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Contact:

Yisrael van Handel
Active Cool
+(972) 8 678 1771
yvh@activecool.com

Debra Masters
Merritt Group, Inc.
+(1) 703 556 6300 x141
masters@merrittgrp.com

ACTIVE COOL LAUNCHES AC4G TO ADDRESS COMPUTER INDUSTRY'S GROWING CPU HEAT CRISIS AND PC NOISE CONCERNS

Thermal Take Lines Up to Support Active Cool and Industry's First-Ever High-Powered Thermo-Electric CPU Cooling System

ASHKELON, ISRAEL, October 28, 2002 – Active Cool today announced the official launch of its new AC4G CPU cooling system, a revolutionary thermo-electric cooling system designed to address the looming processor heat crisis in the PC industry. As PC processors continue to get smaller and faster, CPU heat will remain a significant challenge that will ultimately threaten the reliability and stability of the PC. Active Cool's AC4G solution has the power to cool the most advanced Intel Pentium 4 processors and the new AMD K8 processors.

In just three years, computer processor speeds have increased from 500 MHz to more than 2.8 GHz with TeraHertz speeds not too far away. As processor speeds continue to increase, so does the amount of heat generated, making it critical to find ways to overcome this problem. Intel Pentium 4 CPUs are designed with a Thermal Control Circuit (TCC), which enables the processor to implement clock modulation to slow down the processor when the CPU is overheating. When the thermal envelope is reached, TCC slows down the processor to prevent data corruption, computational errors, system crashes, and processor degradation that may cause permanent damage to the CPU. In future processors that are cooled with conventional air cooling, clock modulation will become a common phenomenon.

"The CPU heating crisis is at the forefront of everyone's mind these days as one of the industry's most critical issues," said Jerry Worchel, senior analyst of InStat/MDR. "Not only are processor and computer manufacturers going to be affected, but so is the end-user running processor-intensive applications such as graphics and image manipulation or computer-aided design and business applications that can quickly cause overheating. Active Cool's AC4G solution has the potential to be a significant technology and definitely warrants a closer look by anyone looking for a compelling way to solve this problem. Without the ability to cool tomorrow's high-performance chips, future end-use applications will be greatly restricted."

Conventional air cooling solutions, heat sinks and fans, are near the limits of what they can achieve. Today's alternative solutions, such as liquid cooling and vapor-phase refrigeration are expensive and impractical for PC manufacturers to incorporate into new computers. Active Cool's AC4G technology is uniquely designed to solve the problems of CPU heat and fan noise effectively, while being ideally suited for installation during computer assembly.

“The PC industry is headed for a crisis unless these CPU heat issues are resolved,” said Ronen Meir, founder and president of Active Cool. “Active Cool’s innovative solution is quickly gaining industry attention and promises to ensure the productivity, reliability and stability of personal computers into the future.”

In addition to the CPU heat problem, computer noise is becoming an increasing concern. While most PC noise tends to be generated from cooling fans, it can be disruptive as excessive computer noise can negatively impact a PC user’s office productivity. While traditional cooling methods run fans continuously, causing increased noise as fan speeds increase to maintain stable temperatures, AC4G dynamically reduces PC fan noise by pumping heat out of the processor using a noiseless electronic heat pump.

Geared towards the global PC OEM and white box manufacturing markets, Active Cool’s innovative AC4G solution addresses both the heat and noise problems.

Active Cool’s new AC4G product has the following features:

- Microprocessor-controlled thermo-electric cooling
- Significantly reduced PC fan noise
- Cools Intel Pentium 4 up to 4GHz; cools new AMD K8 processors
- Maintains CPU temperatures at 26°C during normal operation
- Powered independently of the PC
- Installs in any PC in less than 90 seconds

While conventional air coolers cannot lower temperatures below that of the (warm) air inside the computer case, Active Cool’s solid-state thermo-electric heat pump cools processors to 26 degrees Celsius when running typical office applications, allowing tolerance for hot spots while preventing condensation. Active Cool’s AC4G solution reduces PC case and CPU fan noise by running fans at slow speeds under normal operation, only operating fans at full speed when the CPU is stressed. AC4G’s heat pump continues to provide cooling power, even when fans are operating at slow speed, which is impossible to do with conventional cooling methods.

Active Cool’s AC4G does not require hardware modification or software and can be installed quickly and easily into any PC during assembly. The AC4G is powered independently from the PC.

Active Cool is poised to revolutionize the PC manufacturing industry with its affordable, high-tech cooling solution. The AC4G product will cost less than US\$120 (MSRP) compared to liquid cooling solutions that cost US\$175 and vapor-phase cooling that exceeds US\$500.

Early customers of Active Cool’s AC4G product include Thermal Take, GlobalWin, Titan and ADDA, all of whom have successfully tested the product.

“Active Cool’s AC4G product is a real milestone in the industry – a groundbreaking application of technology that we’ve been fortunate to take advantage of,” said Kenny Lin, CEO of Thermal Take. “Active Cool’s product far outpaces advanced alternative cooling solutions in terms of cost, performance, assembly and noise reduction, and we are really excited to have found this solution.”

The AC4G will be available for commercial sale by January 2003 via Thermal Take.

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About Active Cool

Founded in January 2000 and headquartered in Ashkelon, Israel, Active Cool is focused on addressing the industry's growing CPU heat crisis and noise concerns. Active Cool's flagship product, the AC4G, is the world's first high-powered thermo-electric CPU cooling system. The AC4G product, designed for global PC OEM and white box manufacturers, has the power to cool the most advanced Intel Pentium 4 processors and the new AMD K8 processors. For more information, please visit <http://www.activecool.com>.