



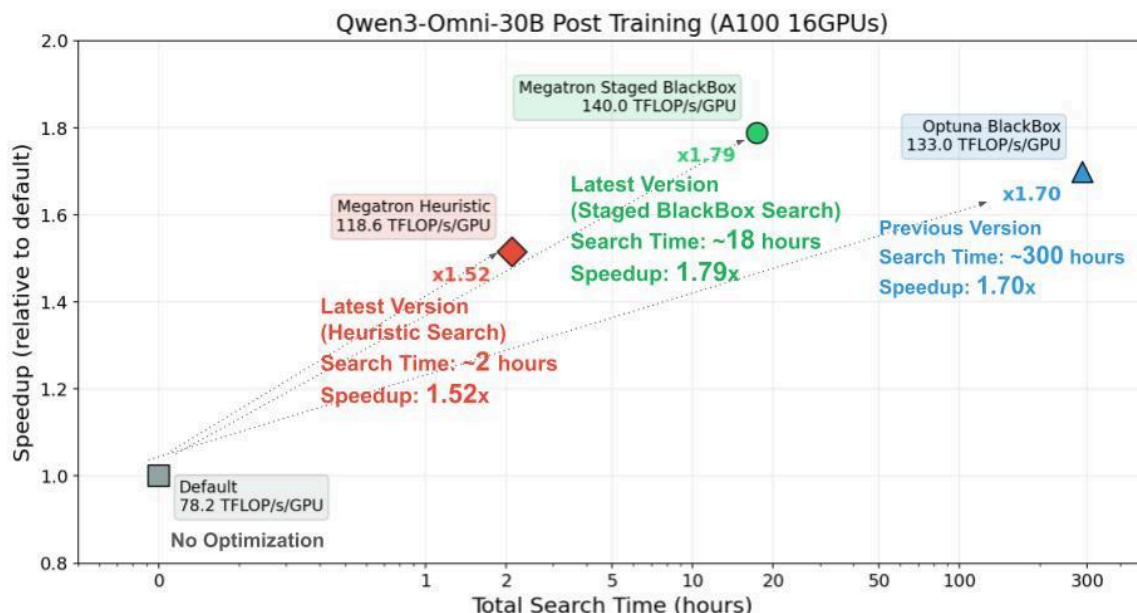
FOR IMMEDIATE RELEASE

Fixstars Reduces AI Training Costs by Up to 43% and Reducing Search Time to 1/16th

Fixstars AIBooster Dramatically Enhances AI Training Efficiency with Proprietary Optimization Algorithms

IRVINE, California – April 13, 2026 – Fixstars Corporation (TSE Prime: 3687, US Headquarters: Irvine, CA), a global leader in performance engineering, today announced a significant upgrade to the automated hyperparameter optimization features within its performance engineering platform, Fixstars AIBooster.

In recent benchmark tests evaluating AI training performance, Fixstars compared three scenarios: unoptimized, optimized using the previous version, and optimized using the latest version. The results demonstrated that the latest AIBooster identifies superior hyperparameters in approximately 1/16th the time required by previous versions, further accelerating processing speeds and operational efficiency.



The Impact of Automated Hyperparameter Optimization on AI Training

In the distributed training of Large Language Models (LLMs), numerous parameters—such as tensor parallelism, pipeline parallelism, and micro-batch size—dictate training efficiency. **Setting optimal hyperparameters can significantly increase AI training speeds.**

Traditionally, searching for the ideal combination of hyperparameters required deep expertise and extensive trial and error, placing a heavy burden on engineers. Fixstars AIBooster automates this search process, allowing engineers to focus on higher-value development tasks.

By improving AI training efficiency, organizations can achieve the following:

- **Reduced AI Investment Costs:** Maximize the utilization of limited GPU assets. Efficient operation reduces hardware procurement costs and power consumption.
- **Enhanced Accuracy via Rapid Iteration:** Faster training cycles allow for more frequent iterations, resulting in higher-precision AI models and improving both the speed and quality of AI development.

Performance Gains Through Proprietary Algorithms

Fixstars has implemented two new proprietary algorithms—**Heuristic Search** and **Staged BlackBox Search**—specifically designed for hyperparameter exploration using domain knowledge of Megatron Core parallelization strategies.

Benchmarks conducted using **Qwen3-Omni-30B** supervised fine-tuning (SFT) on an **NVIDIA A100 x 16 GPU** environment yielded the following results:

- **Heuristic Search:** Improved training throughput from 78.2 to 118.6 TFLOP/s/GPU in just 2 hours, accelerating training time per epoch by approximately 1.52x. Previously, achieving a 1.7x speedup required roughly 300 hours; the new algorithm achieves comparable results in 1/150th of the time.
- **Staged BlackBox Search:** Increased throughput to 140.0 TFLOP/s/GPU in 18 hours, achieving a 1.79x speedup in training time. Compared to conventional BlackBox optimization (Optuna-based), it identifies superior hyperparameters in 1/16th of the search time.

Users can now choose the best approach for their needs: Heuristic Search for rapid practical speedups or Staged BlackBox Search for maximum performance.

No-Code Tuning Capabilities

The latest version introduces a no-code feature, allowing users to execute tuning via command-line operations without writing Python scripts. This enables engineers without specialized optimization backgrounds to leverage high-precision hyperparameter tuning immediately.

About Fixstars AIBooster

Fixstars AIBooster is a solution designed to optimize the efficiency of computational resources and unlock peak performance for AI workloads, including AI training and inference. It primarily offers the following three pillars:

- 1. Performance Observability (PO):** Continuously records and visualizes hardware utilization (such as GPUs) and software execution profiles to track performance fluctuations and identify bottlenecks.
- 2. Performance Intelligence (PI):** Supports continuous performance enhancement of AI workloads through bottleneck analysis, automated acceleration, AI agent-driven improvement suggestions, and expert reviews.
- 3. Optimized AI Infrastructure:** Based on insights gained from PO and PI, we provide the ideal infrastructure environment (Public Cloud, Private Cloud, On-premises, etc.) tailored specifically to the customer's AI workloads.

Release note: <https://doc.aibooster.fixstars.com/en/>

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About Fixstars Corporation

Fixstars is a technology company dedicated to accelerating AI inference and training through advanced software optimization solutions. It supports innovation in healthcare, manufacturing, finance, mobility, and other industries. For more information, visit: <https://www.fixstars.com/>

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