

# 香港綠色 創新大獎

Hong Kong Green  
Innovations Award



## 聯治有限公司

Allied Control Limited

### 應用於數據中心的浸沒式冷卻方案

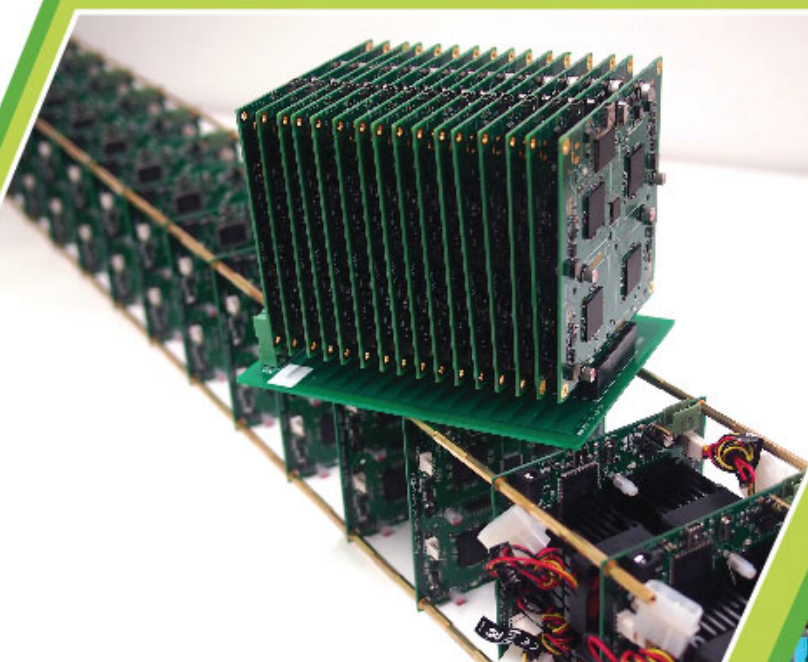
Application of Immersion Cooling in Data Centers

方案運用了無毒絕緣的氟化液，創建了革新的浸沒式冷卻系統，冷卻能力比傳統的空氣冷卻系統有效4000倍 (PUE1.01)，更可節省99%的用電。

The solution has adopted the non-conductive and non-toxic fluid to create a revolutionary liquid cooling system, which is 4000 times more effective in removing heat than traditional air cooling. The resulted PUE of 1.01 allows saving more than 99% of energy consumption.



每個19吋機架的功率可達500千瓦，減少耗電量。  
Up to 500kW per each 19-inch server rack to reduce electricity consumption.



每塊電路板之間只有幾毫米距離，可節省87%的空間，提高節能效益。

Only a few millimeters space between boards, leading to 87% reduction in space requirement, to enhance the energy efficiency.



兩相浸沒式冷卻設施每年可減少4,200噸碳排放。能源使用效率 (PUE) 值為1.01，較普遍香港數據中心PUE平均值2.2為低。  
Two-phase immersion cooling infrastructure, saving 4,200 tonnes of CO<sub>2</sub> emission annually. The Power Usage Effectiveness (PUE) of a data centre after application of this solution is 1.01, which is much lower than the average PUE of 2.2 for other typical data centres in Hong Kong.