NeuroBlade

SQL Processing Unit - PCIe Card

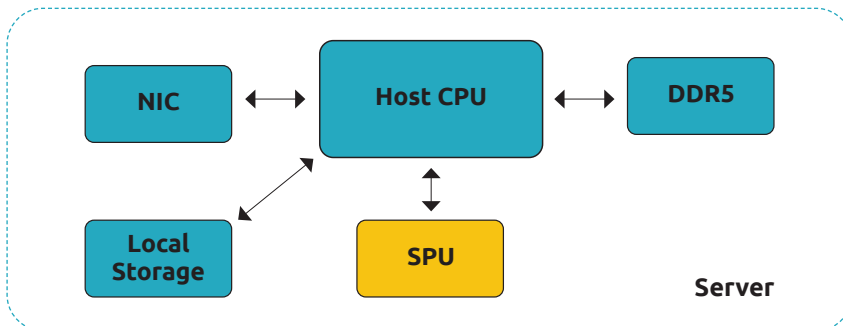**Industry-first proven accelerator for data analytics.**

The NeuroBlade SQL Processing Unit (SPU) is an industry-first processor architecture designed specifically to accelerate data analytics. The SPU G200 supplements existing data center infrastructure and is designed to be plugged into existing data analytics tools, enabling the CPU to transparently offload SQL operations for efficient processing. By adopting NeuroBlade, organizations can leverage the value of their data assets. The purpose-built SPU architecture developed by NeuroBlade overcomes the limitations of traditional CPUs by eliminating system bottlenecks and enabling query processing at the speed of I/O, regardless of query complexity.

Simple Integrations

NeuroBlade's SPU G200 seamlessly integrates into your data center infrastructure as PCIe cards, providing flexibility and easy deployment. It offers a wide range of deployment options, supporting on-premises, shared services, or cloud environments, catering to diverse infrastructure requirements.

By installing the SPU G200 in existing compute servers, the processing capabilities are significantly enhanced, resulting in accelerated performance. This optimization eliminates the need for additional compute servers, leading to cost savings and improved operational efficiency.

With NeuroBlade's scale-out architecture, scaling linearly becomes effortless, enabling you to handle even the most demanding analytics workloads. Whether you require increased capacity or improved performance, the NeuroBlade solution is designed to meet your needs and seamlessly adapt to your evolving requirements.

KEY FEATURES

- PCIe card offloads SQL operations from the CPU
- Native server integration
- FHHL PCIe card
- PCIe Gen4 x16
- 25GByte/sec processing
- Up to 100x performance boost for data analytics
- Seamless software integration with leading data analytics engines
- DAXL SDK provides a database-friendly programming interface

KEY VALUES

Parallel Processing

Storage Throughput

Constant Data Processing

Energy Efficiency

Software Infrastructure

The SPU Software Platform integrates with leading analytics engines such as PrestoDB, ClickHouse, and Apache Spark, enabling the efficient offloading of SQL operations to the SPU for a substantial performance boost. Custom integrations with propitiatory analytics tools are enabled through the DAXL SDK, which provides a database-friendly programming model for accessing the capabilities of the SPU.

Technical Specifications

180.84 mm   21.59 mm   126.18 mm

Form Factor	Full height half length, single width
SPU Processor	x1
PCIe Edge Connector	PCIe 4.0 x16 lanes
PCI Vendor ID	0x1E73
Power	150[W]
Extremal Power	8pin PCIe ATX
Thermal	Passive cooling
Environment	Storage: -40°C to 75°C Operating: 0°C to 55°C
Humidity	Storage: 5% to 95% Operating: 5% to 90%

About NeuroBlade

NeuroBlade is unlocking the power of data analytics by setting a new standard for query processing speed and scale. Founded in 2018 and led by veterans of the systems, storage, and data analytics industries, NeuroBlade has reinvented processor design with its proven Compute for Analytics approach, built to maximize throughput at petabyte-scale so that queries can run multiple orders of magnitude faster. NeuroBlade is headquartered in Tel Aviv, Israel, and California. **To learn more, visit www.neuroblade.com.**

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