

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202511061219 A

(19) INDIA

(22) Date of filing of Application :26/06/2025

(43) Publication Date : 11/07/2025

(54) Title of the invention : AN IMPROVED HEAT-DISSIPATING SERVER RACK FOR HIGH-DENSITY DATA CENTERS

(51) International classification :H05K0007200000, H05K0007140000, B60H0001320000, B60H0001000000, G06F0009500000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

(71)Name of Applicant :
1)NOIDA INSTITUTE OF ENGINEERING & TECHNOLOGY
Address of Applicant :19, Knowledge Park-II, Institutional Area, Greater Noida – 201306, Uttar Pradesh, India. -----

Name of Applicant : NA
Address of Applicant : NA

(72)Name of Inventor :
1)Dr. VIKAS SAGAR
Address of Applicant :Department of Computer Science & Engineering (AI), Noida Institute of Engineering & Technology, Greater Noida. Greater Noida -----

(57) Abstract :
The present invention relates to an improved heat-dissipating server rack (100) for high-density data centers. It includes axial fans (102), directional fins (103), PCM chambers (104), thermal sensors (105), a smart controller (106), and modular trays (107) with micro-blowers (108). The invention ensures dynamic heat management, improves energy efficiency, and supports retrofit deployment. The rack architecture offers modularity and real-time thermal regulation, enhancing server longevity and performance in dense electronic environments.

No. of Pages : 14 No. of Claims : 5