

WHY TWO-PHASE



IS THE WINNING CHOICE

VS. SINGLE-PHASE



1 BETTER HEAT REMOVAL

- The phase change from liquid to vapor absorbs a significant amount of energy, effectively extracting more heat
- Thermally tested to 2200 watts per socket
- If all else equal, two-phase provides greater GPU/CPU headroom



2 NON-CONDUCTIVE REFRIGERANT

- Two-phase cooling uses non-conductive fluid, unlike water, which can damage electronics
- This is increasingly important as chips exceed \$40K and a full rack of IT equipment can be millions of dollars

3 75-90% LOWER FLOW RATE

Lower flow rates mean less chance of leaks and corrosion, smaller pumps, and lower pressures in system



4 EASE OF MAINTENANCE

Unlike two-phase, refrigerant-based cooling, the water chemistry & purity of a single-phase system must be monitored frequently to avoid corrosion and bacterial growth, which can negatively impact heat transfer and overall system operation