TEST LIQUID COOLING IN YOUR ENVIRONMENT

CEI Modular leverages 30 years of data center experience by combining the customization of a traditional approach with the repeatable efficiency and quality of a factory-built, modular approach. Our prefabricated modular data centers are comprehensive, 360-degree solutions that are flexible and fully integrated.

YOUR CHALLENGE | WANT TO TRY LIQUID COOLING, BUT DON'T WANT TO RISK AN ENTIRE PROJECT

OUR SOLUTION | INSTALL A TEST RACK IN A CURRENT PROJECT YOU HAVE WITH CEI TO ELIMINATE ADDITIONAL PURCHASING AND BUDGET HURDLES, ANALYZE ENERGY AND SPACE SAVINGS DATA, AND LOWER RISK VIA A PILOT PROGRAM THAT CAN BE EXPANDED IN THE FUTURE.

HYPERCOOL™ BY ZUTACORE™

WATERLESS, DIRECT-ON-CHIP EVAPORATIVE LIQUID COOLING

HyperCool uses low-pressure cooling to alleviate boundaries at the chip, server, rack, POD and data center levels. Mechanically self-regulated, HyperCool provides on-demand cooling simply and reliably.

Designed for customers with high performance computing needs who:

- Need to reliably address future cooling demands of increasingly high-powered processors >400W
- Serve artificial intelligence (AI), machine learning (ML), autonomous vehicle or 5G network industries
- Want to address lower Tcase requirements without sacrificing energy efficiency
- Need to adhere to ASHRAE W4 thresholds

## WHEN YOU NEED SPEED, QUALITY & LOWER RISK

TEST BEFORE YOU INVEST

Ideal for those wanting to:

- Access budget surplus from an existing project
- See a two-phase liquid cooling system in action prior to committing to a large deployment
- Realize the benefits of a densified data center—new or retrofitted
- Eliminate additional purchasing and finance team scrutiny around new technology
- Test before inveting in a low-risk environment

LIQUID COOLING BENEFITS

- Alleviates cooling boundaries
- Uses a safe, non-conductive refrigerant
- Densifies computing, maximizes real estate assets
- Lowers cost and accelerates ROI
- Reduces data center complexity, streamlines installation
- Solves chip and server-level hot spots
- Well suited for edge computing requirements

![CUPERTINO ELECTRIC INC logo]
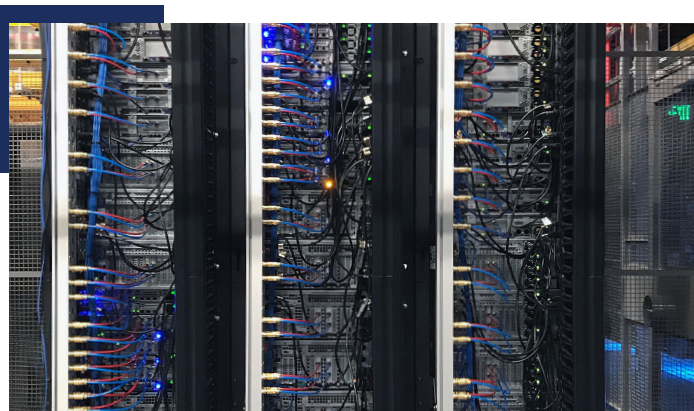
THE COOLING SYSTEM

SPECIFICATIONS

The in-rack HyperCool solution is scalable and can be deployed in a new or retrofitted data center. It supports up to 20 kW computing power when used with an in-rack air cooled condenser, and 70 kW computing power when used with an in-rack water cooled condenser to produce the lowest PUE and highest efficiency in any climate.

The ZutaCore system includes:

- **Server Kit and an Enhanced Nucleation Evaporator (ENE)**—a direct-contact, pool-boiling evaporator device enabling HyperCool to scale and simultaneously cool all chips on demand
- **Smart Refrigerant Distribution Unit (S-RDU)**—a self-contained unit that fits into standard racks
- **Smart Heat Rejection Unit (S-HRU)** —provides easy access and no refrigerant piping above or below racks
- **Software-Defined-Cooling (SDC)**—control and optimization software

THE RESULTS

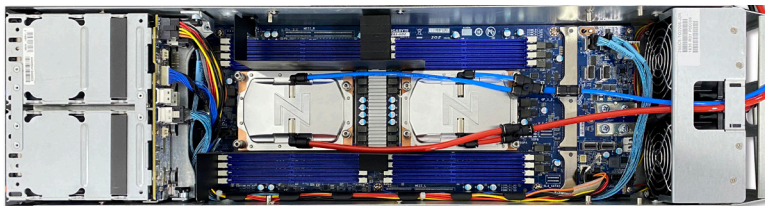SPACE, ENERGY & CAPEX
50% LESS

RISK OF MELTDOWN
0%

PROCESSING CAPACITY
3X

CHIP COOLING
>1,000 W

WHY USE A MODULAR SOLUTION WITH LIQUID COOLING?

The "CEI Cooled by ZutaCore" solution is a plug-and-play option that provides a flexible, cost-effective alternative to traditional data center construction. It is designed to match business needs, pre-tested to work every time and built in a controlled environment to ensure the highest quality.

TO LEARN MORE, EMAIL MODULAR@CEI.COM.