

Green Thermal Simulation Analysis of Desktop PC Components Using Multiple Heatsinks

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Abstract

Green computing has emerged as an effective strategy for designing and operating computers. Accordingly, desktop Personal Computers (PCs) play a major role in industrial applications; however, one of the major concerns faced by PCs is their overheating issue. The researchers considered adding only one single heatsink to a specific component, such as a motherboard, which is insufficient to lower the overall temperature inside the desktop PC cabinet. Due to that, a solution that consists of multiple heatsinks plays a vital role in removing the overall heat from a desktop PC enclosure. The idea is to analyse multiple single-type heatsinks known as Cooler Master Heatsinks using the Computational Fluid Dynamics (CFD) approach. The study found that adding multiple Cooler Master Heatsinks attached to different major heat source components inside a desktop PC cabinet is a viable solution for lowering the overall temperature of these devices.

Keywords

Green Computing, Desktop PC, Thermal Management, Heatsinks.

