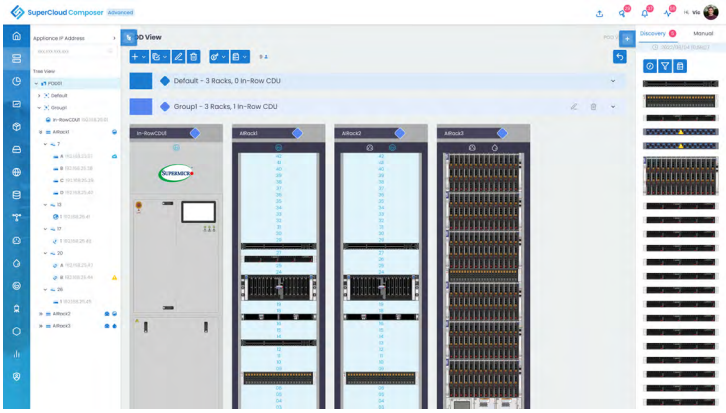
SuperCloud Composer®

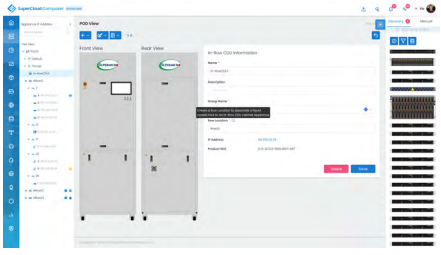
Scaling Liquid Cooled Data Centers for a Sustainable Future

Supermicro's LCCM (Liquid Cooling Console Module) gathers critical physical asset details and sensor data directly from the CDU. The Supermicro In-Row CDUs offer several key advantages for data centers, such as increased cooling efficiency by placing cooling near heat sources, lower energy consumption with optimized airflow, and better scalability to adapt to shifting workloads. Additionally, they help maintain stable temperatures, which can prolong equipment life and enhance overall system reliability.

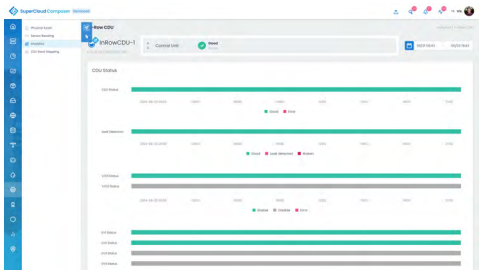


SuperCloud Composer® (SCC) monitors and manages a wide, multi-generation range of Supermicro servers and third-party systems from a single unified console through its data center lifecycle management features. Along the left side pane, data is represented in a hierarchical tree view where the end-user can easily navigate the location of in-row CDUs, associating them with servers within a rack.

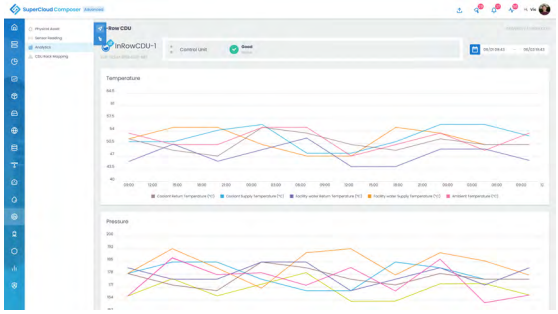
Overview - Coolant Distribution Unit Specifications	
Cooling Capacity	• 1MW approach temperature 50°C for below conditions: Primary 1000 LPM at 0.1 MPa pressure drop secondary 1000 LPM at 0.4 MPa CDU available pressure
Dimensions/Weight	• 850 (W) x 1300 (D) x 2300 mm (H) • <1200kg (including coolant and water) / <1000kg (excluding coolant and water)
Input Power/Max Power Consumption	• 3P 380-480VAC 50/60Hz connector: IEC60320/NEMA plugs available ATS for dual power source • 18.5kW
Operating Temperature	• 5° to 35° C, 8% to 85% (RH)/ -25°C to 60° C
Primary Side	• Connection to secondary loop: 4" ANSI 150LB flange • Supply temp: 2°C to 45°C (ASHRAE W45) or dew point • Supply flow rate: <1200 LPM • Max pressure: 1 MPa • Water quality: ASHRAE Standard Liquid Cooling Guidelines for Datacom Equipment Centers, • Particulates: Facility water shall be clear of particulates; (requirement: <300um filtration)
Secondary Side	• Connection to Secondary Loop: 4" ANSI 150LB Flange • Coolant: Propylene Glycol 25wt% 100L • Pump: 2N redundant • Operating Pressure: Max 0.5 MPa • Flow rate: Max 1200 LPM • Filtration: 50µm
Monitoring and Control	• Communication: Web UI, SNMP, Modus, API • Monitoring: Temperature, pressure, flow rate, water quality, leak, power consumption • Control: Pump speed, primary side valve, condensation • Software Supported: SCC



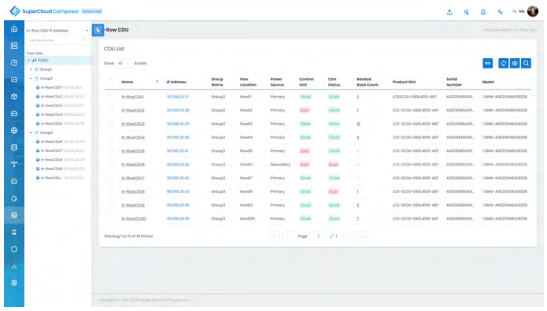
Leverage SCC's efficient API to set up and register the InRow CDUs within Super Cloud Composer®'s POD View module. Once registered InRow CDU appliance is positioned on the left side of a fully populated liquid-cooled rack.



The POD View rack management solution offers flexibility in organizing data center needs, allowing you to align workloads with specific rack deployments, whether at the edge, or associated CDU appliances, or even in data centers located miles away.



The Liquid Cooling Console compiles historical data from the CDU and presents it through detailed charts, graphs, and tables for a comprehensive granular view. It also gives administrators quick access to performance metrics, telemetry, real-time or extensive historical monitoring, predictive analytics, and precise alert notifications. The above screen is a screenshot example of the *coolant supply temperature*.



Enhance PUE operational efficiency by implementing Supermicro's cold plate rack-scale solutions, designed specifically for demanding AI and Big Data workloads. Supermicro's advanced liquid cooling technology minimizes energy consumption while cutting down carbon emissions from fossil fuel-based power sources. Start reducing your data center's environmental impact today with SCC's intuitive dashboard. Instantly gather real-time sensor data and make crucial lifecycle management decisions for your liquid-cooled HPC systems efficiently.

SuperCloud Composer® License Model

Type of License	Description	License P/N
Trial License	Free 90-day trial license with 200 monitored systems activation. Applicable only for SCC instance.	• SFT-SDDC-TRIAL
Monitor License	Single monitored system license activation. One license key per system managed by SCC instance.	• SFT-SDDC-SINGLE
DCMS License	DCMS license. Required to enable advanced BMC features in SuperCloud Composer®. One license key per system managed by SCC instance.	• SFT-DCMS-SINGLE

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Get the free limited trial version of SuperCloud Composer® today and experience a new and revolutionary way to manage your data center with agility, speed, and simplicity.

Scan the QR code below to visit the SuperCloud Composer® product web page and apply for your free 90-day trial license:

SCC White Paper

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