

Design and Optimization of Radiator for Liquid Cooling using Micro Channels

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Abstract: *The need to use micro channel in such radiator arise as need to increase the heat transfer rate from the radiator to better cool down the working fluid. The current radiator are not efficient in this process and thus hamper the performance of CPU, solution employed currently include increase the length of radiators and to accommodate multiple fans over it. The method we employed to tackle the issue was to introduce micro channels in the tube of the radiator. Use of micro channels increases the surface area of the passage through which the fluid passes, the increase in surface area leads to increased heat transfer rate which causes more heat loss through the system. Thus, increasing the efficiency of the radiator.*

Keywords: Micro channel, radiator, heat transfer rate, efficiency, surface area, temperature drop, pressure drop

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