Rear Door Heat Exchanger (RDHx)

Easy-to-Mount Rear Door Cooling Solution for Efficient Heat Removal

Optimized for High-Density AI & HPC Data Center Racks

- **Fast, Flexible Deployment:** Universal rack compatibility and simple mounting reduce installation time
- **Cooling Capacity:** Up to 80 kW to remove all residual heat, enabling maximum compute density
- **Zero-Downtime Reliability:** Redundant 4- and 5-fan designs keep cooling at peak performance
- **High Reliability:** Smart anti-condensation system prevents moisture damage
- **Multiple Integration Protocol Support:** Redfish®, SNMP, Web-based UI, and Supermicro SuperCloud Composer® (SCC) ready

Plug-and-Cool, Instant Upgrade

Supermicro's Rear Door Heat Exchanger (RDHx) provides up to 80 kW of cooling capacity through a plug-and-cool design, enabling easy deployment and exceptional operational flexibility. Compatible with most standard racks, it is ideal for cooling next-generation high-density setups and significantly improves thermal performance. Its instant-upgrade capability and rapid installation minimize downtime, delivering superior agility for data center operators.

Redundant Fan Design for Optimum Cooling

Supermicro's RDHx features a high-efficiency, N+1 redundant fan cooling design that delivers reliable thermal management even under the most demanding data center conditions. Each fan includes intelligent speed control to dynamically optimize airflow and maximize energy efficiency, while the N+1 redundancy provides built-in fault tolerance, allowing maintenance or replacement without disrupting system operation. This approach ensures exceptional reliability, scalability, and confidence for mission-critical AI and HPC workloads.

Power Integration for Enhanced Reliability

DC-powered model of the RDHx integrates seamlessly with the rack's shared power busbar, eliminating the need for additional cabling or external wiring. This fully integrated architecture streamlines deployment, significantly reduces installation time, and enhances both energy efficiency and airflow optimization. By leveraging the rack's existing power backbone, it delivers consistent, dependable power distribution and ensures long-term operational reliability in high-demand AI and HPC environments.

Centralized Management and Monitoring

Supermicro's RDHx features advanced control and monitoring capabilities, including a built-in touchscreen, Web UI, and support for SuperCloud Composer (SCC) for centralized management. It also supports industry-standard protocols, such as SNMP and Redfish, to enable seamless integration with existing data center platforms. Additionally, real-time monitoring of temperature, pressure, flow rate, and pump status ensures optimal and stable performance.

Rear Door Heat Exchanger	SRK-52RDCC-00-001	SRK-42RDCC-00-001
Power Supply	Direct Current (DC)	Direct Current (DC)/Alternating Current (AC)
Application Type	Air-to-Liquid (A2L) deployment	Air-to-Liquid (A2L) deployment
Cooling Capacity	Up to 80 kW	Up to 50 kW
Fan Quantity	5	4
Power Consumption (Max)	2.1 kW	1.7 kW
Dimensions	• Height Range: 48U to 52U • Width Range: 750 - 800 mm • Depth: 390 mm	• Height Range: 42U to 52U • Width Range: 600 - 800 mm • Depth: 337 mm
Weight	136 kg (without coolant)	114 kg (without coolant)
Protocols	• SNMP v2c/v3 • Ethernet/Web-based UI • Redfish	• SNMP v2c/v3 • Ethernet/Web-based UI • Redfish