+357 96 030922
info@marketpublishers.com

Direct-to-Chip Liquid Cooling Market Opportunity, Growth Drivers, Industry Trend Analysis, and Forecast 2024 – 2032

https://marketpublishers.com/r/D5C44A7C9246EN.html
Date: October 2024
Pages: 210
Price: US$ 4,850.00 (Single User License)
ID: D5C44A7C9246EN

Abstracts

The Global Direct-To-Chip Liquid Cooling Market reached USD 1.5 billion in 2023 and is projected to grow at a remarkable CAGR of 20.3% from 2024 to 2032. This growth is primarily driven by data center operators' increasing emphasis on reducing energy consumption, leading to a greater adoption of energy-efficient cooling solutions. The market, based on the components, is segmented into CPUs, GPUs, ASICs, and memory. Among these, the CPU cooling segment is expected to achieve an impressive CAGR of over 20.6% through 2032. Given that CPUs play a crucial role in high-performance computing systems, effective thermal management is essential. Liquid cooling solutions for CPUs are available in both single-phase and two-phase designs, offering superior performance in dissipating heat generated during operations.

These solutions leverage the liquid’s ability to absorb and transfer heat more efficiently than traditional air cooling methods. When considering the types of cooling solutions, direct-to-chip liquid cooling is categorized into single-phase and two-phase systems. The single-phase cooling segment is projected to reach USD 4.1 billion by 2032, largely due to its efficiency and simplicity. This cooling method utilizes a closed-loop design, employing liquids like water or water-glycol mixtures to absorb and transport heat away from critical components.

The liquid circulates through these components, transferring the absorbed heat to a cooling mechanism, such as a radiator before it recirculates. This straightforward and reliable design makes single-phase cooling a cost-effective solution for many operators seeking effective heat management without excessive expenses. In the United States, the direct-to-chip liquid cooling market held a dominant 77.9% share in 2023. The demand for these liquid cooling solutions is significantly driven by the rapid expansion of

+357 96 030922
info@marketpublishers.com

cloud services and the increasing presence of data centers. As organizations focus on optimizing their IT infrastructure, they are adopting liquid cooling for its capability to manage heat directly at the chip level, thereby enhancing performance and reliability.Additionally, U.S. regulatory initiatives aimed at promoting energy efficiency are encouraging the transition to these sustainable cooling technologies. Compliance with these regulations, along with the potential for operational cost savings, is contributing to a broader shift toward advanced cooling solutions.

+357 96 030922
info@marketpublishers.com

Contents

Report Content

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

CHAPTER 8 MARKET ESTIMATES & FORECAST, BY APPLICATION, 2021-2032 (USD MILLION)

CHAPTER 9 MARKET ESTIMATES & FORECAST, BY END USE INDUSTRY, 2021-2032 (USD MILLION)

CHAPTER 10 MARKET ESTIMATES & FORECAST, BY REGION, 2021-2032 (USD MILLION)

+357 96 030922
info@marketpublishers.com

CHAPTER 11 COMPANY PROFILES

+357 96 030922
info@marketpublishers.com

I would like to order

Product name: Direct-to-Chip Liquid Cooling Market Opportunity, Growth Drivers, Industry Trend Analysis, and Forecast 2024 – 2032

Product link: https://marketpublishers.com/r/D5C44A7C9246EN.html

Price: US$ 4,850.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:
info@marketpublishers.com

Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page https://marketpublishers.com/r/D5C44A7C9246EN.html