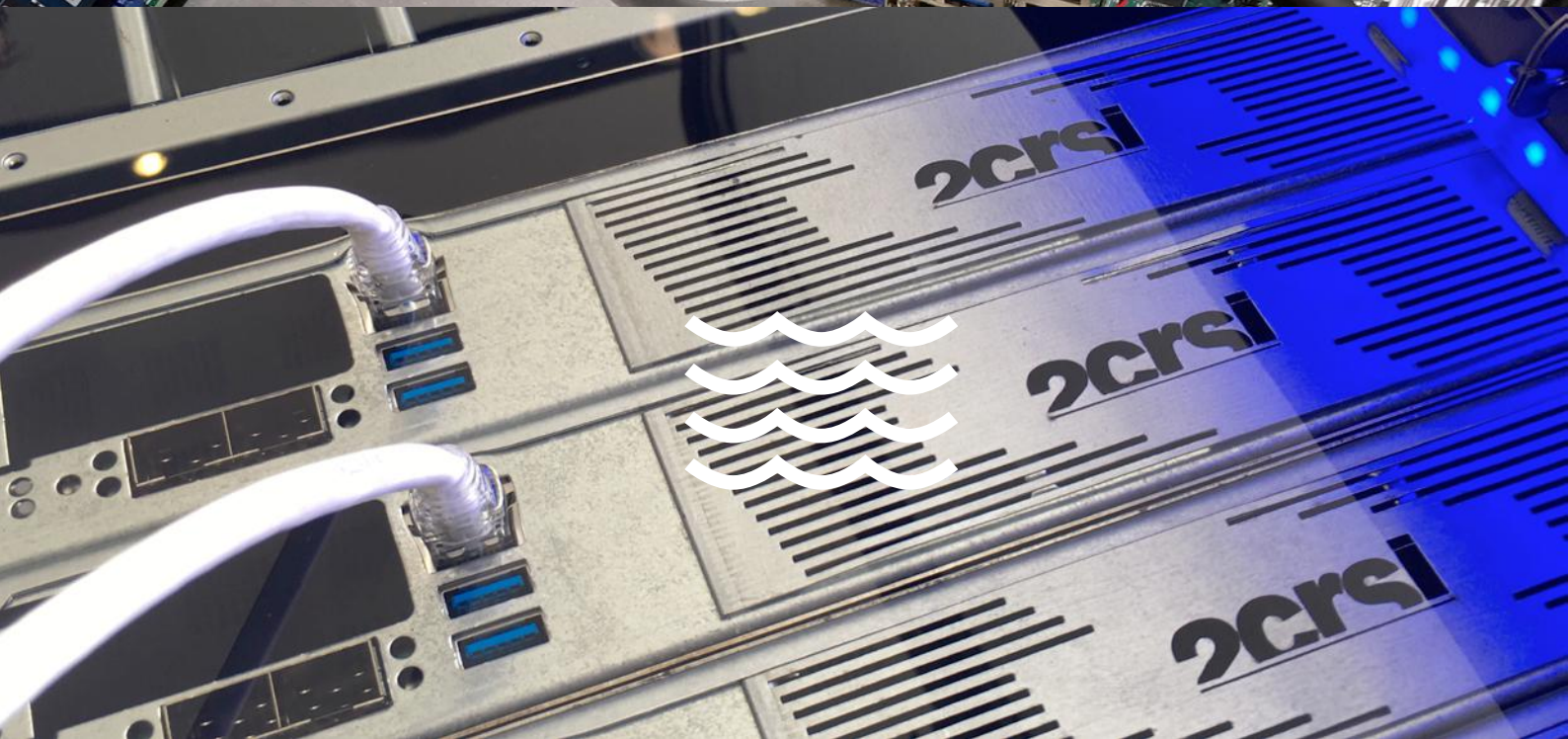
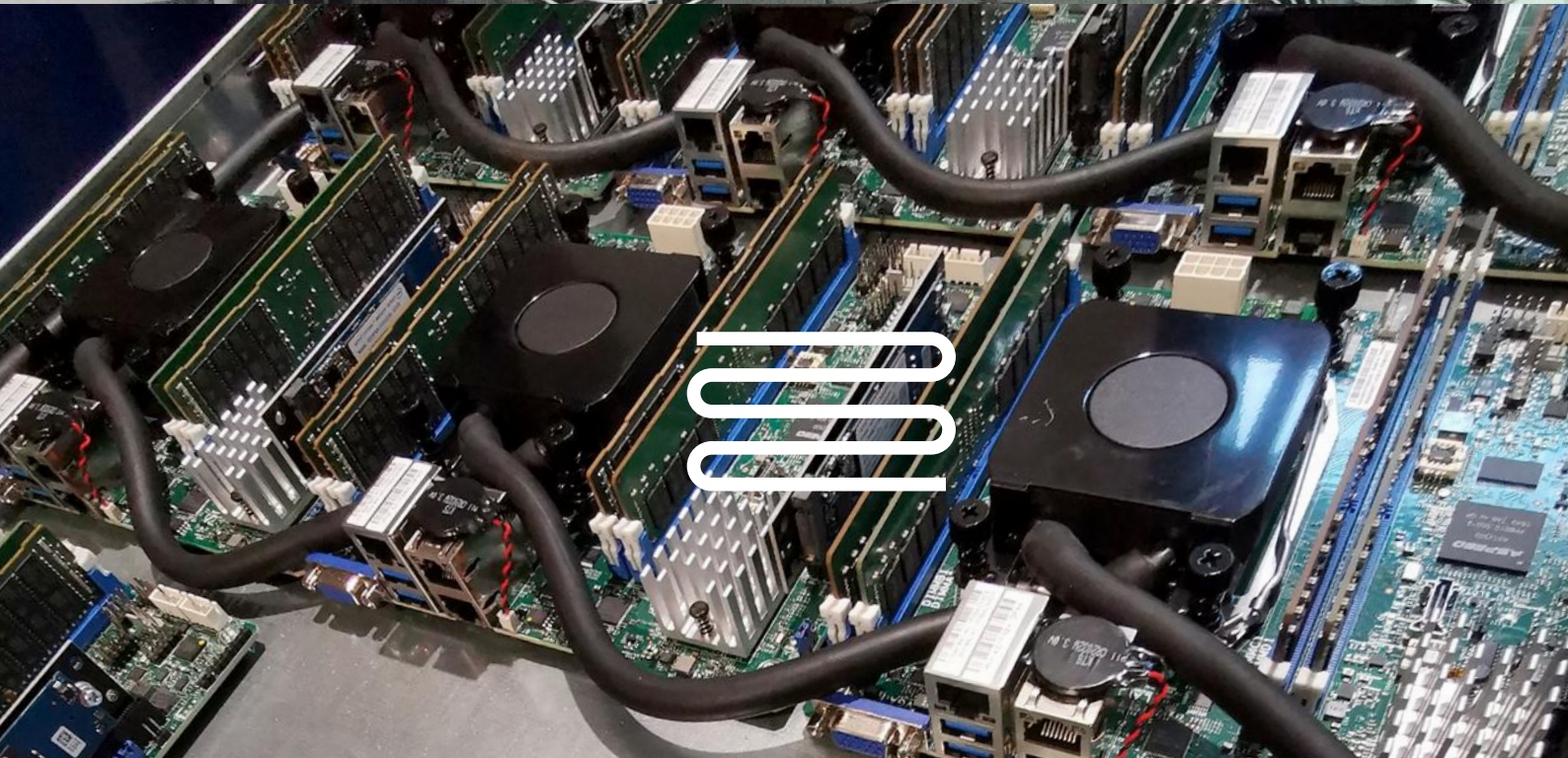


# OCTOPUS

Compute solutions by 2CRSi







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What are your datacenter needs? P 4

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OCtoPus Solutions P 6

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What makes the OCtoPus servers unique? P 8

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3 types of cooling to fit your needs P 10

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About 2CRSi P 20

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OCtoPus servers range P 23

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Product sheets P 24

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# What are your datacenter needs?

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## Your field of activity...



Life Science



ISP - Hosting  
Datacenters



Research &  
Education



Industries



Defense  
Government  
Administration



Software  
providers

## ... drives specific needs



Compute



Storage



Network

But you may also have specific  
challenges related to...



We provide a customized approach  
to answer your specific needs

# OCtoPus Solutions

OCtoPus is a new generation of servers designed by 2CRSi, based on the Open Compute Project

**Best profitability**  
**Highest performance**  
**Higher flexibility**

For simulation, AI, deep learning, VDI,  
Cloud gaming, rendering or CAD.

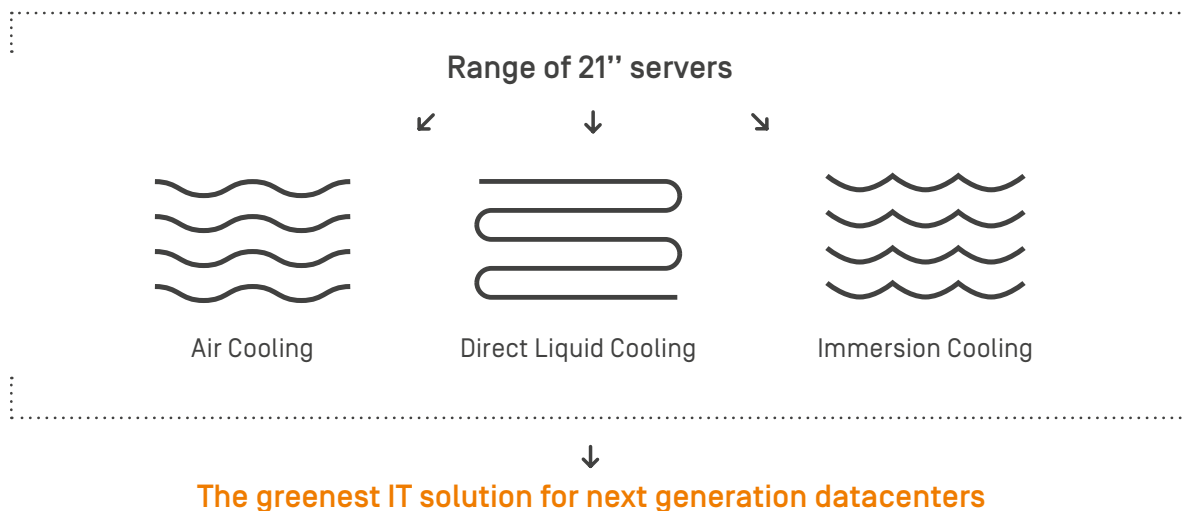
What if you could get the best compute power from your clusters while reducing your costs to update and maintain them?

At 2CRSi, we designed an all-in-1 solution based on the OCP community standards combined with our unique server designs:

While standard server architectures reach their limits, new technologies and approaches enable us to reach a new level of efficiency.

OCtoPus, a wide range of 21" servers compatible with 3 cooling technologies.

## OCtoPus



**Optimize your CAPEX and OPEX**



## Benefits

The OCtoPus combines the best advantages of OCP architectures with unique R&D innovation from 2CRSi and new technologies from its strategic partners.

### A wide choice of cooling systems

- Optimized air cooling
- Direct liquid cooling (DLC)
- Immersion cooling

### Supercharged density level

Our larger 21" form factor allows you to push internal density to the next level.

### Maintenance made quick and easy

- Rectifiers, fans and servers are hot-pluggable
- Front Data cables & LED indicators
- Tool-free

### Dramatically increased reliability

- Servers downtime is reduced
- Fans & power supplies are relocated & aggregated
- Power supplies are redundant



# Why are the OCtoPus servers unique?

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## **A deep look into our 21" server designs.**

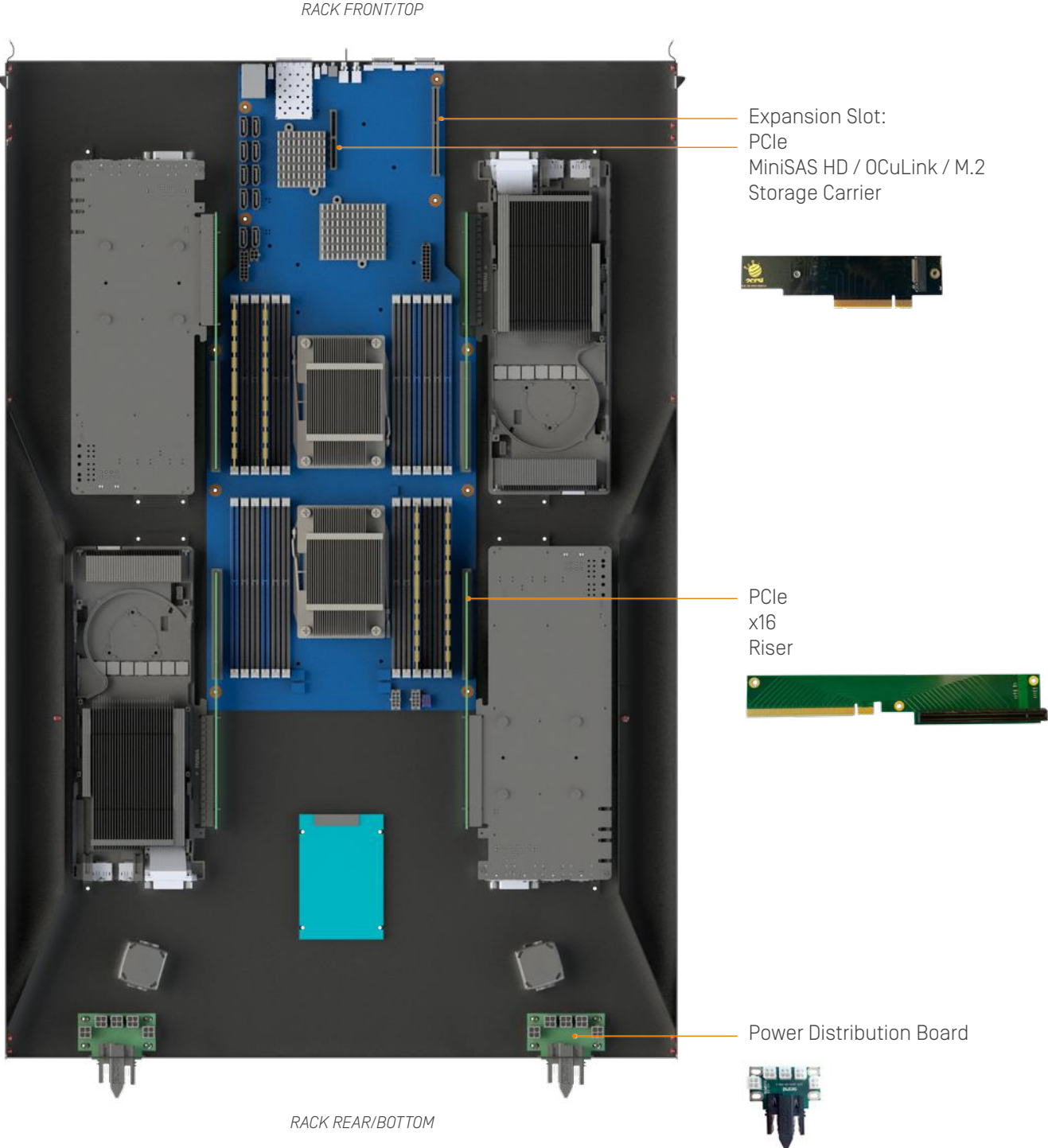
All our servers are designed, customized and produced in house to meet your needs and provide the best performances.


Our R&D department innovates with unique mechanics and electronics to allow for the best integration of the latest technologies available on the market.

Designed for optimal heat dissipation, all server configurations can be adapted to our three cooling systems (structure may vary according to cooling system chosen).

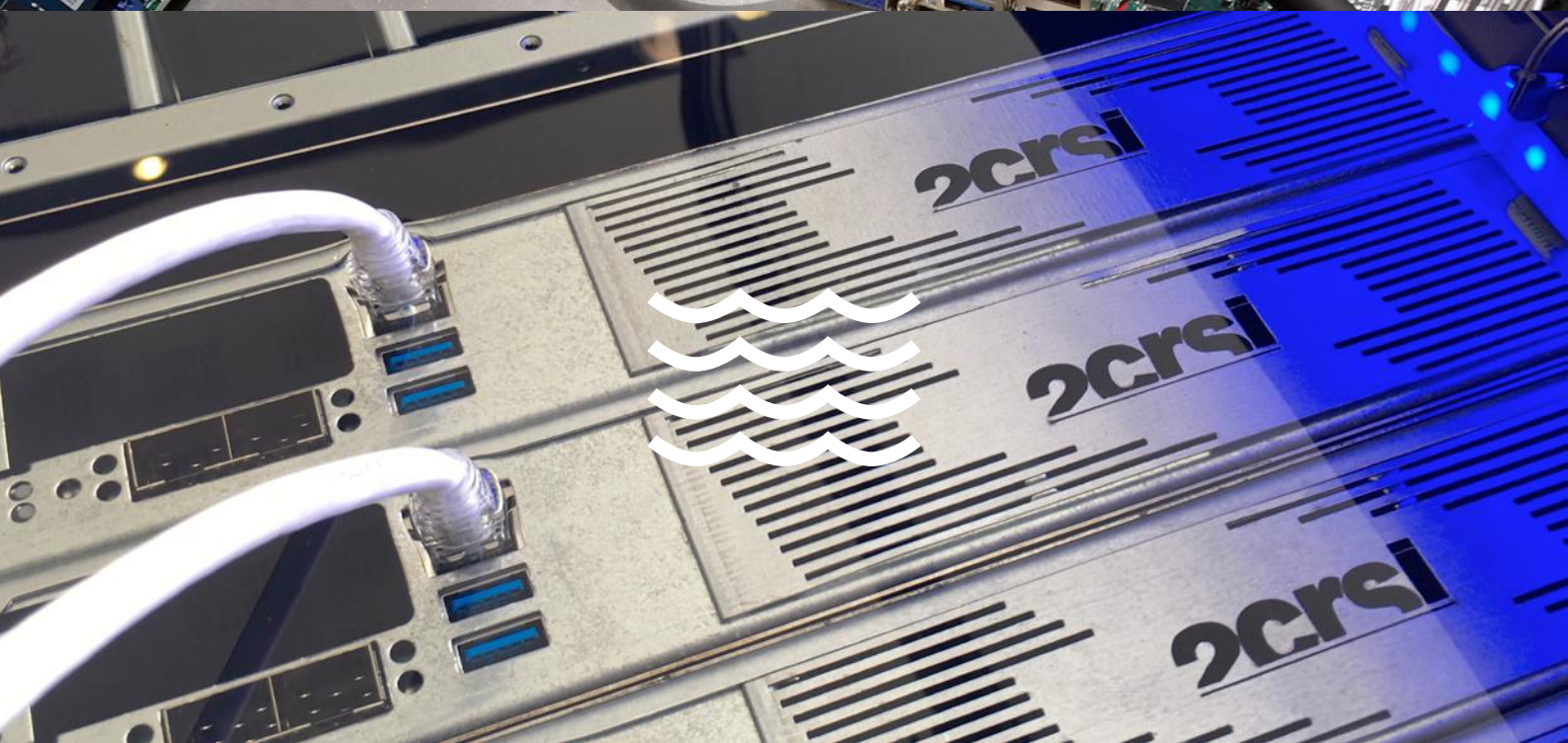
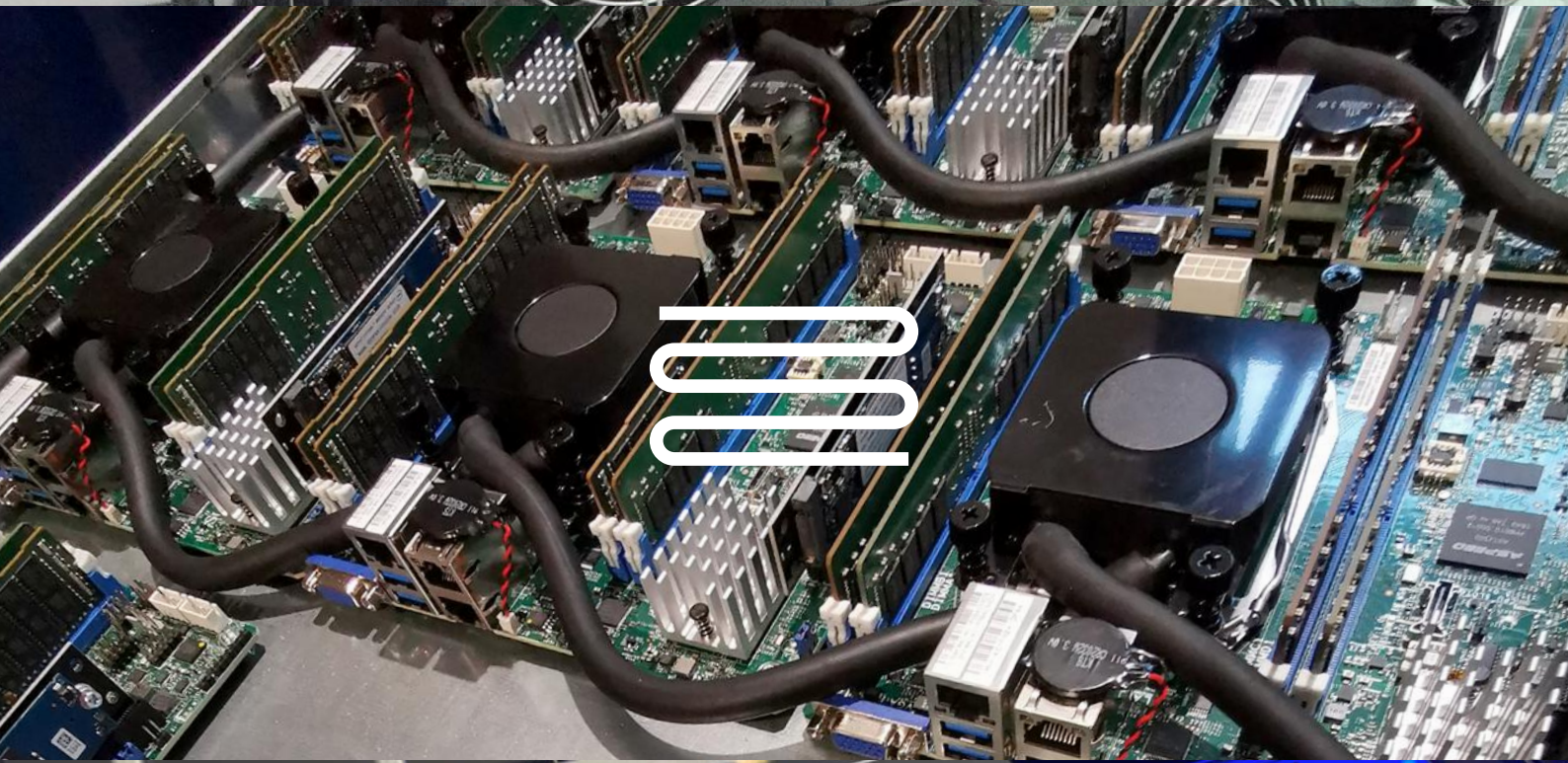


# OCtoPus Server Top View

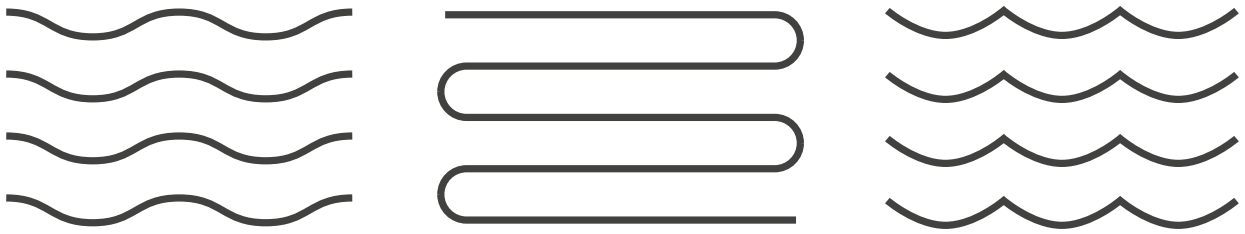


 **OCtoPower 1.2**  
**OCP 2CRSi contribution**









3 types of cooling  
to fit your needs



# Air cooling



## OCtoPus Rack 30

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### Pushing air cooling efficiency to its limits

The OCtoPus was created in 2017 while we were trying to improve the efficiency of a standard OCP cluster. In addition to all the developments around the servers, we rethought the implementation of fans and power supply at the rack level.

We chose to aggregate all the fans at the rear of the rack, to add smart control of the fans speed and to monitor the power distribution. These developments made it possible to reduce power consumption by 23%.



3D FRONT VIEW

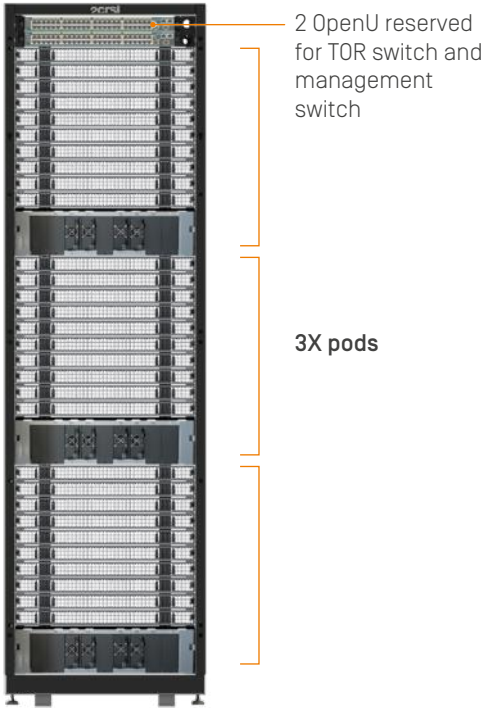


3D BACK VIEW

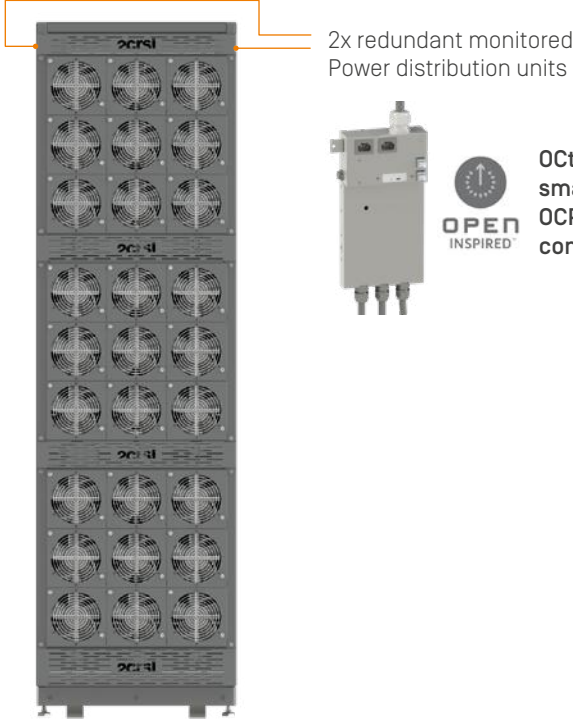
*\*Also available :*  
- OCtoPus Rack 24 (24 servers and 18 fans)  
- OCtoPus Rack 18 (18 servers + 1/3 of the rack available for 19" servers)

# Specifications

30 OpenU servers -3 independent Pods - TOR & management Switches  
600mm (W) x 1067mm (D) x 2100mm (H)

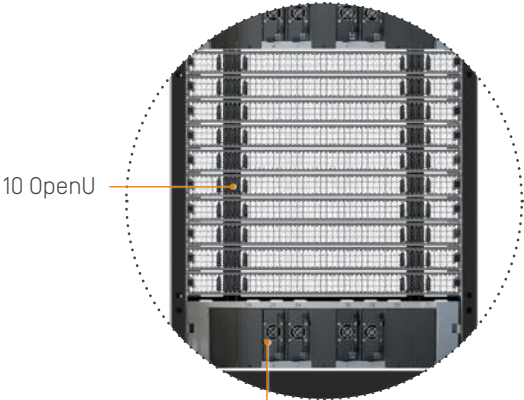


RACK FRONT VIEW



RACK REAR VIEW

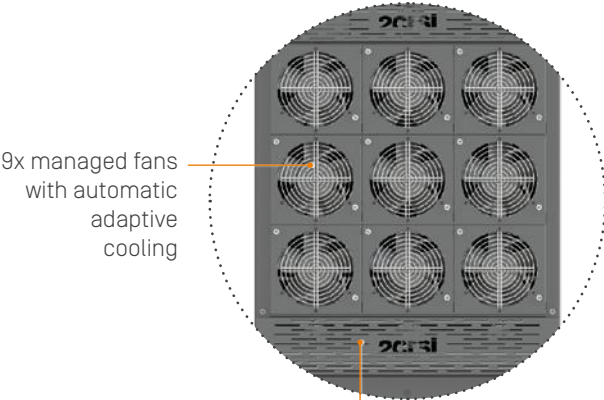
POD FRONT VIEW



10 OpenU

3 OpenU:  
1x Power Supply unit including up to 8 power modules with redundancy from N+1 to N+N

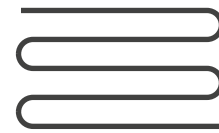
POD REAR VIEW



9x managed fans with automatic adaptive cooling

BusBar coming from Power supply units to power the pods

# Direct liquid cooling



## OCtoPus Hybrid Rack 30

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### A combination between direct liquid and air cooling

Air cooling is not efficient enough to support ultra high density. With this in mind, we adapted direct liquid cooling to our air-cooling rack: specific higher power server components such as CPUs and GPUs are exposed to liquid in order to be cooled more efficiently than air cooling. Highest performance servers can be integrated efficiently

using this approach.

Our DLC rack includes manifolds with double shut-off valves to ensure hot-swappable liquid distribution to the servers at the rear of the rack. In addition to the DLC, 9 fans ensure to keep remaining components cool to avoid SPOFs (Single Point Of Failure).



3D FRONT VIEW

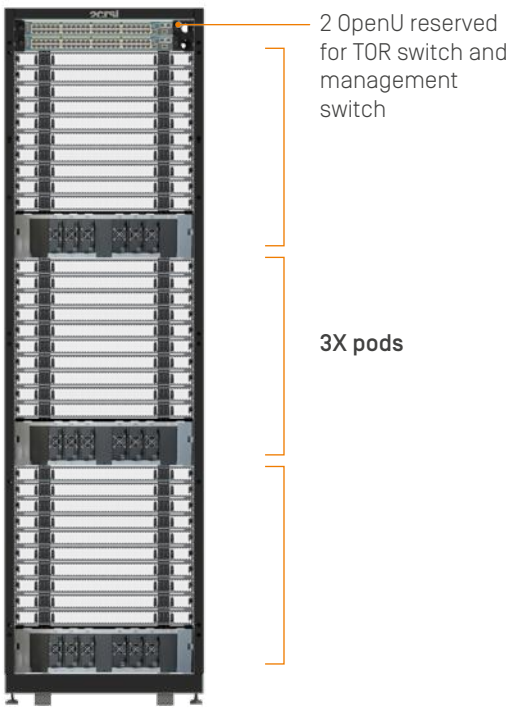


3D BACK VIEW

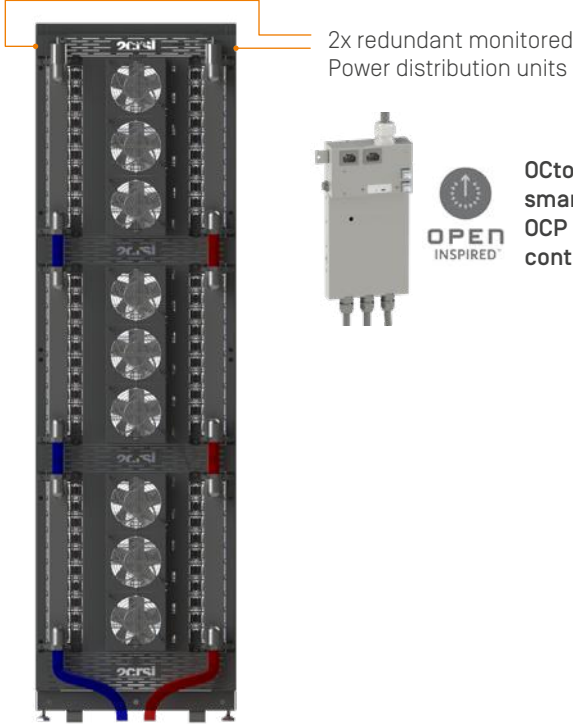


# Specifications

30 OpenU servers - 3 independent Pods - TOR & management Switches  
600mm (W) x 1067mm (D) x 2100mm (H)



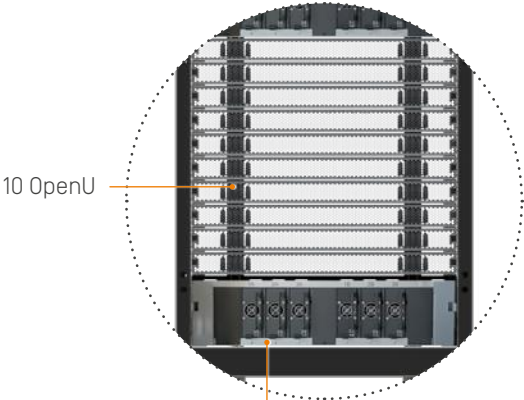
RACK FRONT VIEW



RACK REAR VIEW

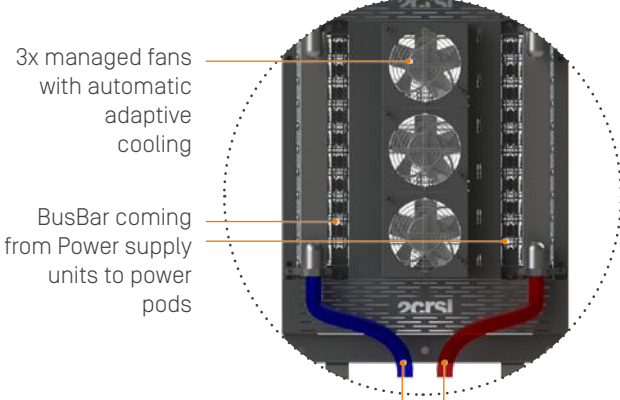


POD FRONT VIEW



1x Power Supply unit including up to 8 power modules with redundancy from N+1 to N+N

POD REAR VIEW



# Immersion cooling



## OCtoPus Tank

From 21 to 39 OpenU servers in a tank

### Get to the highest level of cooling

To go further in energy saving and performance, 2CRSI develops solutions with immersion cooling. Servers are submerged in tanks filled with a non-conductive fluid which cools all the components down, allowing to reach the highest level of data center efficiency.

Thanks to immersion, servers do not need fans to be cooled anymore and data centers no longer need to invest in expensive and inefficient air conditioning systems. At the scale of a datacenter, this represents **25% savings** on the implementation of a datacenter **[CAPEX]** and **40%** on its operating costs **[OPEX]**.

Immersion cooling is a sustainable choice: life of the components is extended, energy consumption is reduced and the heat generated can be reused.

**-25% CAPEX and -40% OPEX**

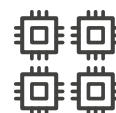
**Datacenter: PUE down to 1.03**



Reduce power  
consumption



Reduce building  
costs



Increase  
computing  
density per sqm



Easy to set up



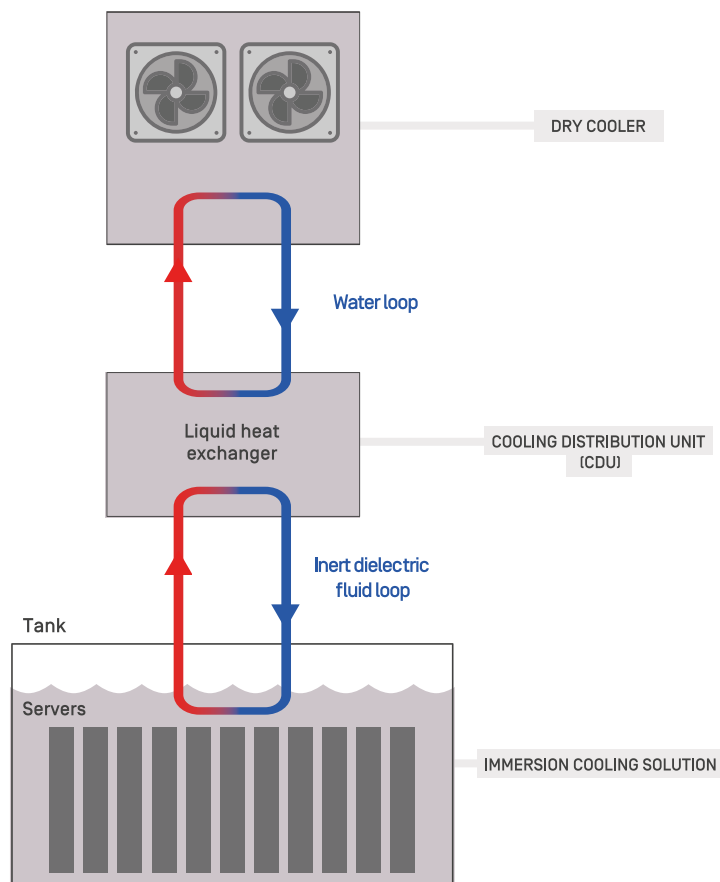
Noiseless



Homogeneous  
cooling



## How liquid immersion cooling works





## We develop immersion solutions in close collaboration with 2 immersion racks manufacturers.

This approach allows us to leverage different technologies available on the market. Our goal is to better answer our clients' needs, putting Green IT at the center of the debate.



*Green Revolution Cooling (GRC) is an American-based company founded in 2009. Holder of 12 patents — with 9 pending, GRC has worldwide installations in 13 countries*

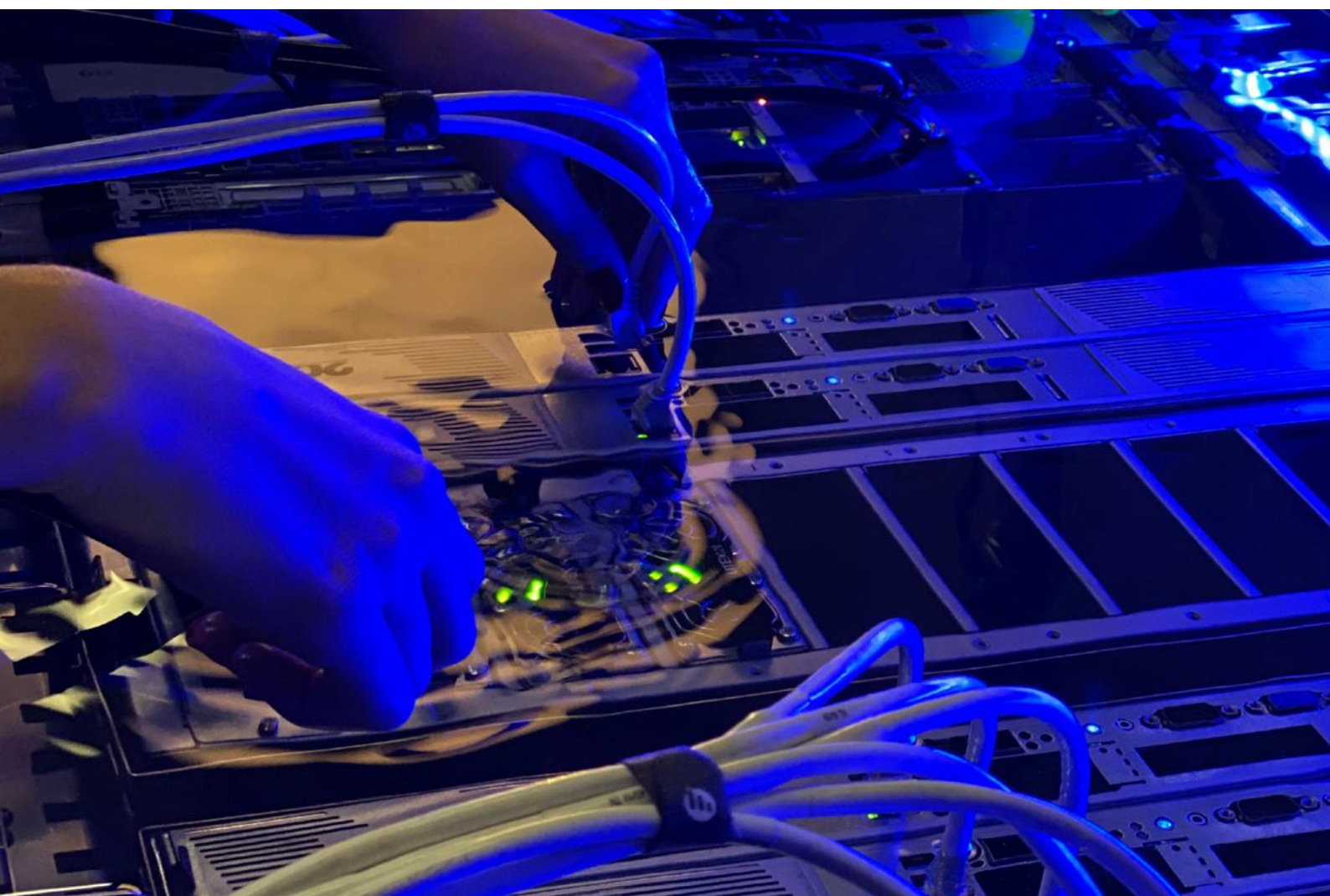


*Submer was founded in 2015 with the vision of building technologies to make data centers more sustainable. Headquarters are located in Spain*

Our technical partners GRC and Submer have both followed us in our adoption of the 21" form factor driven by the Open Compute Project movement.

## Specifications

Available brands	<b>Submer / GRC</b>
Power dissipation per rack	<b>From 22kW to 100kW</b>
Number of OU (OpenU) servers per rack	<b>From 21 OU to 39 OU</b>
Server dimensions	<b>Up to 21"</b>
Power Supply and pump redundancy	<b>Yes</b>



# About 2CRSi

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Created in 2005, 2CRSi is a group focused on server manufacturing. We provide products suitable for industries which require robust and/or embedded solutions and for datacenters looking for high-performance and high-density systems combined with energy efficiency.

Our products are designed and manufactured in France, the United Kingdom and San Jose, USA. With subsidiaries in Manchester and Dubai, we deploy our products on a very large scale in 25 countries for computing, data storage and data transfer applications.

## Research and Development

A strong R&D investment enables us to re-think and re-design next generation servers, from A to Z. Our in-house expertise allows us to develop electronics and mechanical features to fit our clients unique purpose solutions.

Mechanics

Electronics

Thermodynamics

Software Engineering

Innovation

## Strong partnerships

Our partners network encompasses well known players, as well as smaller growing businesses. Working in close collaboration allows us to leverage any technology available on the market: from tried and tested equipment to disruptive technologies, we streamline and re-think the whole concept to perfectly match our clients' needs, in an energy efficient and affordable way.



**Western Digital.**





## Involvement in the OCP community

2CRSi is proud to be platinum member of the OCP community.



Open Compute Project is a movement launched in 2011 by Facebook to define new architecture optimized to break IT standards. It focuses on resources sharing, energy efficiency and complexity reduction.

Our contributions to the community:



2019  
OCtoPower 1.2 Power Distribution Board



2019  
Smart PDU Power Distribution Unit

## Our value proposition

### Green-IT

2CRSi has already been acknowledged by its peers for designing and engineering solutions that will lead the way to a greener future.

### High performance

Our R&D works to optimize our solutions density, compute power and network speed capabilities. We also improve our solutions efficiency, flexibility and ease of use by following the Open Compute Project foundation.

### Tailor-made

Your specific needs drive our technical approach: from our existing offer to new developments, we customise our servers according to your criteria.

### Smart Design

Our solutions are designed to be simple, flexible and scalable.

### Operational agility

We allocate specific resources to your projects.



# OCtoPus server range

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## Servers with multi graphic cards

### **OCtoPus 1.2**

One node and two GPUs

### **OCtoPus 1.8**

One node and eight GPUs

### **OCtoPus 1.4**

One node and four GPUs

## Servers with dual-CPU with 2-slot GPU

### **OCtoPus 2.2**

Two nodes each with two GPUs

### **OCtoPus 2.4**

Two nodes each with one CPU  
and two GPUs

## Servers with multiple single CPU nodes

### **OCtoPus 3**

Three nodes

### **OCtoPus 5**

Five nodes

### **OCtoPus 3S**

Three nodes and multiple  
storage capacities

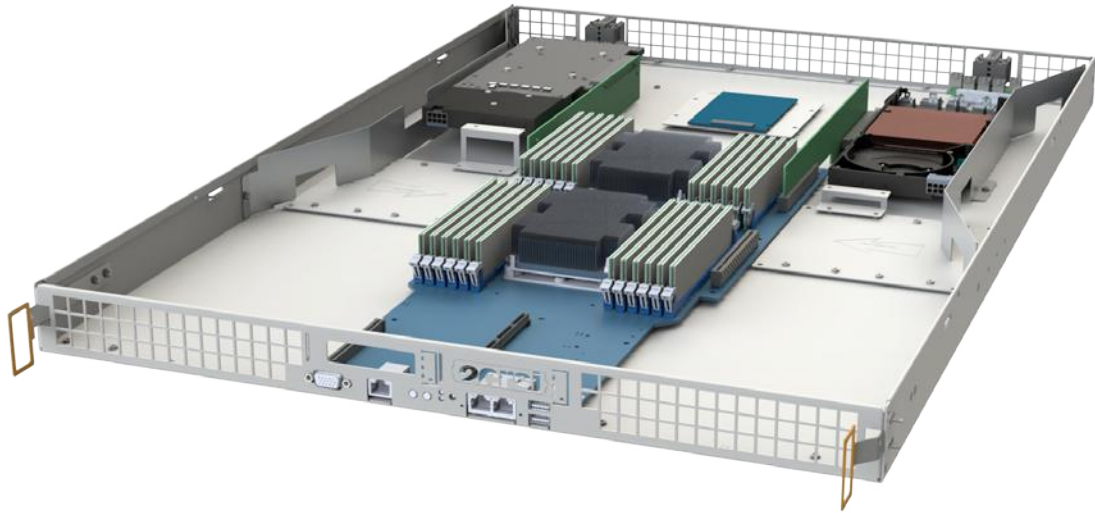
### **OCtoPus 8**

Eight nodes

### **OCtoPus 4**

Four nodes





OCtoPus, a 21" compute solution by 2CRSi.

# OCtoPus 1.2

Servers OCtoPus 1.2 - One node and two GPUs

## USES



Rendering



Artificial Intelligence and Deep Learning



HPC



GPU Virtualization

## FEATURES



Up to 2 CPUs



No internal fan



1 OpenU



Up to 2 GPUs

## BENEFITS



Improved MTBF (Mean Time Between Failure)



Easy handling (Installation and maintenance)

## 3 SERVER VERSIONS



OCtoPus 1.2SP, OCtoPus 1.2B, OCtoPus 1.2E

## COOLING TYPE



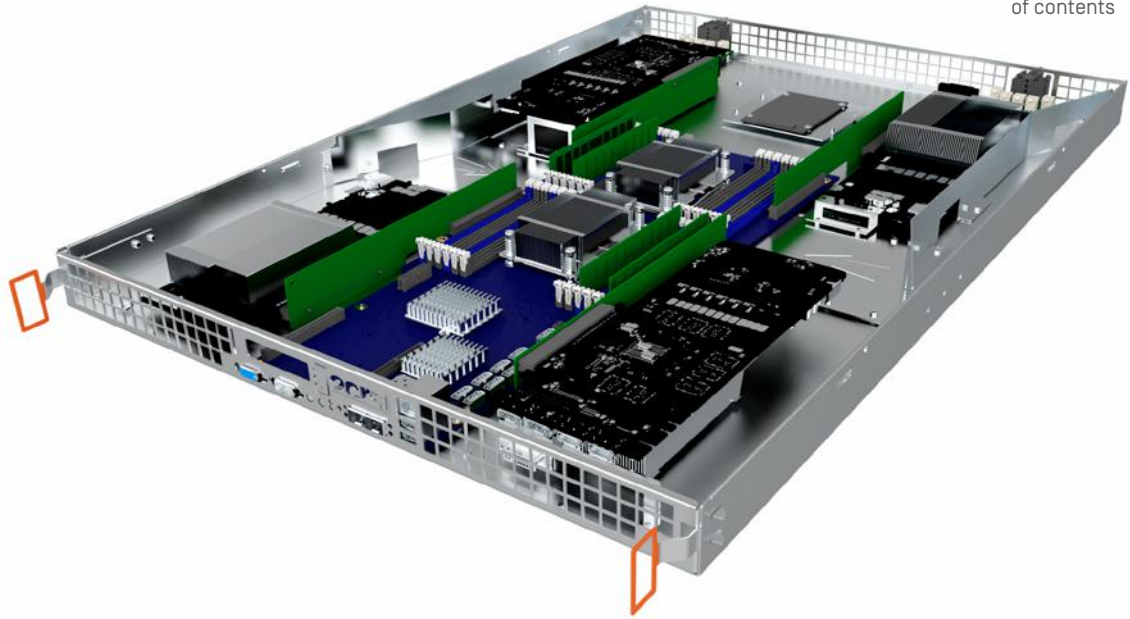
Air cooling, Immersion and Direct liquid cooling

# OCtoPus 1.2

Servers OCtoPus 1.2 - One node and two GPUs

## Configuration for one node

	OCtoPus 1.2SP	OCtoPus 1.2B	OCtoPus 1.2E
<b>Form Factor</b>	1 OpenU - 21"	1 OpenU - 21"	1 OpenU - 21"
<b>Motherboard</b>	Intel® C621 Socket P	Intel® C612 Socket R	On Chip Socket SP3
<b>Processors</b>	Up to 2x 2 <sup>nd</sup> Generation Intel® Xeon® Cascade Lake and Intel® Xeon® Scalable Processors	Up to 2x Intel® Xeon® E5 v3/v4	Up to 2x AMD EPYC™ 700x
<b>Memory</b>	Up to 24x DDR4 ECC RDIMM/LRDIMM [6-ch]	Up to 24x DDR4 ECC RDIMM/LRDIMM [4-ch]	Up to 8x DDR4 ECC RDIMM/LRDIMM [8-ch]
<b>Network</b>	2x 10GbE (RJ45)	2x 10GbE (SFP+)	2x 10GbE (SFP+)
<b>PCIe Gen</b>	Gen 3.0	Gen 3.0	Gen 3.0
<b>GPU</b>	2x Dual-slot Nvidia® GeForce, Tesla, Quadro cards, or AMD Vega or Vega Pro cards	2x Dual-slot Nvidia® GeForce, Tesla, Quadro cards, or AMD Vega or Vega Pro cards	2x Dual-slot Nvidia® GeForce, Tesla, Quadro cards, or AMD Vega or Vega Pro cards
<b>Storage</b>	Up to 2x M.2 NVMe	Up to 2x M.2 NVMe	Up to 2x M.2 NVMe
<b>Port Expansion</b>	1x PCIe 8x LP	1x PCIe 8x LP	1x PCIe 8x LP
<b>Management</b>	AST2500	AST2400	AST2500
<b>Warranty</b>	Up to 5 year pre-swap or on-site service	Up to 5 year pre-swap or on-site service	Up to 5 year pre-swap or on-site service
<b>Cooling type</b>	Air cooling / Direct liquid cooling	Air cooling / Immersion / Direct liquid cooling	Air cooling / Immersion / Direct liquid cooling



OCtoPus, a 21" compute solution by 2CRSi.

# OCtoPus 1.4

Servers OCtoPus 1.4 - One node and four GPUs

## USES



Rendering



Artificial Intelligence and Deep Learning



HPC



GPU Virtualization

## FEATURES



Up to 2 CPUs



No internal fan



1 OpenU



Up to 4 GPUs

## BENEFITS



Improved MTBF  
(Mean Time Between Failure)



Easy handling  
(Installation and maintenance)

## 3 SERVER VERSIONS



OCtoPus 1.4SP, OCtoPus 1.4B,  
OCtoPus 1.4E

## COOLING TYPE



Air cooling, Immersion and Direct liquid cooling



# OCtoPus 1.4

Servers OCtoPus 1.4 - One node and four GPU

## Configuration for one node

	<b>OCtoPus 1.4SP</b>	<b>OCtoPus 1.4B</b>	<b>OCtoPus 1.4E</b>
<b>Form Factor</b>	1 OpenU - 21"	1 OpenU - 21"	1 OpenU - 21"
<b>Motherboard</b>	Intel® C621 Socket P	Intel® C612 Socket R	On Chip Socket SP3
<b>Processors</b>	2 <sup>nd</sup> Generation Intel® Xeon® Cascade Lake and Intel® Xeon® Scalable Processors	Intel® Xeon® E5 v3/v4	AMD EPYC™ 700x
<b>Memory</b>	24x DDR4 ECC RDIMM/LRDIMM [6-channel]	24x DDR4 ECC RDIMM/LRDIMM [4-channel]	8x DDR4 ECC RDIMM/LRDIMM [8-channel]
<b>Network</b>	2x 10GbE (RJ45)	2x 10GbE (SFP+)	2x 10GbE (SFP+)
<b>PCIe Gen</b>	Gen 3.0	Gen 3.0	Gen 3.0
<b>GPU</b>	4x Dual-slot Nvidia® GeForce, Tesla, Quadro cards or AMD Vega or Vega Pro cards	4x Dual-slot Nvidia® GeForce, Tesla, Quadro cards, or AMD Vega or Vega Pro cards	4x Dual-slot Nvidia® GeForce, Tesla, Quadro cards, or AMD Vega or Vega Pro cards
<b>Storage</b>	Up to 4x M.2 NVMe	Up to 6x M.2 NVMe	up to 4x M.2 NVMe
<b>Port Expansion</b>	1x PCIe 8x LP	1x PCIe 8x LP	1x PCIe 8x LP
<b>Management</b>	AST2500	AST2400	AST2500
<b>Warranty</b>	Up to 5 year pre-swap or on-site service	Up to 5 year pre-swap or on-site service	Up to 5 year pre-swap or on-site service
<b>Cooling type</b>	Air cooling / Direct liquid cooling	Air cooling / Direct liquid cooling / Immersion	Air cooling / Direct liquid cooling / Immersion



OCtoPus, a 21" compute solution by 2CRSi.

# OCtoPus 1.8

Servers OCtoPus 1.8 - One node and eight GPUs

## USES



Rendering



Artificial Intelligence and Deep Learning



HPC



GPU Virtualization

## FEATURES



Up to 2 CPUs



No internal fan



2 OpenU



Up to 8 GPUs

## BENEFITS



Improved MTBF  
(Mean Time Between Failure)



Easy handling  
(Installation and maintenance)

## 3 SERVER VERSIONS



OCtoPus 1.8SP, OCtoPus 1.8B,  
OCtoPus 1.8E

## COOLING TYPE



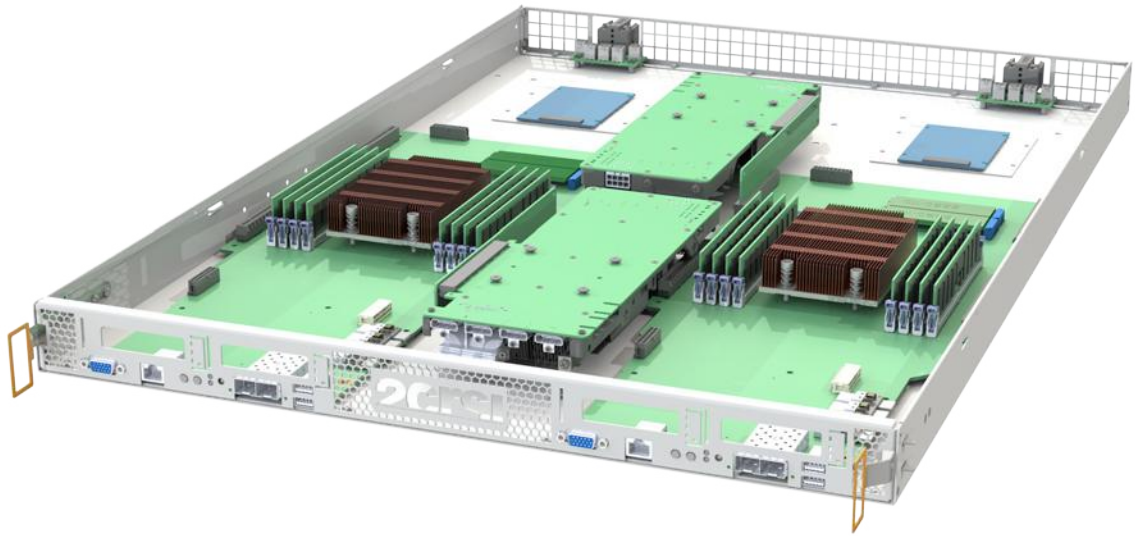
Air cooling, Immersion and Direct liquid cooling

# OCtoPus 1.8

Servers OCtoPus 1.8 - One node and eight GPUs

## Configuration for one node

	<b>OCtoPus 1.8SP</b>	<b>OCtoPus 1.8B</b>	<b>OCtoPus 1.8E</b>
<b>Form Factor</b>	2 OpenU - 21"	2 OpenU - 21"	2 OpenU - 21"
<b>Motherboard</b>	Intel® C621 Socket P	Intel® C612 Socket R	On Chip Socket SP3
<b>Processors</b>	2 <sup>nd</sup> Generation Intel® Xeon® Cascade Lake and Intel® Xeon® Scalable Processors	Intel® Xeon® E5 v3/v4	AMD EPYC™ 700x
<b>Memory</b>	Up to 24x DDR4 ECC RDIMM/LRDIMM [6-ch]	Up to 24x DDR4 ECC RDIMM/LRDIMM [4-ch]	Up to 8x DDR4 ECC RDIMM/LRDIMM [8-ch]
<b>Network</b>	2x 10GbE (RJ45)	2x 10GbE (SFP+)	2x 10GbE (SFP+)
<b>PCIe Gen</b>	Gen 3.0	Gen 3.0	Gen 3.0
<b>GPU</b>	8x Dual-slot Nvidia® GeForce, Tesla, Quadro cards, or AMD Vega or Vega Pro cards	8x Dual-slot Nvidia® GeForce, Tesla, Quadro cards, or AMD Vega or Vega Pro cards	8x Dual-slot Nvidia® GeForce, Tesla, Quadro cards, or AMD Vega or Vega Pro cards
<b>Storage</b>	2x M.2 NVMe	2x M.2 NVMe	2x M.2 NVMe
<b>Port Expansion</b>	1x PCIe 8x LP	1x PCIe 8x LP	1x PCIe 8x LP
<b>Management</b>	AST2500	AST2400	AST2500
<b>Warranty</b>	Up to 5 year pre-swap or on-site service	Up to 5 year pre-swap or on-site service	Up to 5 year pre-swap or on-site service
<b>Cooling type</b>	Air cooling / Direct liquid cooling	Air cooling / Direct liquid cooling / Immersion	Air cooling / Direct liquid cooling / Immersion



OCtoPus, a 21" compute solution by 2CRSi.

# OCtoPus 2.2

Servers OCtoPus 2.2 - Two nodes and two GPUs

## USES



Rendering



Artificial Intelligence and Deep Learning



HPC



GPU Virtualization +

## FEATURES



Up to 2 CPUs



No internal fan



1 OpenU



Up to 2 GPUs

## BENEFITS



Improved MTBF (Mean Time Between Failure)



Easy handling (Installation and maintenance)

## 4 SERVER VERSIONS



OCtoPus 2.2SP, OCtoPus 2.2B, OCtoPus 2.2X, OCtoPus 2.2E

## COOLING TYPE



Air cooling, Immersion and Direct liquid cooling



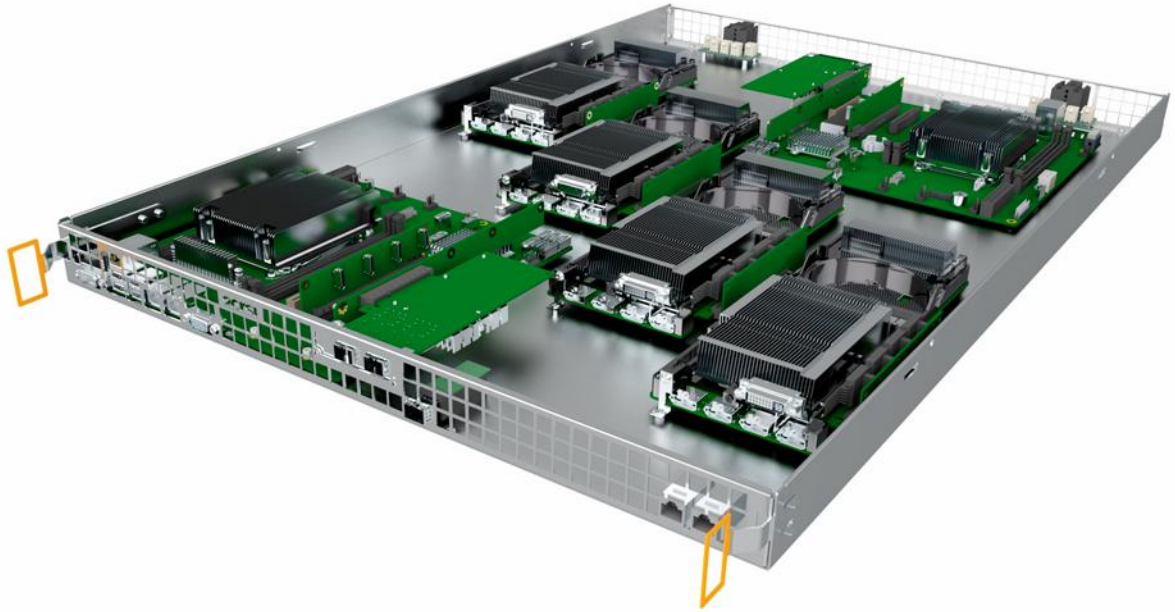
# OCtoPus 2.2

Servers OCtoPus 2.2 - Two nodes and two GPUs



## Configuration for one node

	OCtoPus 2.2SP	OCtoPus 2.2B	OCtoPus 2.2X	OCtoPus 2.2E
<b>Form Factor</b>	1 OpenU - 21"	1 OpenU - 21"	1 OpenU - 21"	1 OpenU - 21"
<b>Motherboard</b>	Intel® C621 Socket P	Intel® C612 Socket R	Intel® C612 Socket R4"	On Chip Socket SP3
<b>Processors</b>	2 <sup>nd</sup> Generation Intel® Xeon® Cascade Lake and Intel® Xeon® Scalable Processors	Intel® Xeon® E5 v3/v4	Intel® Core™ X-Series	AMD EPYC™ 700x
<b>Memory</b>	24x DDR4 ECC RDIMM/LRDIMM [6-ch]	24x DDR4 ECC RDIMM/LRDIMM [4-ch]	4x DDR4 [4-ch]	8x DDR4 ECC RDIMM/LRDIMM [8-ch]
<b>Network</b>	2x 10GbE (RJ45)	2x 10GbE (SFP+)	2x 10GbE (RJ45)	2x 10GbE (SFP+)
<b>PCIe Gen</b>	Gen 3.0	Gen 3.0	Gen 3.0	Gen 3.0
<b>GPU</b>	1X Dual-slot Nvidia® GeForce, Tesla, Quadro cards, or AMD Vega or Vega Pro cards	1X Dual-slot Nvidia® GeForce, Tesla, Quadro cards, or AMD Vega or Vega Pro cards	1x Dual-slot Nvidia® GeForce, Tesla, Quadro cards, or AMD Vega or Vega Pro cards	1x Dual-slot Nvidia® GeForce, Tesla, Quadro cards, or AMD Vega or Vega Pro cards
<b>Storage</b>	Up to 2x M.2 NVMe	Up to 2x M.2 NVMe	Up to 1x M.2 NVMe	Up to 2x M.2 NVMe
<b>Port Expansion</b>	1x PCIe 8x LP	1x PCIe 8x LP	1x PCIe 8x LP	1x PCIe 8x LP
<b>Management</b>	AST2500	AST2400	AST2500	AST2500
<b>Warranty</b>	Up to 5 year pre-swap or on-site service	Up to 5 year pre-swap or on-site service	Up to 5 year pre-swap or on-site service	Up to 5 year pre-swap or on-site service
<b>Cooling type</b>	Air cooling / Direct liquid cooling	Air cooling / Direct liquid cooling / Immersion	Air cooling / Direct liquid cooling / Immersion	Air cooling / Direct liquid cooling / Immersion



OCtoPus, a 21" compute solution by 2CRSi.

# OCtoPus 2.4

Servers OCtoPus 2.4 - Two nodes and four GPUs

## USES



Rendering



Artificial Intelligence and Deep Learning



HPC



GPU Virtualization

## FEATURES



Up to 2 CPUs



No internal fan



1 OpenU



Up to 4 GPUs

## BENEFITS



Improved MTBF (Mean Time Between Failure)



Easy handling (Installation and maintenance)

## 2 SERVER VERSIONS



OCtoPus 2.4SP, OCtoPus 2.4E

## COOLING TYPE



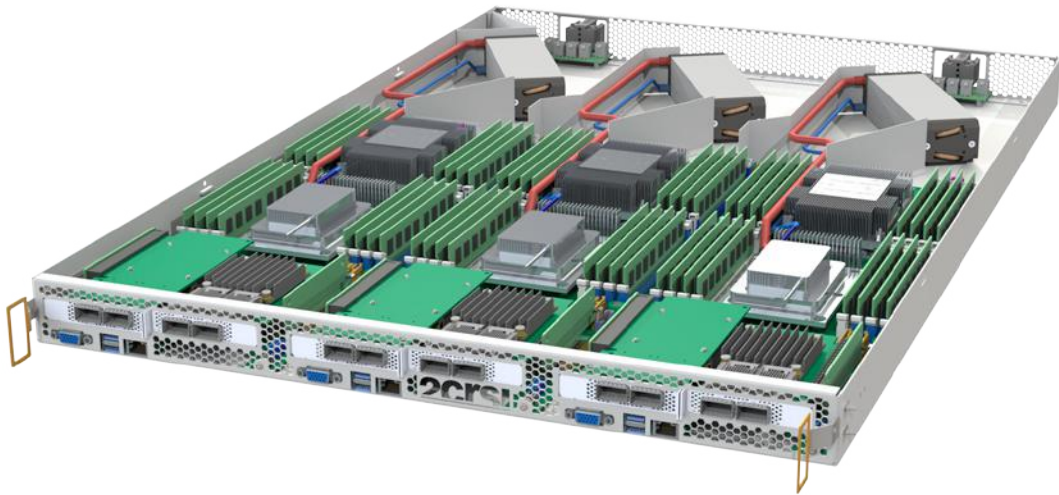
Air cooling, Immersion and Direct liquid cooling

# OCtoPus 2.4

Servers OCtoPus 2.4 - Two nodes and four GPUs

Configuration for one node

	OCtoPus 2.4SP	OCtoPus 2.4E
<b>Form Factor</b>	1 OpenU - 21"	1 OpenU - 21"
<b>Motherboard</b>	Intel® C621 Socket P	On Chip Socket SP3
<b>Processors</b>	2 <sup>nd</sup> Generation Intel® Xeon® Cascade Lake and Intel® Xeon® Scalable Processors	AMD EPYC™ 700x
<b>Memory</b>	6x DDR4 ECC RDIMM/LRDIMM (6-ch)	8x DDR4 ECC RDIMM/LRDIMM (8-ch)
<b>Network</b>	2x 1GbE (RJ45) or 2x 10GbE (RJ45)	From 1GbE to 100 GbE
<b>PCIe Gen</b>	Gen 3.0	Gen 3.0
<b>GPU</b>	2x Dual-slot Nvidia® GeForce, Tesla, Quadro cards, or AMD Vega or Vega Pro cards	2x Dual-slot Nvidia® GeForce, Tesla, Quadro cards, or AMD Vega or Vega Pro cards
<b>Storage</b>	2x M.2 NVMe	2x M.2 NVMe
<b>Port Expansion</b>	1x PCIe 8x LP	1x PCIe 8x LP
<b>Management</b>	AST2500	AST2500
<b>Warranty</b>	Up to 5 year pre-swap or on-site service	Up to 5 year pre-swap or on-site service
<b>Cooling type</b>	Air cooling / Direct liquid cooling	Air cooling / Direct liquid cooling / Immersion



OOctoPus, a 21" compute solution by 2CRSi.

# OOctoPus 3

Servers OOctoPus 3 - Three nodes

## USES



HPC++

## FEATURES



Up to 6 CPUs



No internal fan



1 OpenU

## BENEFITS



Improved MTBF  
(Mean Time Between Failure)



Easy handling  
(Installation and maintenance)

## 3 SERVER VERSIONS



OOctoPus 3B, OOctoPus 3SP,  
OOctoPus 3E

## COOLING TYPE



Air cooling, Immersion and  
Direct liquid cooling

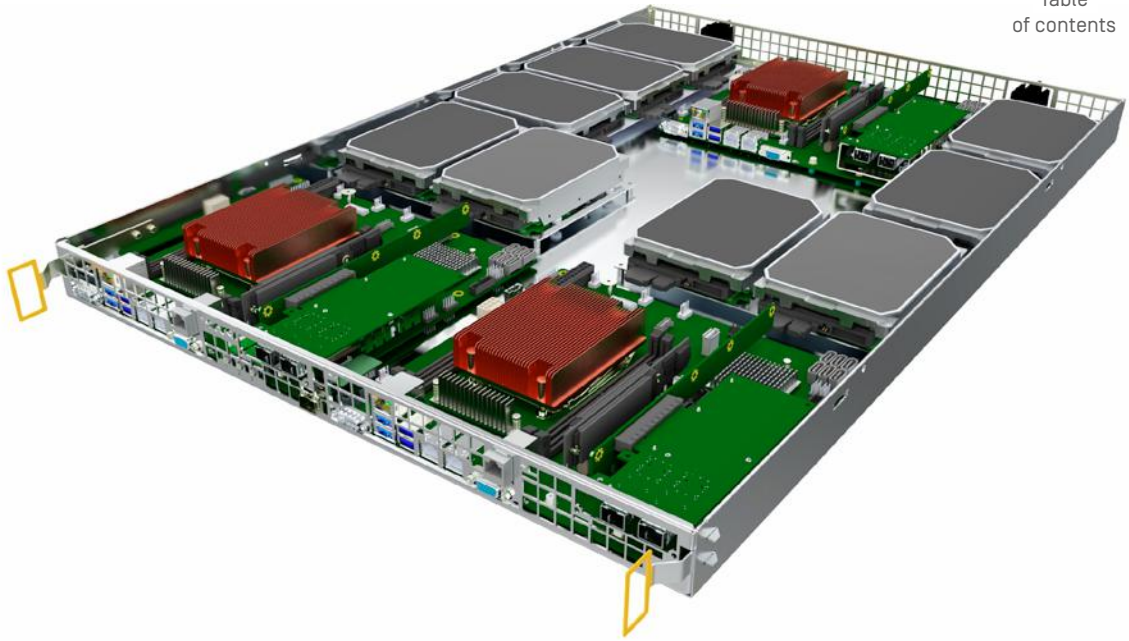


# OCtoPus 3

Servers OCtoPus 3 - Three nodes

## Configuration for one node

	OCtoPus 3B	OCtoPus 3SP	OCtoPus 3E
<b>Form Factor</b>	1 OpenU - 21"	1 OpenU - 21"	1 OpenU - 21"
<b>Motherboard</b>	Intel® C612 Socket R	Intel® C621 Socket P	N/A
<b>Processors</b>	Intel® Xeon® E5 v3/v4	2 <sup>nd</sup> Generation Intel® Xeon® Cascade Lake and Intel® Xeon® Scalable Processors	AMD EPYC™ 700x
<b>Memory</b>	Up to 16x DDR4 ECC RDIMM/LRDIMM [4-ch]	Up to 16x DDR4 ECC RDIMM/LRDIMM [6-ch]	Up to 16x DDR4 ECC RDIMM [8-ch]
<b>Network</b>	2 x 1GbE (RJ45) Infiniband Fiber Channel	From 1GbE to 100 GbE Infiniband Fiber Channel	From 1GbE to 100 GbE Infiniband Fiber Channel
<b>Storage</b>	2x M.2 NVMe	1x SATADOM 2x M.2 NVMe	1x SATADOM 1x M.2 NVMe
<b>Port Expansion</b>	1x PCIe 16x 1x PCIe 8x	2x PCIe 16x	2x PCIe x16 Gen4
<b>Management</b>	AST2400	AST2500	AST2500
<b>Warranty</b>	Up to 5 year pre-swap or on-site service	Up to 5 year pre-swap or on-site service	Up to 5 year pre-swap or on-site service
<b>Cooling type</b>	Air cooling / Immersion / Direct liquid cooling	Air cooling / Direct liquid cooling	Air cooling / Immersion / Direct liquid cooling



OCtoPus, a 21" compute solution by 2CRSi.

# OCtoPus 3S

Servers OCtoPus 3S - Three nodes and multiple storage capacities

## USES



Big Data +++



HPC ++

## FEATURES



3 CPUs



1 OpenU



Up to 9 HDD (1 HDD up to 15 TB)



Up to 9 SSD with SATA connection (1 SSD up to 4 TB)

## BENEFITS



Improved MTBF (Mean Time Between Failure)



Increased storage capacity



Customisable nodes

## 5 SERVER VERSIONS



OCtoPus 3S.SP, OCtoPus 3S.B, OCtoPus 3S.X, OCtoPus 3S.W, OCtoPus 3S.R

## COOLING TYPE



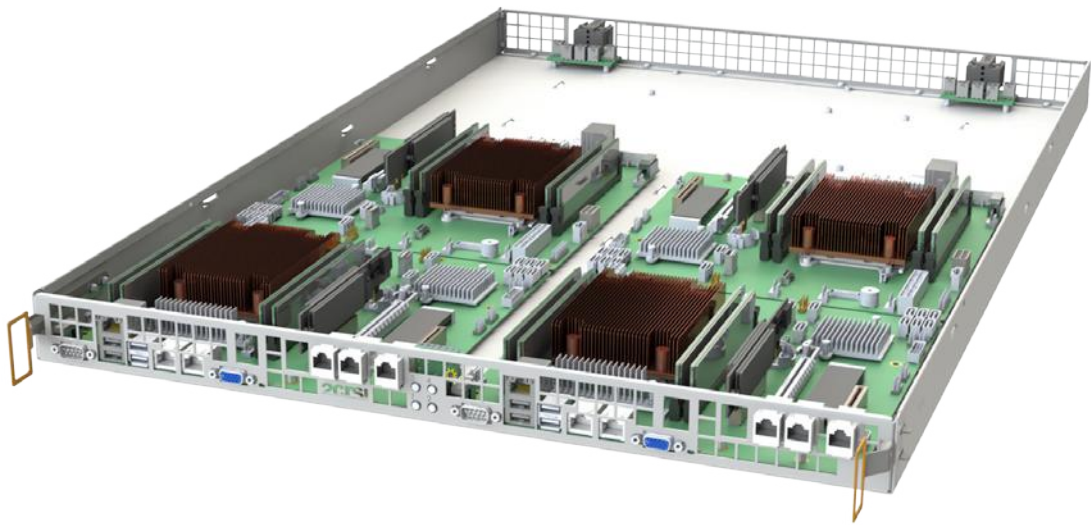
Air cooling, Immersion and Direct liquid cooling

# OCtoPus 3S

Servers OCtoPus 3S - Three nodes and multiple storage capacities

## Configuration for one node

	OCtoPus 3S.SP	OCtoPus 3S.B	OCtoPus 3S.X	OCtoPus 3S.W	OCtoPus 3S.R
<b>Form Factor</b>	1 OpenU - 21"	1 OpenU - 21"	1 OpenU - 21"	1 OpenU - 21"	1 OpenU - 21"
<b>Motherboard</b>	Intel® C622/621 Socket P	Intel® C612 Socket R3	Intel® X299 Socket R4	Intel® C422 Socket R4	AMD X470 Socket AM4
<b>Processors</b>	2 <sup>nd</sup> Generation Intel® Xeon® Cascade Lake and Intel® Xeon® Scalable Processors	Intel® Xeon® E5 v3/v4	Intel® Core™ X-Series	Intel® Xeon® W-2xxx	AMD Ryzen Series
<b>Memory</b>	6x DDR4 ECC RDIMM/LRDIMM [6-ch]	4x DDR4 ECC RDIMM/LRDIMM [4-ch]	4x DDR4 [4-ch]	4x DDR4 ECC [4-ch]	4x slots Support DDR4 ECC/UDIMM 2-channel memory architecture
<b>Network</b>	2x 10GbE [RJ45/SFP+] or 2x 1GbE [RJ45]	2x 10GbE [RJ45] or 2x 1GbE [RJ45]	2x 1GbE [RJ45]	2x 1GbE [RJ45]	2x 10GbE [RJ45] or 2x 1GbE [RJ45]
<b>Storage</b>	2x M.2 NVMe 3x HDD/SSD SATA	2x M.2 NVMe 3x HDD/SSD SATA	2x M.2 NVMe 3x HDD/SSD SATA	2x M.2 NVMe 3x HDD/SSD SATA/NVMe	2x M.2 NVMe 3x HDD/SSD SATA
<b>Port Expansion</b>	1x PCIe 8x LP	1x PCIe 8x LP	1x PCIe 8x LP	1x PCIe 8x LP	1x PCIe 8x LP
<b>Management</b>	AST2500	AST2400	AST2500	AST2500	AST2500
<b>Warranty</b>	Up to 5 year pre-swap or on-site service	Up to 5 year pre-swap or on-site service	Up to 5 year pre-swap or on-site service	Up to 5 year pre-swap or on-site service	Up to 5 year pre-swap or on-site service
<b>Cooling type</b>	Air cooling / Direct liquid cooling	Air cooling / Direct liquid cooling / Immersion	Air cooling / Direct liquid cooling / Immersion	Air cooling / Direct liquid cooling / Immersion	Air cooling / Direct liquid cooling / Immersion



OCtoPus, a 21" compute solution by 2CRSi.

# OCtoPus 4

Servers OCtoPus 4 - Four nodes

## USES



HPC +++

## FEATURES



up to 4 CPUs



No internal fan



1 OpenU

## BENEFITS



Improved MTBF  
(Mean Time Between Failure)



Easy handling  
(Installation and maintenance)

## 5 SERVER VERSIONS



OCtoPus 4B, OCtoPus 4W,  
OCtoPus 4X, OCtoPus 4SP,  
OCtoPus 4R

## COOLING TYPE



Air cooling, Immersion and  
Direct liquid cooling

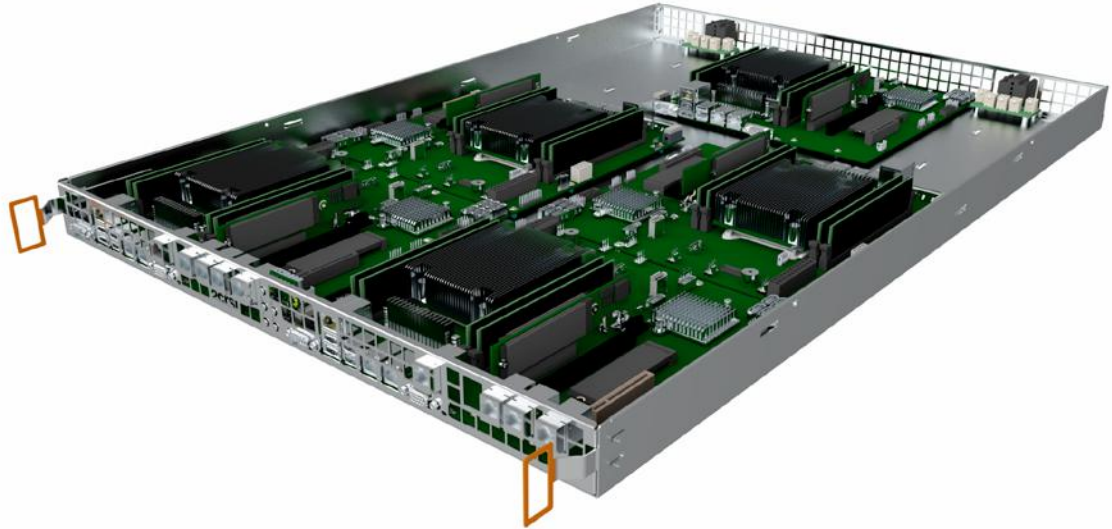


# OCtoPus 4

Servers OCtoPus 4 - Four nodes

## Configuration for one node

	OCtoPus 4B	OCtoPus 4W	OCtoPus 4X	OCtoPus 4SP	OCtoPus 4R
<b>Form Factor</b>	1 OpenU - 21"	1 OpenU - 21"	1 OpenU - 21"	1 OpenU - 21"	1 OpenU - 21"
<b>Motherboard</b>	Intel® C612 Socket R3	Intel® C612 Socket R4	Intel® C612 Socket R4	Intel® C622/621 Socket P	AMD X470 Socket AM4
<b>Processors</b>	Intel® Xeon® E5 v3/v4	Intel® Xeon® W-2xxx	Intel® Core™ X-Series	2 <sup>nd</sup> Generation Intel® Xeon® Cascade Lake and Intel® Xeon® Scalable Processors	AMD Ryzen Series
<b>Memory</b>	4x DDR4 ECC RDIMM/LRDIMM (4-ch)	4x DDR4 ECC (4-ch)	4x DDR4 (4-ch)	6x DDR4 ECC RDIMM/LRDIMM (6-ch)	4x slots Support DDR4 ECC/UDIMM 2-channel memory architecture
<b>Network</b>	2x 10GbE (RJ45)	2x 1GbE (RJ45)	2x 1GbE (RJ45)	2x 10GbE (RJ45/SFP+) or 2x 1GbE (RJ45)	2x 10GbE (RJ45) or 2x 1GbE (RJ45)
<b>Storage</b>	2x M.2 NVMe	2x M.2 NVMe	2x M.2 NVMe	2x M.2 NVMe	2x M.2 NVMe
<b>Port Expansion</b>	1x PCIe 8x LP	1x PCIe 8x LP	1x PCIe 8x LP	1x PCIe 8x LP	1x PCIe 8x LP
<b>Management</b>	AST2400	AST2500	AST2500	AST2500	AST2500
<b>Warranty</b>	Up to 5 year pre-swap or on-site service	Up to 5 year pre-swap or on-site service	Up to 5 year pre-swap or on-site service	Up to 5 year pre-swap or on-site service	Up to 5 year pre-swap or on-site service
<b>Cooling type</b>	Air cooling / Direct liquid cooling / Immersion	Air cooling / Direct liquid cooling / Immersion	Air cooling / Direct liquid cooling / Immersion	Air cooling / Direct liquid cooling / Immersion	Air cooling / Direct liquid cooling / Immersion



OCtoPus, a 21" compute solution by 2CRSi.

# OCtoPus 5

Servers OCtoPus 5 - Five nodes

## USES



HPC+++

## FEATURES



5 CPUs



No internal fan



1 OpenU

## BENEFITS



Improved MTBF  
(Mean Time Between Failure)



Easy handling  
(Installation and maintenance)



High density

## 5 SERVER VERSIONS



OCtoPus 5SP, OCtoPus 5B,  
OCtoPus 5X, OCtoPus 5W,  
OCtoPus 5R

## COOLING TYPE



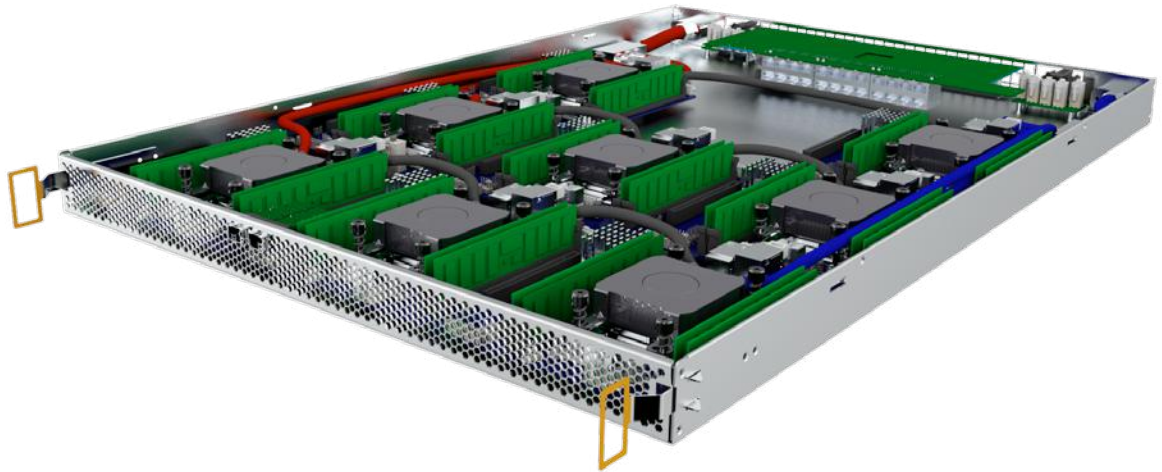
Air cooling, Immersion and  
Direct liquid cooling

# OCtoPus 5

Servers OCtoPus 5 - Five nodes

## Configuration for one node

	OCtoPus 5SP	OCtoPus 5B	OCtoPus 5X	OCtoPus 5W	OCtoPus 5R
<b>Form Factor</b>	1 OpenU - 21"	1 OpenU - 21"	1 OpenU - 21"	1 OpenU - 21"	1 OpenU - 21"
<b>Motherboard</b>	Intel® C622/621 Socket P	Intel® C612 Socket R3	Intel® C612 Socket R4	Intel® C422 Socket R4	AMD X470 Socket AM4
<b>Processors</b>	2nd Generation Intel® Xeon® Cascade Lake and Intel® Xeon® Scalable Processors	Intel® Xeon® E5 v3/v4	Intel® Core™ X-Series	Intel® Xeon® W-2xxx	AMD Ryzen Series
<b>Memory</b>	6x DDR4 ECC RDIMM/LRDIMM [6-ch]	4x DDR4 ECC RDIMM/LRDIMM [4-ch]	4x DDR4 [4-ch]	4x DDR4 ECC [4-ch]	4x slots Support DDR4 ECC/UDIMM 2-channel memory architecture
<b>Network</b>	2x 10GbE [RJ45/SFP+] or 2x 1GbE [RJ45]	2x 10GbE [RJ45]	2x 1GbE [RJ45]	2x 1GbE [RJ45]	2x 10GbE [RJ45] or 2x 1GbE [RJ45]
<b>Storage</b>	2x M.2 NVMe	2x M.2 NVMe	2x M.2 NVMe	2x M.2 NVMe	2x M.2 NVMe
<b>Port Expansion</b>	1x PCIe 8x LP	1x PCIe 8x LP	1x PCIe 8x LP	1x PCIe 8x LP	1x PCIe 8x LP
<b>Management</b>	AST2500	AST2400	AST2500	AST2500	AST2500
<b>Warranty</b>	Up to 5 year pre-swap or on-site service	Up to 5 year pre-swap or on-site service	Up to 5 year pre-swap or on-site service	Up to 5 year pre-swap or on-site service	Up to 5 year pre-swap or on-site service
<b>Cooling type</b>	Air cooling / Direct liquid cooling	Air cooling / Direct liquid cooling / Immersion	Air cooling / Direct liquid cooling / Immersion	Air cooling / Direct liquid cooling / Immersion	Air cooling / Direct liquid cooling / Immersion



OCtoPus, a 21" compute solution by 2CRSi.

# OCtoPus 8

Server OCtoPus 8 - Eight nodes

## USES



HPC ++++

## FEATURES



8 CPUs



No internal fan



1 OpenU

## BENEFITS



Improved MTBF  
(Mean Time Between Failure)



Easy handling  
(Installation and maintenance)

## 1 SERVER VERSION



OCtoPus 8W

## COOLING TYPE



Direct liquid cooling,  
Immersion



# OCtoPus 8

Servers OCtoPus 8 - Eight nodes

## Configuration for one node

	<b>OCtoPus 8W</b>
<b>Form Factor</b>	1 OpenU - 21"
<b>Motherboard</b>	Intel® C422 Socket R4
<b>Processors</b>	Intel® Xeon® W-2100 Processors
<b>Memory</b>	4x DDR4 ECC (4-ch)
<b>Network</b>	2x 1GbE (RJ45)
<b>PCIe Gen</b>	Gen 3.0
<b>Storage</b>	1x M.2 NVMe
<b>Management</b>	AST2500
<b>Warranty</b>	Up to 5 year pre-swap or on-site service
<b>Cooling type</b>	Direct Liquid Cooling

2CRSi  
HIGH PERFORMANCE  
SOLUTIONS MANUFACTURER

## Global Presence



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