

# Reliable cooling system for AI and HPC powered enterprises



Staying ahead of evolving cooling technology is crucial for Bulk Data Centers. With growing demand in Generative AI and High-Performance Computing, efficient heat management is vital. Cooling technology impacts Bulk's reliability, efficiency, and competitiveness. Choosing USystems' ColdLogik CL20 RDHx builds on past success, enabling larger deployments with proven technology.

## Choosing the right cooling solutions is pivotal

### Bulk faced the following challenges:

- How to design a solution for a colocation customer when specific IT technology, density or rack configuration is not known
- How to cater for the current GPU trend requiring 40-50kW+ per rack, while also considering future tech upgrades that could scale to even higher densities including Direct Liquid Cooling (Direct Liquid Cooling)
- Find a flexible solution that allows its customer the option to select and bring in their own racks of different sizes and manufacturers
- Maximise operational efficiency through optimised airflow and heat rejection
- Reduce time for white space fit out and customer deployment by pre-installing and testing all cooling components.

### The ColdLogik solution

- Energy Efficiency Ratio (EER) of over 100 at maximum capacity
- Average 15% reclaimed power for Compute by comparison to traditional cooling
- Potential Cooling PUE available of 1.035 with RDC
- Over 50,000 trees worth of carbon saved per 1MW ColdLogik deployment
- Adaptive Intelligence that controls the whole room temperature
- Higher water temperatures reduce the need for mechanical cooling, whilst maintaining ASHRAE A1 temperatures



## What made USystems' ColdLOGik CL20 RDHx the best choice?

- USystems engage in a flexible way to develop the design and ensure overall project objectives were met
- The CL20 RDHx handles peak densities from GPU-based hardware, up to approx. 50kW per rack in N+1, with the headroom to go even higher, and the flexibility to be further integrated as part of a hybrid DCLC system (direct-to-chip-liquid-cooling)
- White space was maximised without the need for cooling corridors for more traditional room based cooling solutions
- Without the need for hot-aisle containment a structural ceiling / return-air plenum was no longer required. This gave greater floor to ceiling height, which improved high-level M&E coordination and simplified the overall fit out
- The free-standing interface frame allowed for the installation and commissioning of RDHx units independently of the customer's rack deployment, enhancing overall design flexibility and system configuration
- Predictable air management, removed the risk of hot spots and airflow issues attributed to higher densities using conventional air cooling and hot-aisle containment
- The system's performance, scalability, and sustainability benefits align seamlessly with Norway's energy-efficient, cooler climate, coupled with the low-carbon Hydro energy at Bulk's N01 campus.

*"Implementing RDHx in our existing facility allowed us to meet the specific requirements of a high-performance computing customer in a very short time frame. To maximize efficiency and deliver the highest densities in the most flexible way we will continue to design for rack-based cooling solutions. We will work with key partners like USystems to ensure we can support our customers and partners now and moving forward with the evolving requirements of latest Generation High Performance Computing and CPU/GPU infrastructure."*

**Rob Elder, Chief Commercial Officer, Bulk Data Centers**



[Click Here for more information about USystems](#)

[Click Here for more information about Bulk Data Centers](#)