



Corporate Backgrounder

Waytronx, Inc. is the openly licensable thermal management solutions company. The Waytronx enabling technology solutions remove system bottlenecks in applications such as semiconductor, solar, display and electronic packaging. Through its patented WayCool™ thermal management architecture – with hybrid (air + liquid) and flexible mesh elements – Waytronx delivers unique industry reference designs that speed time to market for OEMs. The Company's goal is to make its open architecture and openly configurable solutions the defacto standard for system cooling and performance enhancement.

Microwarming: A New Industry Phenomenon

Thanks to Moore's Law, microelectronics components continue to run at exponentially higher speeds, delivering more computing capacity to virtually every industry with each progressive generation – from computing to solar, medical and consumer systems, and more. As a result, the computing industry has rapidly evolved from big box PCs to laptops to handhelds to entire systems on chips, like cell phones, television tuners and multi-chip modules. Additionally, and just as significantly, as server density rises in the enterprise, so does heat output. These increases in power usage, coupled with a continued progression of smaller form factors and denser system design, create a greater need for better thermal/heat management systems at the chip and system level.

This combination of high performance chips and smaller device form factors is what we refer to as microwarming – overheating at the chip level which reduces system performance for each successive computing generation. Microwarming is a growing crisis in performance and power that occurs when Moore's Law and miniaturization collide. Thermal bottlenecks form, with the potential to slow down or even crash advanced systems. Better thermal solutions are needed to solve the cooling issues of multi-core processor and advanced graphic chips performance gains negated by overheating. Waytronx offers a solution to this difficult industry challenge.

WayCool Technology is the Solution

Waytronx WayCool technology is a patented, scientific approach to address today's microwarming crisis. Its hybrid mesh architecture addresses the intense heat generated in modern electronic systems, offering a true system thermal balance – working both to remove the heat around the system and the performance bottlenecks. Only unique mesh architecture from Waytronx integrates WayFast™ cooling, WayFast communications and power (current) for next-generation 3D packaging – 3Cs for 3D.

Whereas other industry solutions use air cooling or liquid cooling to address microwarming, Waytronx takes a hybrid approach. Waytronx combines air cooling, hermetically sealed liquid cooling or air cooling, and metal cooling across a mesh interface. This open architecture is designed from the ground up to be scalable and flexible enough to address demanding marketing including CPUs and graphics.

Further, patent-pending WayCool Carbon technology heat transfer medium boosts WayCool technology's ability to manage the thermal energy from computing heat sources. In the case of processors, WayCool technology allows operation at lower temperatures, increasing computation rates as faster transistors on the chip do not overheat. Recent technology demonstrations with OCZ Technology Group's HydroJet product and Waytronx WayCool technology affirm this claim. A test block ran to its maximum output of an unprecedented 400W while the HydroJet maintained the chip below



operations norms throughout the entire test period. In contrast, the HydroJet was compared to a leading CPU cooling device that had to be shut down within moments of reaching 400W when the chip temperature exceeded 105 degrees Celsius.

Additionally, for the solar industry, WayCool technology reduces the temperature of the light capturing silicon, increasing the conversion of light into electricity. By cooling the silicon substrate, the efficiency of the solar collector can be increased up to 25 percent without other changes to the solar design.

Depending on the application, the WayCool architecture is comprised of:

- Liquid cooling with minimal hermetically sealed liquid for efficiency
- Air cooling with a fan that is up to 35 times quieter than any other on the market
- A single CPU cooler connected to numerous heat sources on the same motherboard
- The most advanced cooling capacity in the industry for CPU and graphics cooling, with up to 400 watts demonstrated to date.

The Need for a Carbon Block

The goal of all cooling technologies is to remove heat from a concentrated source, (for example a one-inch square microprocessor chip may generate 200 Watts), and distribute it into the general ambient environment. A copper plate interface has traditionally been used to quickly transfer the heat away from the source and then move it, in a second step, via ambient air, or fan or liquid or a CPU cooler, to the general environment. Copper is a decent heat conductor and transfers the heat to the fan or traditional cooler at a rate equal or greater than this "secondary" heat mover.

Coolers based on WayCool technology actually remove heat at a faster rate than the copper plate can transfer it. WayCool systems are, in effect, waiting for more heat. The copper plate has become the heat bottleneck with CPU coolers based on WayCool technology.

Waytronx developed WayCool Carbon technology with a heat transfer rate up to four times that of copper plates, but with the low cost and adaptable size and form factor advantages of copper plates. The impact of carbon block is to once again make the cooler itself the performance limiter for removing heat, but at much higher heat removal rates.

Copper plates and carbon block technology are necessary to take advantage of the WayCool technology in existing systems. In the future, systems may be directly cooled with WayCool technology, eliminating this intermediate step.

Poised for Growth

Waytronx is based on an openly licensable business model, designed to accelerate adoption of this advanced system over time. As a publicly traded company with a rapidly growing portfolio of patented solutions for thermal management solutions and a seasoned leadership team, Waytronx is uniquely positioned for growth in emerging markets.

With nearly 50 years of expertise in growing and building technology companies, the Waytronx leadership team includes: William Clough, Chief Executive Officer, who spearheaded the commercialization of Waytronx's WayCool technology including the HydroJet licensing agreement with OCZ Technology Group, Inc. and the current partnership with BAE Systems and the Defense Advanced



Research Projects Administration (DARPA); Matt McKenzie, President of CUI, Inc. who, as the son of the Founder of CUI, has designed and implemented the sales re-structuring and product commercialization for the AMT and C14 encoders; Dan Ford, Chief Financial Officer, who has brought both public and private financial experience and has been instrumental in the re-structure of Waytronx debt facilities; and Brad Hallock, SVP of Corporate Development, who has brought significant M&A experience into Waytronx's efforts to expand its growth through strategic acquisitions of both companies and technology..

Waytronx is a market leader in documented reference designs for CPU and graphics cooling, enabling stronger performance and improving time to market. Its customers are firms that deliver high-performance computing applications in the semiconductor, solar, display and electronic packaging markets, including Thermaltake Technologies Co. Ltd., a Taiwan-based thermal solutions provider and OCZ Technologies Group, a California-based high-performance memory and components firm.

For More Information:

Maggie Lefor
Waytronx, Inc./CUI Inc
(503) 612-2391

Waytronx, OnScreen, WayCool and WayFast are trademarks of Waytronx, Inc. Other names and brands are the property of their respective owners.