WAVE®
C O M P U T I N G

Introducing the World's Fastest Dataflow Departmental Appliance for Deep Learning

Faster Deep Learning Without IT

Due to strong demand by data scientists, Wave Computing® is introducing a dataflow appliance that is customized for office environments. It is based on the company's revolutionary dataflow technology that eliminates the need for a CPU or co-processors, such as a GPU. Wave's dataflow appliance offers extremely fast modeling and training of data sets, which can outperform existing datacenter servers for deep learning workloads.

The Wave dataflow appliance is designed to easily fit in existing work spaces. Alternative power configurations are available for Asia and Europe.

Performance	Dataflow Processing Elements (PEs)	64,000 per appliance
Memory and Storage	High-Speed Memory	32 GB High-Speed DRAM
	SSD Storage	8 TB of storage
	Bulk Storage	512 GB DDR4 DRAM
Connections and Power Consumption	User Connection	Up to two 10GbE Ports
	Power Requirements	Designed for in-office use; power configurations available for Asia and Europe
Form Factor	Dimensions	15"x15"x30"
	Acoustics	<30dB
	Cooling System	Liquid cooled
Software	Machine Learning Framework	ONNX
	Operating System	Ubuntu Linux
	Library	WaveFlow Agent Library
	Data Runtime	WaveFlow Execution Engine

A Future Proof Solution

With ONNX interoperability, Wave's dataflow appliance can support a range of frameworks such as Tensorflow, Caffe, MXNet and more. Also, the Dataflow Processing Unit (DPU) based boards within each appliance are upgradable, allowing for next-generation, high-bandwidth memory clusters and future Wave DPUs.

Go Faster with Dataflow Technology

Wave Computing's dataflow architecture eliminates the need for a CPU or co-processor, removing bottlenecks such as callouts to accelerators, cross-memory communication and more. The result is performance improvements of training neural networks that outperform datacenter class servers.

Wave's dataflow appliance is ideal for use on both recurrent neural networks (RNNs) and convolutional neural networks (CNNs). The appliance includes all the needed dataflow software and agent libraries to get up and running quickly.

Revolutionary Dataflow Architecture

Wave's native dataflow architecture is the fundamental technology behind each dataflow appliance. It is built upon the company's unique dataflow computing technology that exploits data and model parallelisms present in deep learning models.

Wave's dataflow appliances utilize Dataflow Processing Units (DPUs), which contain thousands of interconnected dataflow Processing Elements (PEs). The performance and scalability of the Wave appliances make them ideal for organizations using deep learning to develop, test and deploy deep learning models for frameworks such as TensorFlow.

Wave Dataflow Systems

Wave Computing is revolutionizing artificial intelligence (AI) and deep learning with its dataflow-based systems. The company's innovative solutions leverage dataflow technology to provide high-performance training and high-efficiency inferencing at scale, enabling companies to drive better business value from their data.

Wave's dataflow system solutions are designed for deep learning. Boasting significant improvements over the current standard, they enable data scientists to experiment, develop, test, deploy and run AI applications faster and more economically than ever before.

Early Access

Interested in getting early access to the Wave dataflow appliance for office environments? Contact us today to see if you qualify. Visit wavecomp.ai or email info@wavecomp.com.

About Wave Computing

Wave Computing is the Silicon Valley company that is revolutionizing AI and deep learning from the datacenter to the edge with its dataflow-based systems and embedded solutions. The company enables enterprises to accelerate their AI applications by easily and cost-effectively bringing deep learning to their data, wherever it is. Wave's innovative AI system solutions provide high-performance training and high-efficiency inferencing at scale.