

**ACT** *Advanced Cooling Technology*

One-stop liquid cooling solution provider



# TTV Product Series

Advanced Cooling Technology SDN.BHD

## ► Introduction

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TTV (Thermal Test Vehicle), as a kind of thermal test tooling, can simulate the generation of waste heat in the operation of server chips, and monitor the  $T_{case}$  value in real time to form a controllable thermal load, providing a stable and reliable test environment for product development and verification.



## ► Product Features

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1. 19" or 21" standard rack-mounted structure
2. Analog market mainstream CPU, GPU specifications, heating power up to 2.5kW or even higher
3. Load heating power continuously adjustable
4.  $T_{case}$  temperature multi-point monitoring
5. Supporting air-cooled / liquid-cooled cooling module
6. Reliability, good stability

### • Chip Level TTV

Genoa / Turin / MI300 / H100 / GB200 / B100 / B200 / NV Switch / EGS / BHS

### • Server Level TTV

Classic CPU Server / HGX SXM5 structure / GB200 structure / Single chip structure

### • Rack Level TTV

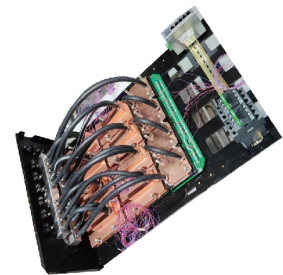
Air cooling / Air-Liquid cooling / Liquid cooling

## ► Chip Level TTV

- Emulation available: CPU, GPU, etc.
- Power Density: 10~200W / cm<sup>2</sup>
- Spreader material : Alloy, Copper etc.
- Resistance Accuracy :  $\leq \pm 2\%$
- $T_{case}$  monitoring
- T type thermocouple
- Uniform temperature field distribution
- Less wire design

## ► Server Level TTV

- Standard server chassis, 19", 21" cabinets
- Optional cooling modes: air-cooling, cold plate liquid-cooling, immersion liquid-cooling
- Load power adjustable
- Customized coolant / electricity / network interfaces
- Coolant interface: QD, QD-B, other threaded connectors
- Power interface: C14 / C20 and other standard socket, aviation connector, Duckbilled connector
- Network interface: RJ45, RS485, RS232
- PLC control
- HMI: 4.3" / 7" touch screen
- $T_{case}$  real-time monitoring
- PID regulation of air / liquid cooling capacity
- Coolant T / P / F operation parameter monitoring
- Alarm & Protection
- Multiple control modes for choice



## ► Rack Level TTV

- Standard server cabinets: 19-inch, 21-inch, OCP standard cabinets, etc.
- Customized adaptation of coolant / electricity / network interfaces
- Air / liquid cooled load infinitely adjustable on demand
- Access to other CDU, RDHx product testing
- Integrated control and monitoring of the entire cabinet

### Air-Liquid Cooling TTV Rack

- 50kW per Rack
- 42U 21" Rack
- 4U TTV Server \*8
- 4U ECU,
- Rack manifold, RDHx



### Air Cooling TTV Rack

- 20kW per Rack
- 42U 21" Rack
- 5U TTV Server \*5
- RDHx



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Welcome to contact us!

- Coolant Distribution Unit(CDU)
- Rear Door Heat Exchanger (RDHx)
- Rack Manifold (MANIFOLD)
- Quick Disconnect (QD)
- Cold Plate
- Thermal Test Vehicle(TTV)
- Immersion Tank
- Coolant
- Leakage Detection Product
- Liquid Cooling Solution

### **Advanced Cooling Technology SDN.BHD**

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