



Decentralize your cloud.

Cachengo® Deep Dish™

Cachengo® Deep Dish™ is Revolutionizing Data Center Economics with a Scalable and Energy Efficient Solution



Why it Matters?

Market size and power demand are skyrocketing, but current infrastructure can't keep up. Cachengo® addresses the AI power crisis by decentralizing workloads, reducing energy use, and allowing for instant deployment—no waiting for grid upgrades. With our scalable Deep Dish™ solution, we're redefining data center economics. The AI power crisis isn't inevitable—it's a choice. Deploy edge AI today with Cachengo®.

How it Works?

Deep Dish's architecture supports thousands of nodes close to the subscriber, making it ideal for inference, VR, online gaming and handling large-scale AI workloads. With a power consumption of just 500W typical per unit, Deep Dish™ reduces operational costs while addressing sustainability concerns—a critical factor for data centers consuming significant power.

A single, energy efficient 1U Deep Dish™ solution has 64 Symbiote® bare metal servers, supporting 512 ARM processor cores, 256 GPU cores, 64 NPU cores, and up to 2 Petabytes of flash storage. Deep Dish™ offers the highest density per KW.

Each Symbiote® is an independent device allowing parallel workloads to be spread across multiple nodes. Cachengo software defined WAN architecture efficiently connects thousands of Symbiotes, allowing for massive scalability to meet the evolving demands of AI, analytics, and data center applications.

The Benefits

- **Massive Scalability:** Easily expand Deep Dish™ deployments to support thousands of nodes for robust AI, analytics, and data center applications.
- **Enhanced Data Security and Governance:** Peer-to-peer network architecture, significantly enhances security, making data breaches virtually impossible.
- **Cost Efficiency:** Energy and rack-space efficient design results in significant reductions in CAPEX (by 5X) and OPEX (by 4X) compared to traditional server architectures.
- **Simplified Management:** Cachengo® Knowhere™ management portal streamlines the deployment, management and rental of Symbiote® bare metal servers.

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Deep Dish™ Specifications

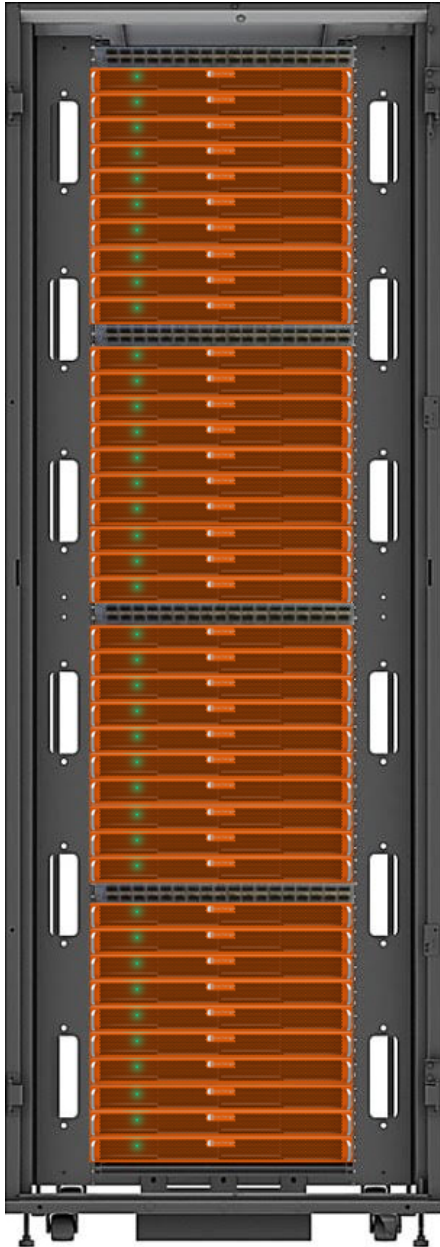
- 64 independent Symbiote® bare metal servers
- 512 ARM processor cores (RK3588)
- 256 GPU cores ARM Mali G610 MC4
- 64 NPU cores (6 TOPS each)
- 32TB to 2 Petabytes of storage
- 1024GB of DDR4 memory
- Cloud native and multi-cloud support
- Just-In-Time Data "Thin-provisioning"
- Native ML/AI Capabilities
- Erasure coding and replication data protection
- Enhanced SD-WAN connectivity
- Dimensions Height: 1.73" (44mm), Width: 17.52" (445mm), Depth: 31.6" (802.6mm)
- Cooling Fan: 4056 x 13, with Dynamical Fan Control
- Operating Temperature: 32° to 104°F (0° to 40°C)
- Non-Operating Temperature: -4° to 176°F (-20° to 80°C)
- Power Consumption 600W maximum, ~500W typical
- Power Type: CRPS 1+1 2000W, Platinum
- Thermal Dissipation 510 BTU/hr maximum, 340 BTU/hr typical
- Operating Requirements Switching Power: 100V-240V, 50-60Hz





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- **40 Deep Dish™ 1U Form Factor**
- **2,560 ARM Servers**
- **Deep Dish™ offers the highest density per KW**

Cachengo[®] Deep Dish[™]

SYSTEM		
System Board	System Control	Avenger x1, Justice x 8, Symbiote x 64, PDB x1
Fan	Cooling Fan	4056 x 13, with Dynamical Fan Control
Power Supply	Power Type	CRPS 1+1 2000W, Platinum
	Power Distribution Board	12V, 12-pin x 1, 16-pin x 2
Environment	Operating Temperature	0° to 40°C
	Non-Operating Temperature	-20° to 80°C
	Relative Humidity	95% Non-Condensing @ 40°C
Chassis	Form Factor	1U
Dimension	D x W x H	802.6 x 445 x 44 mm
Metal Thickness	SGCC	1.2 mm
Weight	Net Weight	TBD
Certification	Safety	FCC, UL
SYMBIOTE		
PCBA	Quantity	64
Processor System	CPU	RK3588
Memory	DDR	LPDDR4X 8G x 2 (16GB in total)
Storage	Storage	32MB SPI ROM + 2 x M.2 slots
AVENGER		
PCBA	Quantity	1
Processor system	SoC	MARVELL 98DX2530
Ethernet Switch	Switch IC	MARVELL 98DX4570
BMC	MCU	NUVOTON NUC980DR63YC LQFP64-EP
Memory	DDR	DDR4 16G x 4
Storage	eMMC	32G x1
Rear I/O	QSFP	4
	RJ45	2
JUSTICE		
PCBA	Quantity	8
Processor System	MARVELL	MARVELL 98DX2518
Memory	DDR	DDR4 2G x 1
Storage	eMMC	32G x 1

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