

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



Why it Matters?

The growing demand from AI, analytics, and traditional cloud applications are testing the limits of traditional server architectures in today's data centers. The Cachengo® Pizza™ solution is designed to address this challenge, with a scalable architecture that's revolutionizing data center economics.

How it Works?

Pizza™ is at the foundation of Cachengo's [Rent-a-Node™](#) (RaN) platform that enables revolutionary new revenue streams for service providers (Rent-a-Node™ Operators, RNOs) AND significant savings for software-as-a-service (SaaS) companies on their hosting services ("Tenants", Rent-a-Node™Cloud, RNC).

A single, energy efficient 1U Pizza™ solution has 32 Symbiote® nodes, supporting 256 ARM processor cores, 128 GPU ARM Mali cores, 32 NPU cores, and up to 512TB of flash storage.

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

The Benefits

- **Massive Scalability:** Easily expand Pizza™ deployments to support thousands of nodes for robust AI, analytics, and data center applications.
- **Enhanced Data Security and Governance:** Hive Connect 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® infrastructure nodes.

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Pizza™ Product Brief

Pizza™ Specifications

- 32 independent Symbiote® nodes
- 256 ARM processor cores (RK3588)
- 128 GPU cores ARM Mali G610 MC4
- 32 NPU cores (6 TOPS each)
- 16TB to 512TB of storage
- 512GB of DDR4 memory, up to 4224 MHz
- 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: 1.75" (44.45mm), Width: 17.6" (447mm), Depth: 20" (506mm) Weight 26.5 lbs. (12kg)
- System Cooling 5x 4056 heavy duty fans
- Operating Environment Target Temp Range: 32°F - 95°F (0°C - 35°C)
- Power Consumption 300W maximum, ~250W typical
- Power Supply 1 x 1U 800W PSU (90-264V AC, 96% Efficiency). Redundant PSU optional
- Thermal Dissipation 255 BTU/hr maximum, 170 BTU/hr typical
- Operating Requirements Switching Power: 180V-300V, 47-63Hz



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