

FOR IMMEDIATE RELEASE

Allied Control announces HPC/Supercomputer and Bitcoin Immersion Cooling Development Systems for 3MTM NovecTM Engineered Fluids

Development systems allow device manufacturers to build energy efficient hardware at unprecedented power densities and speed up development time.

HONG KONG – March 4, 2014 – <u>Allied Control</u>, a professional consulting and engineering company specializing in two-phase immersion cooling, announces the availability of the first immersion cooling development system for 3MTM NovecTM Engineered Fluids.

The development system parts are intended for engineering purposes, including prototyping and evaluation at device manufacturers, and for small series installations such as one to two racks. The system features a modular design in a 19-inch server rack form-factor, with standard power densities of over 150kW per rack. Multi-condenser or high profile condenser configurations, including portholes and custom interface backplates are available on request.

By utilizing passive-two-phase immersion cooling in an open bath design, users benefit from massively reduced cooling energy bills, lower capital expenditure, space savings, and a truly universal and durable system.

Allied Control completed the first large scale implementation in a Hong Kong high-rise building last year. At a footprint of less than a standard shipping container, the system delivers a PUE of less than 1.02, even in hot and humid Asia.

During several rounds of scheduled hardware upgrades in the near future, the system's density will increase from lower-end ASIC devices to 40nm chips and beyond – without making any changes to the infrastructure, demonstrating a secondary value proposition of immersion cooling.

With theoretical rack densities in the hundreds of kilowatts, the major benefits are energy savings, increased density and the elimination of all cooling parts such as fans, bulky heatsinks or cold plates. System designers can finally stop worrying about getting the heat out.

"Immersion cooling designs are a bit like reusable barebone systems - assembled only once and then put to work exactly the way the customer sees fit. By using our system designs, organizations can avoid vendor lock-in and costly mistakes and build a truly open system that can be reused for many hardware generations to come. Our enclosures are essentially tanks with dielectric liquid from $3M^{\rm TM}$, such as Novec 7000 or Novec 649", said Kar-Wing Lau, vice president of operations at Allied Control.

About Allied Control



Allied Control is a consulting and engineering company that made open bath immersion cooling its top priority. The company is looking for partnerships and clients worldwide. Allied Control is official 3M Technology Partner and offers services such as modular enclosure and facility design, remote or on-site project management, training, material and feasibility studies and access to in-house development and test platforms. Allied Control is a privately held company staffed by an international team with its headquarters in Hong Kong.

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