

# **BITFURY LAUNCHES 40MW ENERGY EFFICIENT IMMERSION COOLING DATA CENTER**

## **CUTTING EDGE DISRUPTIVE TECHNOLOGY SETTING NEW STANDARD**

*Immersion Cooled Data Center Technology Enables Cloud Data Centers,  
Supercomputers and HPC Applications To Drastically Save Power and Water  
Consumption*

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### **FACT SHEET**

#### **HIGHLIGHTS:**

***\*SEE PHOTOS BELOW\****

- ❖ The new BitFury Mega Data Center is a breakthrough in energy efficiency, pioneered by Allied Control, a subsidiary of BitFury Group, the leading Blockchain infrastructure provider and transaction processing company in the world.
- ❖ BitFury builds its own full-custom Application Specific Integrated Circuits (ASICs), PCBs, servers and data centers and uses renewable energy for all of its data centers, remaining deeply committed to maintaining the smallest carbon footprint possible.
- ❖ BitFury is the only Bitcoin Blockchain transaction processor that uses this innovative cooling technology at data center scale.
- ❖ Allied Control specializes in the new, two-phase (2PIC) immersion cooling technology which significantly increases power density resulting in fractional floor space requirements, reduced energy consumption and deployment time, and delivers environmental sustainability.

#### **HOW IT WORKS**

- In a two-phase immersion cooled system, electronic components are submerged into a bath of dielectric heat transfer liquids, which are much better heat conductors than air, water or oil.

- Allied Control has created tanks filled with Novec™, a heat transfer fluid by 3M™.
- As the chips inside the tanks generate heat, the Novec fluid evaporates, removing the heat as it changes from liquid to gas. This method has an up to 4000 times higher heat transfer coefficient than air to remove heat from chips.
- This system has a Power Use Effectiveness (PUE) of 1.02 and Water Usage Effectiveness close to zero (WUE < 0.003 L/kWh) by using a closed water cooling loop. It also eliminates conventional cooling hardware like bulky heatsinks and fans on circuit board level, resulting in up to 100 times higher power densities than typical servers.
- This system can work with 48C degree water temperature, it requires not only very little cooling energy, while at the same time it provides the capability to recycle waste heat for local use.
- Two-phase immersion thermal management is the perfect technology for meeting the power density and energy efficiency needs of the high performance computing and cloud computing market.
- In the public sector, on March 19, 2015, President Barack Obama mandated that all legacy government data centers in the U.S. must reach a PUE of <1.5 and all new data centers run between 1.2 and 1.4 by 2025.

***FOR MORE INFORMATION ABOUT BITFURY'S ENERGY EFFICIENT DATA CENTER – PLEASE CONTACT:***

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# The Passive 2-Phase Immersion Cooling Cycle

