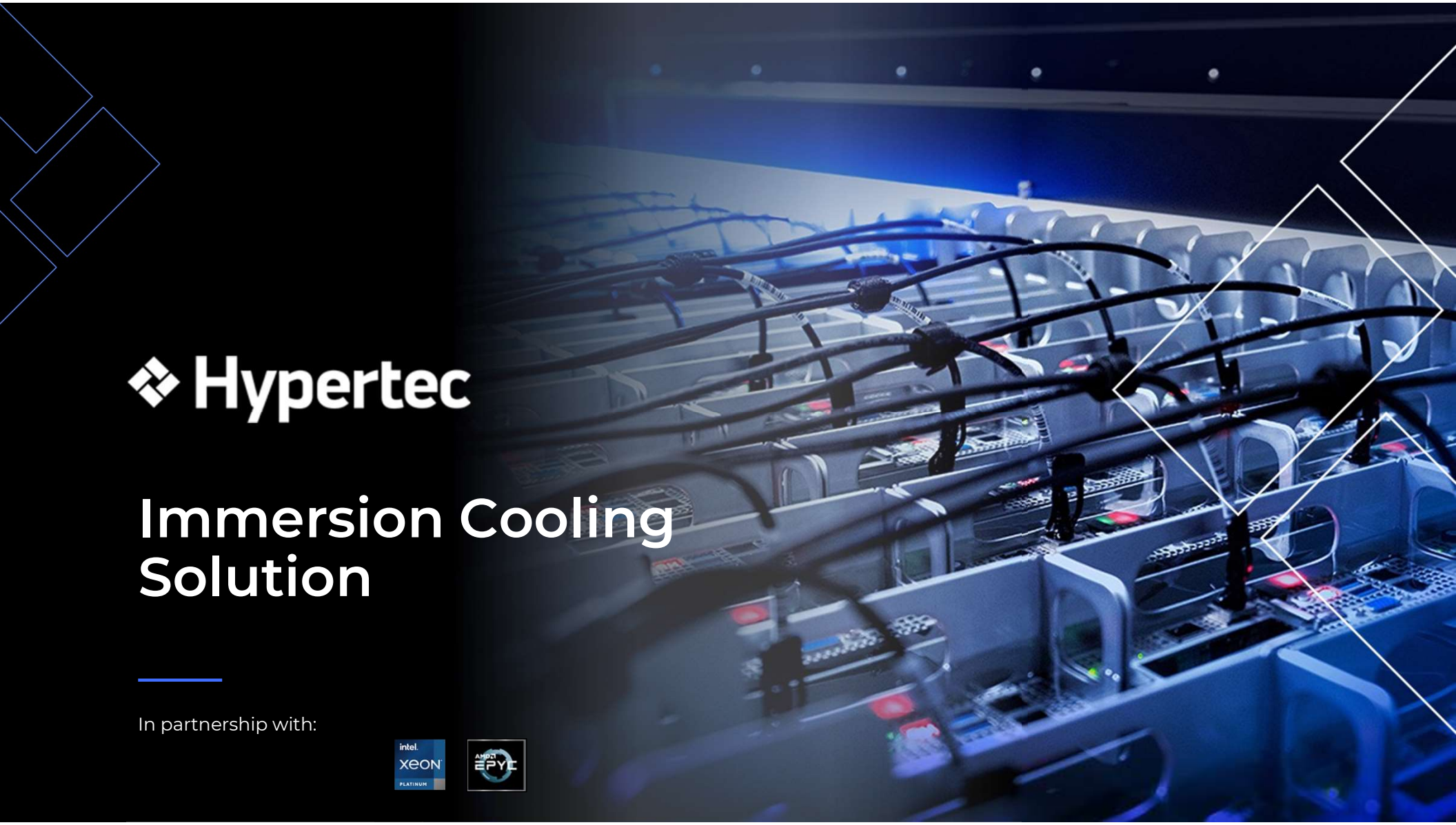
Hypertec

Immersion Cooling Solution



In partnership with:

intel. XEON PLATINUM

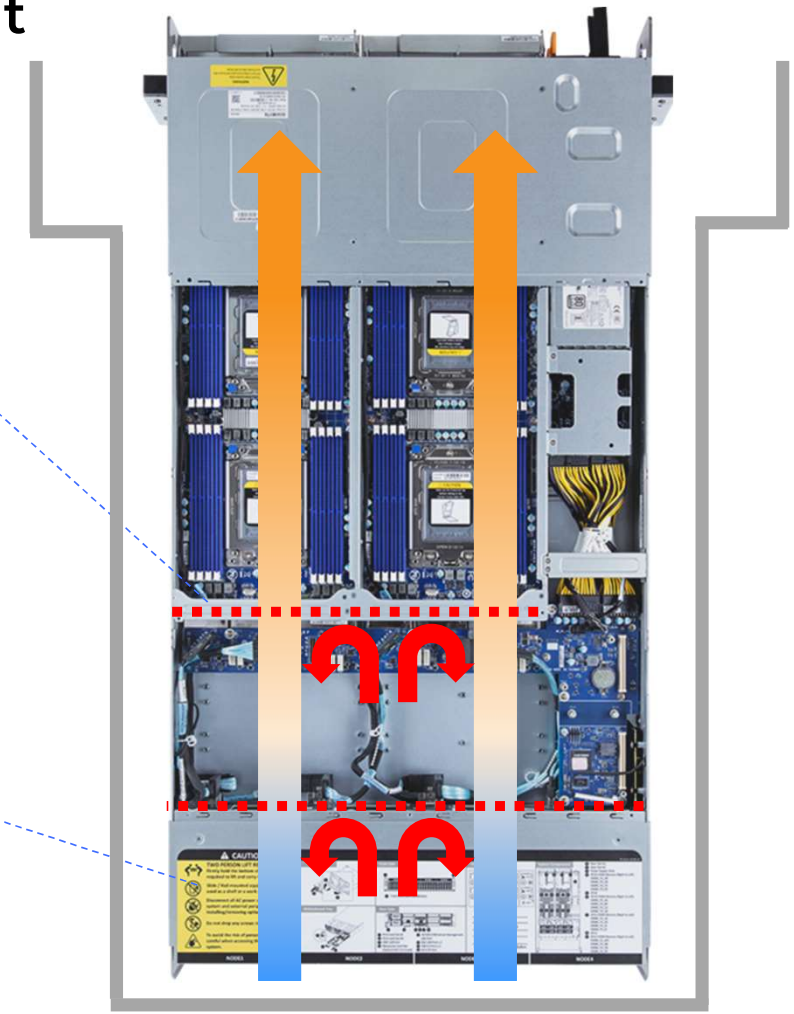
AMD EPYC

Immersion Cooling Product Comparison

FEATURES	RETROFIT	ADVANCED RETROFIT	IMMERSION BORN DESIGN
Availability	Multiple Vendors	Some Vendors + Hypertec	Hypertec only
Base	OTS Air-Cooled Server	COTS Air-Cooled Server	Immersion-Born
Vanity-Free Design	✗	✗	✓
Ease of Installation and Serviceability	Low	Medium	High
Performance Availability (OC or Turbo Lock)	✗	Hypertec only	✓
Supports Both AC & OCP Power	✗	✓	✓
Sustainable Composite Material	✗	✗	✓
Custom Immersion Cooling Heatsink	✗	✓	✓
Intel Xeon and AMD EPYC 3rd Gen Compatibility	✓	✓	✓
Intel Xeon W/SP and AMD EPYC 4/5th Gen Ready	✗	✗	✓
CPU Density Per SmartPod (42RU/48RU)	168	168	252
Warranty	Questionable	Questionable	Full Warranty Up to 5 years NBD 24x7

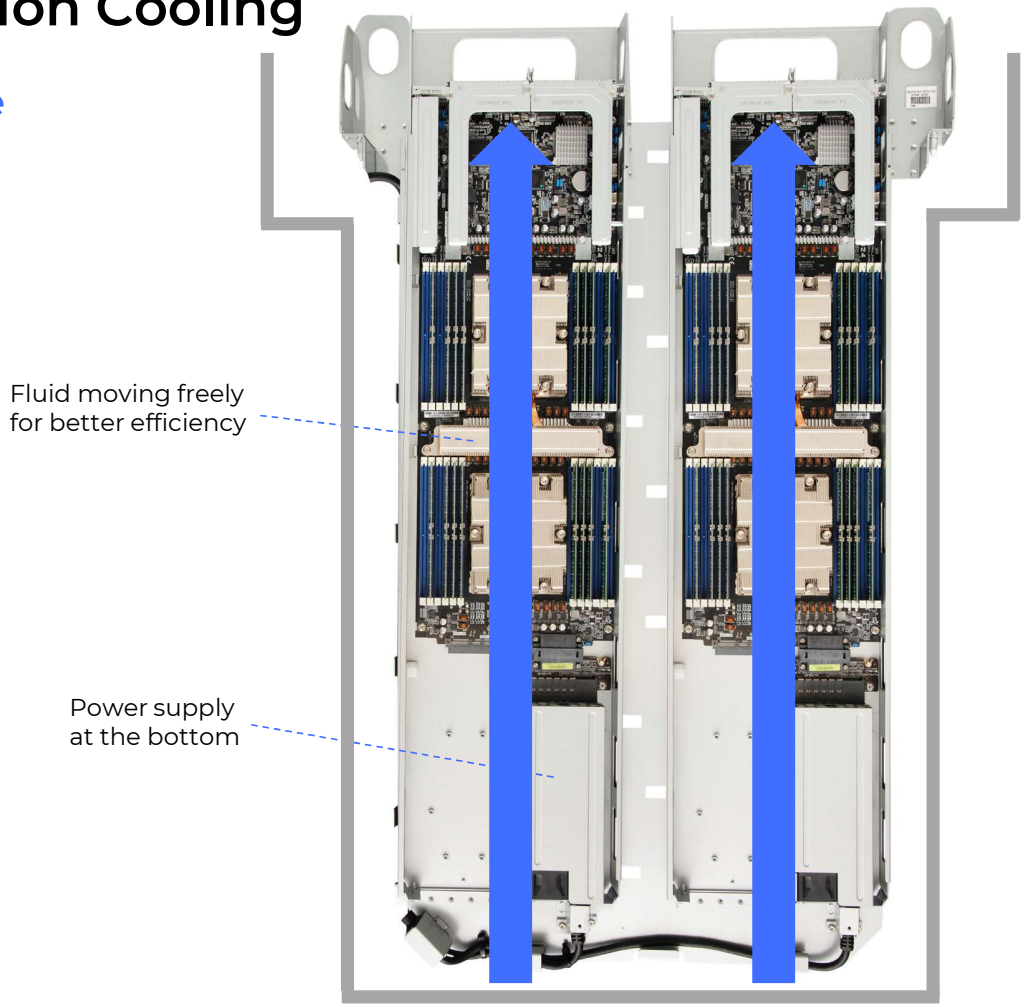
OEM Immersion Retrofit

2U 4 Nodes Example



Native Immersion Cooling

1U 2 Nodes Example



Hypertec

Our 360° Made-for-Immersion Solution

You can now enjoy all the benefits of our 360° immersion cooling solution without the headache, while saving money on OPEX and CAPEX.

- ✓ Site Assessment
- ✓ Power budget
- ✓ Planning
- ✓ Tank and pod layout
- ✓ Factory assembly
- ✓ BIOS & Firmware settings
- ✓ Software & OS installation
- ✓ Customer image
- ✓ Onsite installation
- ✓ Cabling & labeling
- ✓ Networking & power
- ✓ Warranty

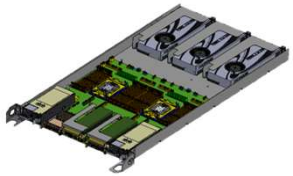
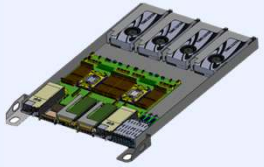
CIARA TRIDENT Product Portfolio

Immersion-Born

Product	Form Factor	Processors / Node	Memory / Node	PCIe Slots / Node	Storage / Node	Power Supply
TRIDENT iC610DR-G6	1U-2 x compute nodes in a 19" chassis	Dual 4th Gen Intel® or 5th Gen Intel® Xeon® Scalable TDP up to 350W	16 x DIMM slots DDR5 RDIMM 4800 MHz 5th gen CPU: up to 5600MHz	2 x PCIe 5.0 x16 LPHL	2 x M.2 SSD up to 2280 (PCIe/SATA) 2 x Optional Fixed 2.5" SATA HDD	Up to 82/88/96 Nodes in 41/44/48U Smart Pod 920(c)
TRIDENT iC610TR-G6* *OCP OrV3 available	1U-3 x compute nodes in a 21" chassis	Dual 4th Gen Intel® or 5th Gen Intel® Xeon® Scalable TDP up to 350W	16 x DIMM slots DDR5 RDIMM 4800 MHz 5th gen CPU: up to 5600MHz	2 x PCIe 5.0 x16 LPHL	2 x M.2 SSD up to 2280 (PCIe/SATA) 2 x Optional Fixed 2.5" SATA HDD	Up to 123/132/144 Nodes in 41/44/48USmart Pod 920 with 270W CPU. Up to 108 Nodes in 41 or 48U Smart Pod 920 with 350W CPU
TRIDENT iC615DR-G6 *21" chassis available	1U-2x compute nodes in a 19" chassis*	Dual AMD EPYC™ 9004 Series Processors TDP up to 400W	24 x DIMM slots DDR5 RDIMM 4800 MHz	2 x PCIe 5.0 x16 LPHL	2 x M.2 SSD up to 2280 (PCIe/SATA)	Up to 82/88/96 Nodes in 41/44/48U Smart Pod 920(c)

CIARA TRIDENT Product Portfolio

Immersion-Born

Product	Form Factor	Processors / Node	Memory / Node	PCIe Slots / Node	Storage / Node	Power Supply
TRIDENT iS515R-G6	1U, 19" chassis	Single AMD EPYC™ 9004 Series TDP up to 400W	8 x DIMM slots DDR5 RDIMM 4800 MHz	1 x PCIe 5.0 x16 LPHL 1 x PCIe 5.0 x16 FHFL 1 x OCP 3.0 PCIe 5.0 x 16	16 x E1.S NVMe Drive Bays (Up to 128TB with 8TB) Or 16 x E1.L NVMe Drive Bays (up to 1PB with 64TB) 2 x M.2 SSD up to 2280 (PCIe/Sata)	1+1 redundant 1600W 80+ Titanium PSU
TRIDENT iG610R-G6 	1U, 19" chassis	Dual 4th gen Intel® or 5th Gen Intel® Xeon® Scalable TDP up to 350W	32 x DIMM slots DDR5 RDIMM 4800 MHz 5th gen CPU: up to 5600 MHz	3 x PCIe 5.0 FHFLDW 2 x PCIe 5.0 LPHL 1 x OCP 3.0 Supports 3 x GPU	2 x M.2 up to 2280	1+1 redundant 80+ Titanium PSU (wattage specs TBC)
TRIDENT iGW610R-G6 	1U, 21" chassis	Dual 4th gen Intel® or 5th Gen Intel® Xeon® Scalable TDP up to 350W	32 x DIMM slots DDR5 RDIMM 4800 MHz 5th gen CPU: up to 5600 MHz	4 x PCIe 5.0 FHFLDW 2 x PCIe 5.0 LPHL 1 x OCP 3.0 Supports 4 x GPU	2 x M.2 up to 2280 4 x E1.L or E1.S (TBC)	1+1 redundant 80+ Titanium PSU (wattage specs TBC)

Ciara **TRIDENT iC610TR-G6**

Immersion-born design | Ultra high density

DENSITY

Industry best density
with up to up 84/96 Nodes
in 42/48U SmartPod

FLEXIBILITY

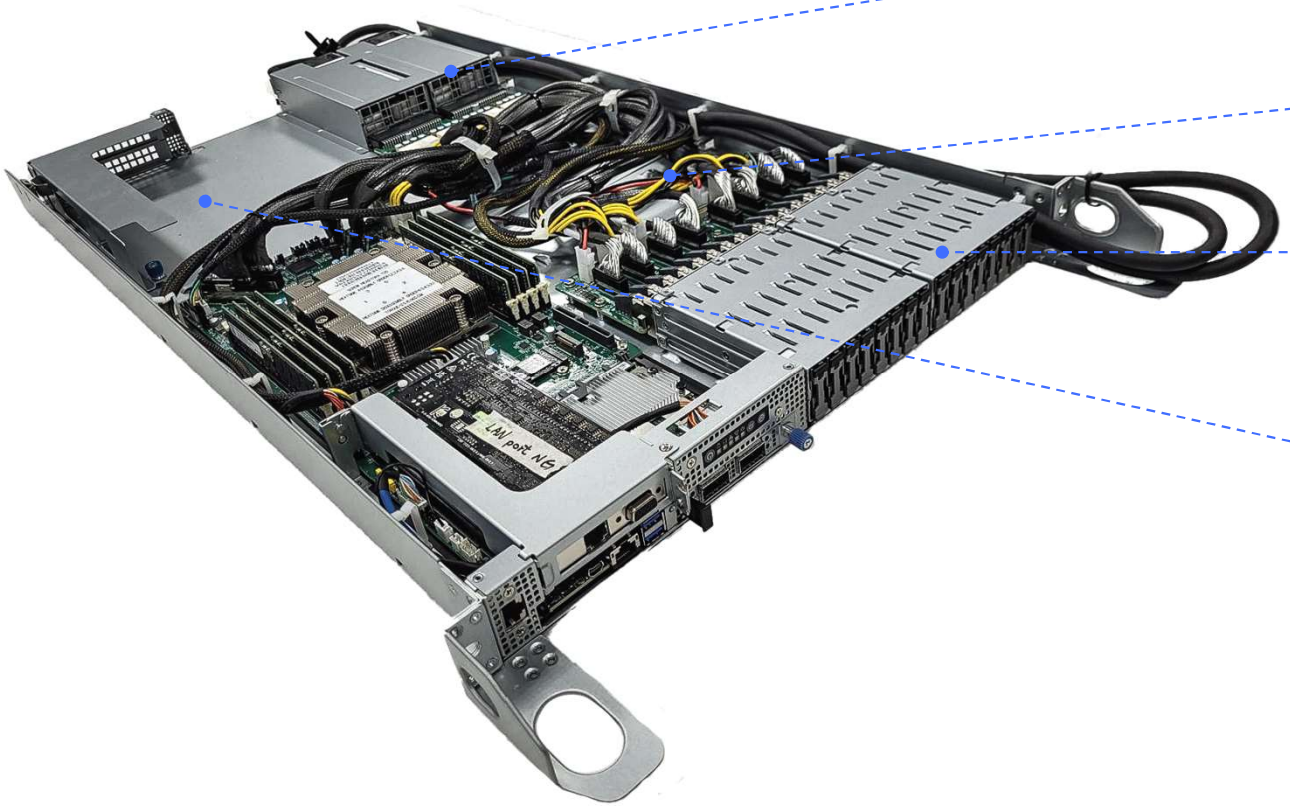
Platform is designed to accommodate multiple **form factors**, **chipsets**, **storage configs** and **power configs**

TCO

Sustainable hardware design **minimizes bill of materials costs, extends** useful life and **improves serviceability**

iS515R-G6

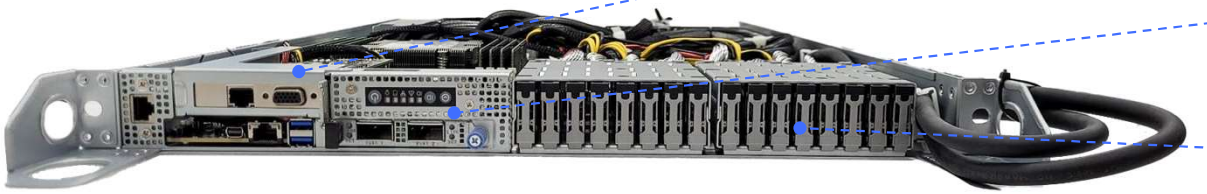
Immersion Server



- Redundant 1200 Watt or 1600 Watt CRPS
- E1.X backplane
- 16x Front (top surface) E1.S or E1.L drives
- 16x dual height slot support for a FHFL PCIe Card or GPU

iS515R-G6

Immersion Server



PCIe x16 Slot for NICs, GRAID and other cards

OCP 3.0 Slot for NICs

16x Front (top surface) E1.S or E1.L drives

TRIDENT OCP TRIDENT

Immersion Born Compute OCP design server

Target workloads

TRIDENT iCO Server:
Multi-node architecture ideal for CDN, HCI, Cloud workload. Designed to drive digital transformations and IT agility

For cloud service providers, Fintech, Hyperscaler, Virtualization

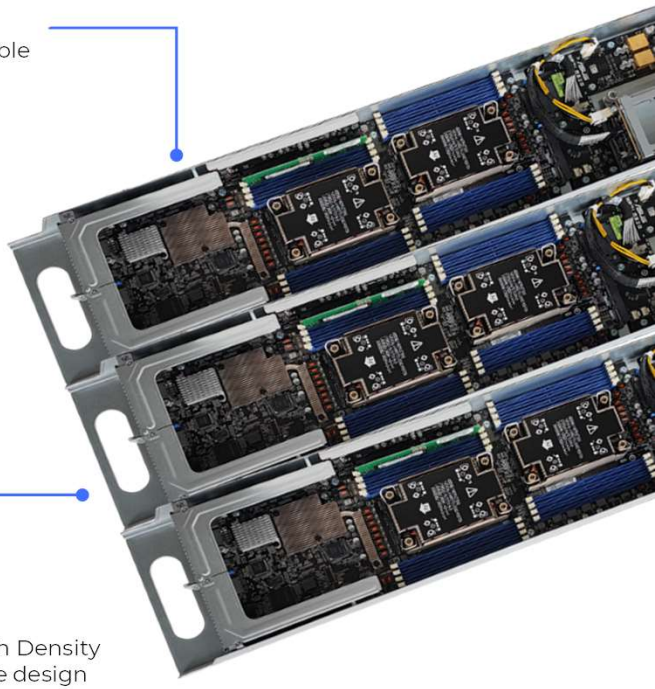
TRIDENT iCO610TR-G6 Server

- 1OU 3 Power Rendered nodes

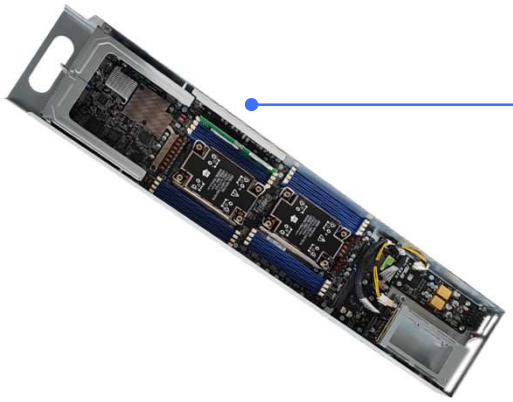
Each Node Specifications:

- Dual 4th Generation Intel® Xeon® Scalable processors
- 16 x slots DDR5 4800MHz RDIMM
- 2 x M.2 + optional 2 x 2.5'' SSD
- 2 x PCIe 5.0 x16 HHHL slots
- OCP Design

Compliant with Open Compute and Power infrastructure
Open Rack v3 (ORv3) Platform compatible
21'' server width



Open Compute Project Design



Optimal liquid flow
open chassis concept for
immersion submerge POD

Super High Density
multi node design

Datasheet
TECH SPECS

CIARA TRIDENT iCO610TR-G6

Form Factor	1OU-3 OCP Powered Render Nodes
Processor/Render Node	Dual 4th Gen Intel® Xeon® Scalable Processors TDP up to 350W
Cooling System / Node	Immersion
Memory / Node	Up to 4TB DDR5 4800 MHz memory 8 x memory channel architecture 16x memory slots
Network Controller / Node	Intel X710 10 GbE LAN Port
Storage / Node	2 x M.2 SSD up to 22110 (SATA or Gen4 x2 link) 2 x 2.5" NVMe front bays (optional)
Expansion Slots / Node	2 x PCIe 5.0 x 16 HHHL
Management / Node	Dedicated Management 1 GbE 1000 BASE-T
Power Supply / Node	OCP OrV3 Compatible
Dimensions (DxWxH)	800mm x 537mm x 48.06mm

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CIARA TRIDENT Series Product Roadmap

CY Q1-24	CY Q2-24	CY Q3-24	CY Q4-24
iC610DR-G6 (1U-2 NODES) Dual 4th or 5th Gen Intel® Xeon® Scalable Processors			
iC610WTR-G6 (1U-3 NODES) Dual 4th or 5th Gen Intel® Xeon® Scalable Processors			
iCO610TR-G6 (1U-3 NODES (OCP OrV3) Dual 4th or 5th Gen Intel® Xeon® Scalable Processors			
iC615DR-G6 (1U-2 NODES (19")) Dual AMD EPYC 9004			
iCW615DR-G6 (1U-2 NODES (21")) Dual AMD EPYC 9004			
	iS515R-G6 (1U Storage) Single AMD EPYC 9004, 16 x E1.S or 16 x E1.L and 2 x M.2		
		iG610R-G6 (1U, 3 x GPU (19")) Dual 4th or 5th Gen Intel® Xeon® Scalable Processors	

Server Availability

POC PERIOD

Hypertec