

Dutch startup solution impacts datacentres

Immersed Computing reduces 50% of their energy footprint

Haarlem, The Netherlands, 16 February 2017 - [Asperitas](#), cleantech startup from the Amsterdam area, one of the world's datacentre hotspots, is introducing a unique solution based on a total liquid cooling concept called Immersed Computing.

After 1.5 years of research and development with an ecosystem of partners Asperitas is launching their first market ready solution, the [AIC24](#), at the leading international industry event Data Centre World & Cloud Expo Europe.

The AIC24

The Asperitas AIC24 is at the centre of [Immersed Computing](#). It is a closed system and the first water-cooled oil-immersion system which relies on natural convection for circulation of the dielectric liquid. This results in a fully self-contained and Plug and Play modular system. The AIC24 needs far less infrastructure than any other liquid installation, saving energy and costs on all levels of datacentre operations. The AIC24 is the most sustainable solution available for IT environments today. Ensuring the highest possible efficiency in availability, energy reduction and reuse, while increasing capacity. Greatly improving density, while saving energy at the same time.

The AIC24 is designed to ensure the highest possible continuity for cloud providers. Total immersion ensures no oxygen gets in touch with the IT components, preventing oxidation. Thermal shock is greatly reduced due to the high heat capacity of liquid. The immersed environment only has minor temperature fluctuations, greatly reducing stress by thermal expansion on micro-electronics. These factors eliminate the root cause for most of the physical degradation of micro-electronics over time.

Plug and Play green advanced computing anywhere

The AIC24 is Plug and Play. A single module requires only power, access to a water loop

and data connectivity to operate. Combined with its silent workings, these limited requirements enable high flexibility in deployment sites and scenarios for the AIC24.

Two specially designed Convection Drives for forced water and natural flow of oil, are capable of transferring 24 kW of heat from the oil while keeping all the IT components at allowable operating temperatures.

Maximised IT capacity, the Asperitas Universal Cassette can contain multiple physical servers. Each module accommodates 24 AUC's, as well as 2 Universal Switching Cassettes. This currently adds up to 48 immersed servers and 2 immersed switches.

Immersed Computing

Immersed Computing is a concept driven by sustainability, efficiency and flexibility and goes far beyond just technology. In many situations, Immersed Computing can save more than 50% of the total energy footprint. By using immersion, 10-45% of IT energy is reduced due to the lack of fans, while other energy consumers like cooling installations can achieve up to 95% energy reduction. It allows for warm water cooling which provides even more energy savings on cooling installations. One more benefit, Immersed Computing enables high temperature heat reuse.

Immersed Computing includes an optimised way of work, highly effective deployment, flexible choice of IT and drastic simplification of datacentre design. Offering great advantages on all levels of any datacentre value chain, Immersed Computing realises maximum results in Cloud, Private and Edge environments.

About Asperitas

ASPERITAS IS A CLEANTECH COMPANY focused on greening the datacentre industry by introducing Immersed Computing.

[THE ASPERITAS DEVELOPMENT PARTNERS](#) include University of Leeds, Aircraft

Development and Systems Engineering (ADSE), Vienna Scientific Cluster, Super Micro, Schleifenbauer and Brink Industrial. Asperitas is furthermore recognised and supported by the Netherlands Enterprise Agency as a promising new cleantech company.

More information

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