Hypertec

TRIDENT iC610TR-G6
immersion server

Unprecedented Performance

Looking for a sustainable ultra-high density, scalable system to meet the evolving demands of your critical high-performance computing needs? The 4th Gen Intel® Xeon® Scalable powered CIARA TRIDENT iC610TR-G6 immersion server is purpose-built for single-phase immersion cooling technology. It offers flexible support for up to 3 hot-swappable dual-socket compute nodes in a 1U chassis with up to 60 cores per socket, 2 M.2 slots, 2 PCIe 5.0 x16 slots and 6 TB of DDR5 4800 MHz memory per node.

Accelerated Workloads

We profoundly understand how software and algorithms work with any given hardware so we can optimize the system to your exact requirements. The CIARA TRIDENT iC610TR-G6 is perfect for HPC, rendering, edge computing, AI, machine learning and deep learning workloads.

Unmatched Serviceability

For improved serviceability and uptime, the CIARA TRIDENT iC610TR-G6 compute nodes can be maintained without impacting operation of other nodes in the same chassis. We offer optimal RAS features that help you save on service costs, reduce server downtime, and allow flexibility and ease to adapt to new generations of technology when the time comes.

Perfect for

› HPC
› Rendering
› Edge Computing
› AI
› Machine Learning
› Deep Learning

1U 3-Node Intel® (Custom Designed for Immersion Cooling) - Chassis

|	
Product Category	High Density Compute Server
Form Factor	3 dual-socket compute nodes in a 1U chassis
Cooling System	Single-Phase Immersion Cooling
Power Supply	Included in each Node - Single CRPSU 1200 W
Dimensions (L x W x H)	31.42" x 20.30" x 1.71" 800mm x 516mm x 43.5mm
Estimated Weight	67 lb / 30.4 kg

Node Specifications

Processor	Dual 4th Gen Intel® Xeon® Scalable Processors, TDP up to 350W
Chipset	C741
Heatsink	Immersion Cooling Custom Heatsink
TIM	Indium Foil
Memory	Maximum up to 2 + 4 TB (Per Node, DDR5 + Crow Pass) DDR5-4800 MHz (16 x DIMM) 8-channel memory architecture Supports RDIMM, LRDIMM, 3DS RDIMM/LRDIMM
Network Controller	Intel® X710-AT2 Dual-Port 10GbE 10GBASE-T Single-Port Dedicated Management 1GbE 1 GBASE-T
Storage	2 x Fixed 2.5" SSD (HBA or RAID Card Required) 2 x M.2 (Up to 22110, SATA or Gen4 x2 link)
Expansion Slots	2 x PCIe x16 slot (Gen5 x16 link, HHHL)
GPU/FPGA Capabilities	N/A or 2 x if HH/HL
GPU/FPGA Support	Upon Request
I/O Top	2 x USB 3.0, 1 x VGA, 1 x RJ45 Management Port, 2 x RJ45 GbE LAN Port
Management	Aspeed® AST2600
Power Supply	1 x Fixed 1200W AC - 80 PLUS Platinum Power Supply

OS Support	Windows Server 2019, Red Hat Enterprise Linux 8.3 (x64) or later, SUSE Linux Enterprise Server 15 SP2 (x64) or later, Ubuntu 20.04.1 LTS (x64) or later, VMware ESXi 7.0 Update 2 or later

Single-Phase Immersion Cooling Capacity

Max Nodes Capacity per Pod	
Submer MicroPod	N/A
Submer SmartPodX (50kW)	63 Nodes - 800 W Max per Node
Submer SmartPodXL (50kW)	144 Nodes* - 400 W Max per Node
Submer SmartPodXL+ (100kW)	144 Nodes* - 813 W Max per Node
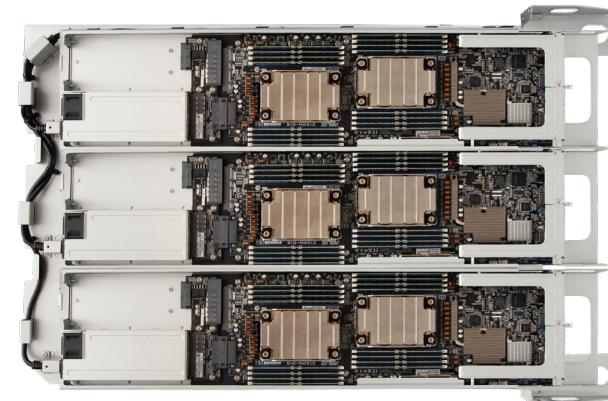
The Unrivalled Benefits of Immersion Cooling

Immersion cooling has a huge number of benefits, especially when it comes to sustainability and efficiency. It significantly reduces the amount of water used, levels of carbon emissions, and much more.

95%
Reduction in Cooling OPEX

PUE of 1.03 (certified by a 3rd party). ROI of less than 1 year even only considering the electricity savings.

60%
Increase in Hardware Lifespan

No moving parts, no dust particles, no vibrations, less thermal and mechanical stress due to the uniformity provided by the liquid and its viscosity.

10x
Increase in Server Density

Dissipation capacity of up to almost 100 kW in the space of two standard racks.

99%
Heat Captured in Form of Warm Water

Allows for unprecedented energy reuse if data centers are built close to communities or industry potentially creating new revenue streams.

50%
CAPEX Reduction Build Costs

Rapidly deployable in raw space without need for raised floors nor cold aisles. Minimum retrofitting required for existing data centers.

0%
Water Consumption

The closed loop of the secondary cooling system guarantees no corrosion, health risks (legionella) and prevents any water evaporation.

The 360° Hypertec
Made-For-Immersion Solution

We bring a full 360° solution so all you need to do is sit back and enjoy all the benefits without the headache and save on OPEX and CAPEX. Our professional services enhance your IT journey by reducing time, TCO, effort and resources.
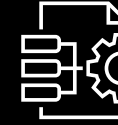

Want to learn more or need help?

› Contact Sales
› Immersion Cooling Solutions
› Hypertec Cloud Services
› Hypertec Support Center
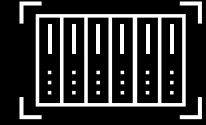› Support Services & Warranty
› Sustainability

Learn more
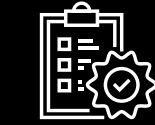
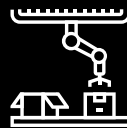**Site Assessment**
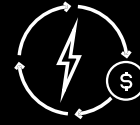
Power Budget

Installation Planning

Tank & Pod Layout

Factory Assembly
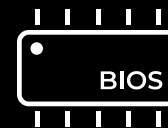
BIOS & Firmware Settings
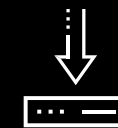
Software & OS Installation

Customer Image
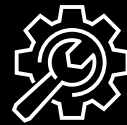
Onsite Installation

Cabling & Labeling

Networking & Power

Global Warranty & Service

Limited Warranty

Hardware warranty includes a one year, parts and labour with return to Hypertec USA or Canada. Customers may purchase an extended warranty of up to 5 years on parts and labour with different support levels. For additional information regarding worldwide limited warranty and technical support, please visit: https://hypertec.com/support-services-policy/.

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