IMMERSED COMPUTING
THE SOLUTION

Asperitas is introducing Immersed Computing, a concept driven by sustainability, flexibility and efficiency with a clean, self-contained, modular and plug & play solution which enables high density computing while reducing IT and cooling energy.

Asperitas

IMMERSED COMPUTING

INTRODUCING 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 onall 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.

ENGINEERED FOR USABILITY

The AIC24 is designed with a strong focus on usability. Immersion requires a different approach compared to traditional air-based operation. All aspects of Immersed Computing are fully addressed with the Asperitas portfolio.
tLiquid and thermal containment
- Easy access
- Clean operation with the Service Trolley

FLEXIBLE DEPLOYMENT

PLUG & PLAY
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 scenarios for the AIC24.

STACKABLE & MODULAR
A single water loop can be shared across multiple modules and modules can be placed back-to-back and side-to-side. Since there is no air required for the system to operate, rows of modules can be placed in relatively small spaces.

NEW DATACENTRE SITES
The AIC24 allows datacentres to go to places which were inaccessible before. Whether it is an expansion of the existing datacentre space, inside an office building or closer to the edge of the network like a rural area.

SPECIFICATIONS

- **PLUG & PLAY:** The AIC24 has only basic infrastructure requirements: water, power and data, and can be set up anywhere.

- **POWER:** 3-phase 400V/32A single/redundant.

- **WATER:** 0,6 kg/sec.

- **DATA:** Any copper based backbone cable.

- **COMPATIBLE FOOTPRINT:** The AIC24 is designed to be compatible with existing raised data floors.

- **FOOTPRINT:** 1200×600 mm or 2 data floor tiles.

- **WEIGHT:** Max 18 kN/m2 (static load).

- **TOTAL DIMENSIONS:** 1200x720x1500/2800 mm (lid closed and opened).

- **INTEGRATED PDUs:** Each immersed IT component is powered by manageable and metered PDUs. Each outlet can be managed and controlled separately by built-in Schleifenbauer controllers.

- **CONVECTION DRIVES®:** 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.

- **DIELECTRIC LIQUID:** The liquid used is medicinal quality oil and is the same product as vaseline, although with a different viscosity. It is commonly used in household materials, medicines and lubricants. Medicinal oils are manufactured by all oil companies and brands can be mixed and exchanged freely.