

NEWSPACE MARKET · COMPANY PROFILE



LiquidCool Solutions

United States · founded 2006 · liquidcoolsolutions.com

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as of 20 August 2026



LiquidCool Solutions

LiquidCool Solutions, Inc. is a Rochester, Minnesota-based engineering company that designs and manufactures total liquid immersion cooling systems for servers and electronic equipment. Founded in 2006, the company originally developed immersion cooling for high-performance gaming PCs before pivoting in 2012 to focus on enterprise server, data center, and industrial computing applications. Its leadership and engineering team include veterans from Dell, IBM, HP, Cray, Silicon Graphics, and Western Digital, and the company holds numerous issued and pending patents around its cooling architecture. LiquidCool's core innovation is Total Liquid Immersion with Directed Flow (TIDF) technology: sealed, liquid-tight chassis are filled with a dielectric coolant, actively pumped so the coolest fluid reaches the hottest components first, rather than relying on passive convection as in typical tank immersion systems. The approach delivers roughly 1,000-1,400x the cooling capacity of air, reduces cooling-related power usage, requires no fans, air conditioning, or external water, and fits in less than half the space of tank-based immersion systems — all while working with off-the-shelf server components in standard 19-inch rack form factors. Because the sealed, fanless, liquid-cooled design isolates electronics from dust, humidity, vibration, altitude, and corrosive or contaminated environments, LiquidCool's products are marketed for edge computing and harsh-environment deployments, including industrial IIoT and mobile/rugged field applications. Trade coverage has profiled LiquidCool's directed-flow technology as a candidate cooling solution for military and field-deployed computing systems.

This profile is generated from the live NewSpace Market catalogue. Specifications are as published by the manufacturer; every product links to a page where a request for quotation reaches the company directly.

SERVICES

Services

Customized system configuration

LiquidCool Solutions configures systems based on customer needs, regardless of brand or form factor.

Product catalogue



LIQUIDCOOL SOLUTIONS

LCS MiniNODE

The LCS MiniNODE is a compact, fully sealed (IP67) industrial computer built on the Thin Mini-ITX standard, cooled entirely by roughly one gallon of non-hazardous, eco-friendly die

Ingress protection	IP67
CPU	AMD Ryzen Embedded R2000/5000-series, up to 6-core/12-thread, 4.4 GHz
Memory	up to 64 GB DDR4
Storage	NVMe M.2 SSD
Power	180 W external supply
Dimensions	16 x 18 x 4.5 in
Fluid volume	~1 gallon

price on request



LIQUIDCOOL SOLUTIONS

LCS MiniNODE Industrial Computing System

IP67-sealed fanless industrial PC with immersion cooling — AMD Ryzen 5, 32 GB DDR4, 1 TB NVMe, no AC/water needed, 0°C–45°C, for harsh environments including space, defense, oil &a

CPU	AMD Ryzen 5 5600G (6C/12T, 4.4 GHz boost)
Memory	32 GB DDR4 2933 MHz (64 GB max)
Storage	1 TB M.2 NVMe
IP rating	IP67 sealed
Dimensions	16" W x 18" D x 4.5" H
Fluid capacity	1 gallon single-phase dielectric
Power supply	180 W / 19 VDC external

price on request



LIQUIDCOOL SOLUTIONS

LCS Small-Scale Server (SSS)

Self-contained, plug-and-play 24U mobile server room housing 4-6 ZPServers for rapid edge deployment.

Power range	1.1 - 8 kW
Storage	up to 16 TB
Cooling PUE	< 1.04
Noise level	< 55 dBA
Rack size	24U
Deployment time	< 2 hours

price on request



LIQUIDCOOL SOLUTIONS

LCS Small-Scale Solution (SSS)

Plug-and-play 24U portable edge compute room — 4-6 ZPServers, PUE < 1.04, < 55 dBA, 16 TB storage, 8 kW max, deploys in under 2 hours, no AC required.

Rack size	24U
Server count	4-6 ZPServers
Max power	8 kW
Storage	Up to 16 TB
PUE	< 1.04
Noise level	< 55 dBA
Operating temperature	0°C – 45°C

price on request



LIQUIDCOOL SOLUTIONS

LCS ZPServer

2U immersion-cooled rack server delivering 4 kW per unit with PUE < 1.03
— Total Liquid Immersion with Directed Flow™ (TIDF), brand-agnostic, supports Intel Xeon, AMD EPYC, NVID

Form factor	2U, standard 19" EIA rack
Power density	Up to 4 kW per server
PUE	< 1.03
Dimensions	18" W × 33" D × 3.5" H
Wet weight	~75 lbs
Fluid capacity	~5 gallons per 2U (single-phase dielectric)
Cooling	TIDF – Total Liquid Immersion with Directed Flow™

price on request



LIQUIDCOOL SOLUTIONS

LCS ZPServer (Zero-Pressure Server)

Immersion-cooled 2U rack server delivering up to 4kW per rack unit for data centers and AI workloads.

Cooling capacity	up to 4 kW per 2U
Dimensions	18 x 33 x 3.5 in (2U)
Fluid volume	~5 gallons per 2U
Wet weight	~75 lb per 2U
Cooling PUE	< 1.03
Operating temperature	0-45 C

price on request

Contact LiquidCool Solutions

Open the company profile on NewSpace Market to see full specifications and datasheets, and to send a request for quotation that reaches the manufacturer directly.

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<https://www.liquidcoolsolutions.com/>

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