The server's waste heat is absorbed by the dielectric fluid and circulated out of the chassis to an external heat exchanger.

For additional heat exchange options and sizing, see the "[Cooling Infrastructure catalog](#)".

Single-phase dielectric fluid has **zero Global Warming Potential (GWP)** and can be easily pumped to/from the chassis for servicing and reuse.

Power Supply

2x 860W Redundant (1 + 1) Titanium Level (96%) power supplies

System BIOS

BIOS Type: AMI 32MB SPI Flash EEPROM

Management

*SuperCloud Composer®; Supermicro Server Manager (SSM); Supermicro Update Manager (SUM) Supermicro SuperDoctor® 5 (SD5); Super Diagnostics Offline (SDO); Supermicro Thin-Agent Service (TAS); SuperServer Automation Assistant (SAA) New! *(Requires paid subscription with SM)

PC Health Monitoring

Status monitor for speed control
Temperature: Monitoring for CPU and chassis environment

Dimensions and Weight

2U Chassis Dimensions - 447.7 x 84.1 x 812.8mm (17.63" x 3.31" x 32")
2U Chassis Wet Weight: approximately 25.9kg (57 lbs)
2U Chassis Dry Weight: approximately 13.6kg (30 lbs)

Dielectric fluid capacity

2U Chassis: 18.17L (4.8 Gallons)

Available Color

ANSI61 GRAY

Operating Environment

Non-operating: -30°C to 60°C (-22°F to 140°F);
Relative Humidity: 8% to 90% (non-condensing)
Operating (ambient air): 0°C to 60°C (32°F to 140°F);
Relative Humidity: not applicable
*Facilities cooling liquid: 10°C to 40°C (50°F to 104°F)
*(The range may vary depending on the coolant specifications and flow rates.)

Motherboard

SuperMicro H13SVW-NT

Chassis

LCSZP2U LiquidCool Solutions Zero Pressure chassis



LCS ZPS 1210

2U with 8 NVMe and 3 PCIe 4.0 x16 slots

Key Applications

Virtualization, Cloud Computing, Enterprise Server,
Data Center Optimized, Database Processing and Storage,

Key Features

- ◆ Single Socket P+ (LGA-4189) 3rd Gen Intel® Xeon® Scalable processors. Up to 270W TDP;
- ◆ 8 DIMMs; Supports 3DS DDR4-3200: RDIMM/LRDIMM/Intel® DCPMM;0
- ◆ 2 PCIe 4.0 x16 (FHFL) slots, 1 PCIe 4.0 x16 (LP) slot;
- ◆ Intel® Ethernet Controller X550 2x 10GbE RJ45
- ◆ 8 NVMe Solid State drives
Onboard 1x NVMe M.2;



The image is representative of the server model. The actual appearance may vary depending on the configuration.

Form Factor	2U Rackmount
Processor	Single Socket P+ (LGA-4189) 3rd Gen Intel® Xeon® Scalable processors Up to 40C/80T; Up to 60MB Cache
System Memory	Slot Count: 8 DIMM slots Max Memory (1DPC): Up to 2TB 3200MT/s ECC DDR4 RDIMM/LRDIMM Supports Intel® Optane™ persistent memory 200 series
Drive Configuration	8 PCIe 4.0 NVMe* (*NVMe support may require additional storage controller and/or cables) M.2: 1 M.2 PCIe 3.0 x4 NVMe slot (M-key 2280/22110)
Expansion Slots	Default 2 PCIe 4.0 x16 FHFLslots 1 PCIe 4.0 x16 LP slots
Onboard devices	NVMe: NVMe; RAID 0/1/5/10 support(Intel® VROC RAID key required) Chipset: Intel® C621A Network Connectivity: 2 RJ45 10GbE with Intel® X550
Input / Output	LAN: 2 RJ45 10 GbE LAN ports 1 RJ45 1 GbE Dedicated BMC LAN port (IPMI shared on LAN port 1) USB: 2 USB 3.0 ports (front) DOM: 2 SuperDOM (Disk on Module) portswith built-in power TPM: 1 TPM header
Network	UP TO 4 10GbE



Input / Output



System Cooling

LiquidCool Solution's patented **TOTAL LIQUID IMMERSION** with Directed Flow™ (TIDF) technology.

How it works - The LCS ZPS chassis is sealed and filled with **single-phase dielectric fluid**. As waste heat is generated a continuous and regulated flow of cool dielectrical fluid is circulated into the server chassis directed first to the components that produce the most heat. The server's waste heat is absorbed by the dielectric fluid and circulated out of the chassis to an external heat exchanger.

For additional heat exchange options and sizing, see the "Cooling Infrastructure catalog".

Single-phase dielectric fluid has **zero Global Warming Potential (GWP)** and can be easily pumped to/from the chassis for servicing and reuse.

Power Supply

2x 750W Redundant (1 + 1) Platinum Level (94%) power supplies

System BIOS

BIOS Type: AMI 32MB SPI Flash EEPROM

Management

*SuperCloud Composer®; Supermicro Server Manager (SSM); Supermicro Update Manager (SUM) Supermicro SuperDoctor® 5 (SD5); Super Diagnostics Offline (SDO); Supermicro Thin-Agent Service (TAS); SuperServer Automation Assistant (SAA) New! *(Requires paid subscription with SM)

PC Health Monitoring

CPU: Monitors for CPU Cores, Chipset Voltages, Memory
Temperature: Monitoring for CPU and chassis environment

Dimensions and Weight

2U Chassis Dimensions - 447.7 x 84.1 x 812.8mm (17.63" x 3.31" x 32")
2U Chassis Wet Weight: approximately 25.9kg (57 lbs)
2U Chassis Dry Weight: approximately 13.6kg (30 lbs)

Dielectric fluid capacity

2U Chassis: 18.17L (4.8 Gallons)

Available Color:

ANSI61 GRAY

Operating Temperature:

Non-operating: -30°C to 60°C (-22°F to 140°F);
Relative Humidity: 8% to 90% (non-condensing)
Operating (ambient air): 0°C to 60°C (32°F to 140°F);
Relative Humidity: not applicable
*Facilities cooling liquid: 10°C to 40°C (50°F to 104°F)
*(The range may vary depending on the coolant specifications and flow rates.)

Motherboard

SuperMicro X12SPW-TF

Chassis

LCSZP2U LiquidCool Solutions Zero Pressure chassis

Product specifications may change without notice



MHA 6-NODE

Manifold, Heat Exchange Assembly

Connects 6 LCS Servers to the facilities-side liquid cooling loop. Designed to meet the cooling requirements of the LCS ZPS 1210, 1212, 1220, 3210, and 3220.



LiquidCool
SOLUTIONS

#LCSTMHA6



Parker® 800 Series hose | 82 Series Push-Lok



SWEP® Heat Exchange



STAUBLI® Quick Connects and Couplers



Rack configuration example:

18 2U LCS ZPS / 42U rack

3 MHA 6-NODE



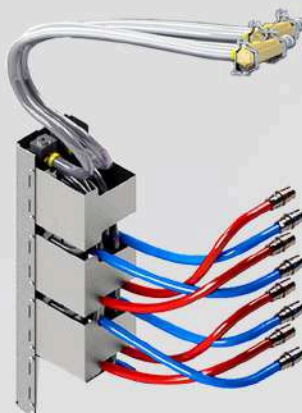
All trademarks are the property of their respective owners



MHA 4-NODE

Manifold, Heat Exchange Assembly

Connects 4 LCS Servers to the facilities-side liquid cooling loop. Designed to meet the cooling requirements of the LCS ZPS 5310 and 5320.



LiquidCool
SOLUTIONS

#LCSMHA4



Parker® 800 Series hose | 82 Series Push-Lok



SWEP® Heat Exchange



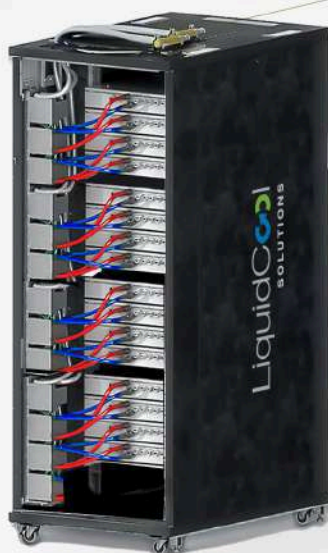
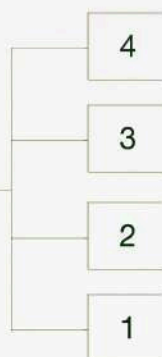
STAUBLI® Quick Connects and Couplers



Rack configuration example:

16 LCS servers / 48U rack

4 MHA 4-NODE



Top-of-rack manifold

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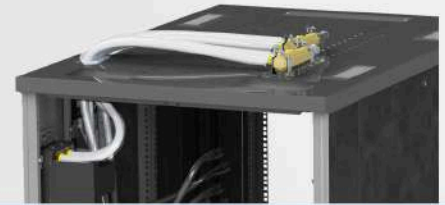


TRM

Top-of-rack manifold set

1 TRM set required per rack

#LCSTRM01



MHA 6-NODE

Manifold, Heat Exchange Assembly

Designed to meet the cooling requirements of the LCS ZPS 1210, 1212, 1220, 3210, and 3220.

#LCSMHA6



MHA 4-NODE

Manifold, Heat Exchange Assembly

Designed to meet the cooling requirements of the LCS ZPS 5310 and 5320.

#LCSMHA4



HOSE SETS

Connects TRM to the MHAs

Hose sets connect the Top-of-rack manifold (TRM) to the MHA 6 and 4-NODE Heat Exchange Assemblies. Hose set 0 reaches from the bottom of a 48U rack to the TRM. 42U rack with a single MHA 6-NODE installed in the bottom shown.

Choose part# (LCS 4) 0,1,2,3* for 4-NODE Hose Set
Choose part# (LCS 6) 0,1,2,3*, for 6-NODE Hose Set

*Dependent on rack size 42U OR 48U

HOSE SET 3
#LCSHS3

HOSE SET 2
#LCSHS2

HOSE SET 1
#LCSHS1

HOSE SET 0
#LCSHS0



**CUSTOMIZE TO MEET YOUR APPLICATION
REQUIREMENTS CONTACT US AT 866 530 0101
OR AT INFO@LIQUIDCOOLSOLUTIONS.COM**

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Racks

Recommended Server Racks

24U
(AR3104) APC NetShelter SX 24U
600mm Wide x 1070mm

42U
(AR2580) APC NetShelter SV 42U
Rack Cabinet, 800mm Wide x 1200mm

48U
(AR2587) APC NetShelter SV 48U 800mm
Wide 1200mm Deep Enclosure with Sides Black



Rails

LCSP0074540

Supernano MCP-290-00172-0N 2U non-tip rail set,
quick release, default for 2,3U 17.6"W, 26.5"-33.5" D



Mounting "Ears"

LCSP0047419

2U, 3U, server rack mounting ear assembly
MOUNT, CHASSIS, RACK EAR



Fill, Prime, Drain Kit*

LCSFILL01

1. FILL HOSE
2. PRIME HOSE
3. SIPHON
4. PUMP
5. POWER SUPPLY(PUMP)
6. 7 GALLON BUCKET
7. FILTER



*SEE INSTALLATION GUIDE "FILL AND PRIME" FOR OPERATING INSTRUCTIONS

PRODUCT CATALOG

FEBRUARY 2026 v.1



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TOTAL LIQUID IMMERSION with Directed Flow

