WHAT IS NPUsearch™?

Lewis Rhodes Labs' NPUsearch uses a novel neuromorphic processing technology integrated into storage to accelerate data search capability.

Lewis Rhodes Lab’s Neuromorphic Processing Unit (NPU) is the core of NPUsearch. Designed with the fine grain parallelism and hierarchical structure of the brain, the LRL NPU functions as highly efficient pattern matcher to accurately and rapidly scan data.

NPUsearch supports efficient, scalable content search of big data in storage, providing an innovative solution to a significant unsolved problem.

PRODUCT FEATURES

The NPUsearch capability is integrated into a dual-CPU supported appliance containing 96 TB SSD storage. Full content search of unindexed data collection is regex accessible via Jupyter Notebook or other Python-based interface. The deterministic search feature scans an entire database within minutes - independent of query or data type - returning to CPU only the requested items of interest.

NPU ADVANTAGE

> Low power consumption
> Fixed latency
> Fixed throughput
> High resolution accuracy

FULLY SCALABLE SEARCH-IN-Storage

> Supports data monetization
> Minimizes indexing burden
> Optimizes CPU utilization
> Decreases network demands
> Utilizes high performance PCIe

Adaptable. Intelligent.
NPU INTEGRATED SEARCH-IN-STORAGE

**Novel Architecture**

![Diagram of NPU INTEGRATED SEARCH-IN-STORAGE](image)

- Rapid, deterministic search
- Reduce CPU costs
- Move only data of interest
- Light network demands
- Minimize data flow
- Scalable search capacity

**SEARCH PETABYTES IN MINUTES**

- Inconsistent search capacity
- CPU-intensive cost profile
- Move all data to CPU to search
- Heavy network requirements
- High volume of data flow
- Unable to scale performance

**COMPARE CPU-BASED SEARCH**

![Diagram of Traditional Architecture](image)

**TAKE THE NEXT STEP**

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