

**Title of Invention - LIQUID COOLING ASSEMBLY FOR DUAL-SIDED
THERMAL MANAGEMENT AND COMPUTING DEVICE INCLUDING THE
SAME**

ABSTRACT

The present invention relates to the technological field of microelectronics and electronic engineering, specifically to advanced liquid-cooling-based thermal management systems for electronic components on printed circuit boards. The present invention represents a liquid cooling assembly that provides an improvement to the technological field of microelectronics and electronic engineering, by providing an effective cooling solution for systems employing vertical power delivery. Specifically, it provides liquid cooling for electronic components located on both sides of the PCB while fitting within the spatial constraints of modern electronic devices. The invention further provides a computing device that includes such an improved liquid cooling assembly, thereby improving the aforementioned technological field by increasing device operation efficiency, specifically enabling prolonged and stable operation in computationally intensive regimes due to highly efficient thermal management.

[Fig. 1]