

Ventiva Unveils Fan-less Cooling for High-performance, Ultra-thin Laptop Designs

Pioneering ICE technology redefines laptop design, replacing mechanical fans with electronic airflow for high-performance devices up to 40W TDP

FREMONT, Calif. – December 18, 2024 – [Ventiva®](#), the leader in thermal solutions, today announced its ICE9® thermal management suite can now cool laptops that operate at up to 40 watts TDP (Thermal Design Power), enabling thinner, faster, and utterly silent computing devices — without the compromises of traditional, fan-based cooling systems. This allows the ICE9 solution to cool the powerful CPUs required for the next-generation of feature-rich, AI-enabled, high-performance laptops.

The ICE9 thermal management suite is based on Ventiva’s patented [Ionic Cooling Engine \(ICE®\)](#) technology, which eliminates the need for mechanical fans, using intelligent software control to enable optimal performance in electronics devices—without any moving parts, noise or vibration. The ultra-compact ICE9 solution enables laptop designs with a height of less than 12 mm, rivaling the thinnest laptops on the market today. Its space-efficient form factor not only supports sleek, thin designs but also provides original equipment manufacturers (OEMs) with the flexibility to integrate additional functionalities into their products.

“Our ICE technology is transforming the electronics market, enabling a new wave of silent, intelligent heat-transferring thermal management solutions, and our latest results underscore the remarkable scalability of our ICE9 solution,” said Carl Schlachte, Chairman, President and CEO, Ventiva. “Initially demonstrated within the 'thin and light' category of laptops at around 15W TDP, the ICE9 device now enables laptop manufacturers to extend these benefits to higher performance systems, paving the way for the launch of entire product families of silent computing products.”

Ventiva has published a new white paper, [Enabling High Performance Silent Computing: A Breakthrough in Laptop Thermal Management](#), that explores the critical balance between managing heat dissipation and achieving quiet laptop operation. As processors become more powerful, they generate higher thermal output, necessitating innovative cooling solutions that do not compromise form factor or acoustics. It peels back the layers to share how enterprises evaluate these options to support their current and emerging strategies.

Ventiva is working with select partners to productize the ICE9 thermal management suite for up to 40W TDP in 2027. The ICE9 solution for up to 25W TDP is available now.

About ICE Technology

Ventiva's patented ICE technology generates movement of air without any moving parts, noise, or vibration, leveraging the principles of electrohydrodynamic (EHD) flow to move ionized air molecules within an electric field. The ICE9 thermal management suite offers a "smart" cooling solution that continuously monitors its operation, delivering more or less airflow as an electronic system requires. Combining advanced monitoring and algorithms, the ICE9 suite's real-time software can be combined with overall system performance monitoring to provide a robust device-wide thermal solution.

About Ventiva

Ventiva, a leading company in active cooling solutions for electronic devices, enables thinner, faster, and cooler high-performance devices that are lightweight, silent, and vibration-free. The company's patented ICE® technology is a pioneering all-electronic heat transfer technology created to address the thermal problems exacerbated by modern high-performance semiconductor design. Learn more at www.ventiva.com or follow us on [LinkedIn](#).

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