

# INTEGRATED COOLING SOURCE APPARATUS, HEAT DISSIPATION SYSTEM, CONTROLLER, AND RELATED METHOD

## ABSTRACT

An integrated cooling source apparatus, a heat dissipation system, a controller, and a heat  
5 dissipation control method relate to the field of heat dissipation technologies. The integrated  
cooling source apparatus is connected to an air-to-liquid heat exchange mode component through  
a liquid cooling pipeline and is connected to a liquid-to-liquid heat exchange mode component  
through the liquid cooling pipeline. The air-to-liquid heat exchange mode component and the  
liquid-to-liquid heat exchange mode component are connected through the liquid cooling pipeline.  
10 The integrated cooling source apparatus is configured to provide a coolant through the liquid  
cooling pipeline, and the coolant sequentially passes through the air-to-liquid heat exchange mode  
component configured to dissipate heat for a first component of a device and the liquid-to-liquid  
heat exchange mode component configured to dissipate heat for a second component of the device.  
The integrated cooling source apparatus is further configured to receive the coolant that is output  
15 after heat is dissipated for the second component. In the apparatus, temperature requirements in  
different liquid cooling modes are met by supplying a coolant on one path, thereby reducing a  
quantity of coolant supply routes, a quantity of cooling towers, a quantity of circulating pumps,  
and a quantity of liquid cooling pipelines, and greatly reducing system complexity.

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FIG. 3